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REMOVABLE SEAT ATTACHMENT FOR A STROLLER

RELATED APPLICATIONS

This application is a continuation of and claims priority under 35 U.S.C. §120 to U.S. Patent Application No. 15/912,901, filed March 6, 2018, and titled "Removable Seat Attachment for a Stroller," which is a continuation of and claims priority under 35 U.S.C. §120 to U.S. Patent Application No. 15/225,326 (now U.S. Patent No. 9,944,305), filed August 1, 2016, and titled "Removable Seat Attachment for a Stroller," which claims priority under 35 U.S.C. §119 to U.S. Provisional Patent Application No. 62/311,224 filed March 21, 2016, and titled "Removable Seat Attachment for a Stroller," the entire contents of each of which are hereby incorporated herein by reference for all purposes. This application is also a continuation of and claims priority under 35 U.S.C. §120 to U.S. Patent Application No. 15/912,901, filed March 6, 2018, and titled "Removable Seat Attachment for a Stroller," which is a continuation of and claims priority under 35 U.S.C. §120 to U.S. Patent Application No. 15/225,326 (now U.S. Patent No. 9,944,305), which is a continuation-in-part of and claims priority under 35 U.S.C. §120 to U.S. Patent Application No. 14/597,420 (now U.S. Patent No. 9,403,550), filed on January 15, 2015, which claims priority to U.S. Patent Application No. 14/261,558 (now U.S. Patent No. 8,955,869) filed on April 25, 2014, which claims priority to U.S. Patent Application No. 12/631,375 filed on December 4, 2009, which claims priority to U.S. Provisional Patent Application No. 61/119,920 filed on December 4, 2008, the entire contents of each of which are incorporated herein by reference for all purposes.

TECHNICAL FIELD

Embodiments disclosed herein are generally related to children's stroller systems and more particularly to apparatuses and methods for a removable seat attachment for a stroller that is capable of supporting a seat including, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a car seat, or a baby carrier.

BACKGROUND

Parents or guardians with multiple young children may have difficulty transporting their children from place to place. Children are slow, easily distracted and, therefore, may lag behind. In response, many parents and/or guardians have purchased double seat strollers allowing the

parent or guardian to push two children simultaneously and thus allow them to more efficiently run errands, take walks, or jog. As such, a double seat stroller allows the parent or guardian with multiple young children more freedom than they would have with only a single seat stroller.

However, permanently fixed double seat strollers also have certain disadvantages. Double seat strollers are substantially larger (wider and/or longer) than single seat strollers and are, therefore, more difficult to maneuver through doorways and down aisles in stores. While, the benefits of being able to accommodate two children at one time in a double seat stroller typically offset these disadvantages, when the parent or guardian has only one child with them, the benefits of the double seat stroller are not realized but the disadvantages still exist.

Stroller manufacturers have attempted to solve this problem by providing an adjustable stroller that can be modified from having a single seat to having two seats by providing attachments that provide a second seat for the second child that hangs under and slightly behind the seat of the single seat stroller. In other embodiments, the second seat can be attached to a seat attachment placed further forward in the stroller. The current attachment mechanisms can suffer from several drawbacks. These drawbacks include being permanently affixed to the stroller frame and taking up unnecessary space or creating a safety hazard for children not in the stroller when the second seat is not attached to the stroller. In addition, the covers for the seat attachments, for covering a portion of the seat attachment mechanism when not in use, are detachable and can be easily lost when the seat attachment is in use.

BRIEF DESCRIPTION OF THE EXAMPLE DRAWINGS

For a more complete understanding of the present disclosure and certain features thereof, reference is now made to the following description, in conjunction with the accompanying figures briefly described as follows:

Figure 1 presents a side elevation view of a single stroller apparatus according to one example embodiment of the disclosure.

Figure 2 presents a partial side elevation view of a seat attachment to convert a single stroller into a double stroller according to one example embodiment of the disclosure.

Figure 3 presents a side elevation view of a combination of the single stroller of Figure 1 attached to the seat attachment of Figure 2 according to one example embodiment of the disclosure.

Figure 4 presents a perspective view of a seat attachment capable of supporting a car seat on an attachment of Figure 2 according to one example embodiment of the disclosure.

Figure 5 presents a side elevation view of a combination of the single stroller of Figure 1 attached to an attachment in the form of a tricycle-like riding device according to one example embodiment of the disclosure.

Figure 6A presents a view of an accessory attachment for supporting an accessory on a stroller, while Figure 6B presents a view of a bag or purse for attaching to the accessory attachment of Figure 6A according to one example embodiment of the disclosure.

Figure 7 presents a perspective view of an attachment for supporting a seat comprising one wheel according to one example embodiment of the disclosure.

Figures 8A-H present multiple views of a stroller apparatus capable of being converted from a single seat stroller to a double seat stroller through the use of removable seat attachment adapters according to one example embodiment of the disclosure.

Figure 9 presents a perspective view of one version of a stroller with left and right attachment frame members for attaching a second seat according to one example embodiment of the disclosure.

Figure 10 presents a front elevation view of an attachment frame member according to one example embodiment of the disclosure.

Figure 11 is a partial perspective view of the stroller showing the seat attachment housing according to one example embodiment of the disclosure.

Figure 12 is a partial perspective view of the seat attachment housing according to one example embodiment of the disclosure.

Figures 13A-C are partial perspective views of the removable seat attachment adapter removably coupled to the seat attachment housing according to one example embodiment of the disclosure.

Figures 14A-C are partial perspective views of an alternative embodiment of the seat attachment housing according to another example embodiment of the disclosure.

DETAILED DESCRIPTION OF THE EXAMPLE EMBODIMENTS

Example embodiments of the invention now will be described more fully hereinafter with reference to the accompanying drawings, in which example embodiments are shown. The concept

disclosed herein may, however, be embodied in many different forms and should not be construed as limited to the exemplary embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. Like numbers refer to like, but not necessarily the same, elements throughout.

The example embodiments described herein and shown in the figures is described with reference to an infant or child's stroller that can be configured to adjust from a single seat stroller to a multi-seat stroller. While the example embodiments will generally be described with reference to adding or removing seats from the stroller, the reference to seats is for example purposes only, as the seat or portion that can be added or removed from the stroller can include, but is not limited to, a stroller seat, a baby seat, a bassinet, a pram, a car seat, or a baby carrier. Each of the stroller seat, baby seat, bassinet, pram, car seat, and/or baby carrier should individually be read as an alternative embodiment to the removable/added infant or child's stroller seat described below.

Certain dimensions and features of the example adjustable stroller are described herein using the term "approximately." As used herein, the term "approximately" indicates that each of the described dimensions is not a strict boundary or parameter and does not exclude functionally similar variations therefrom. Unless context or the description indicates otherwise, the use of the term "approximately" in connection with a numerical parameter indicates that the numerical parameter includes variations that, using mathematical and industrial principles accepted in the art (*e.g.*, rounding, measurement or other systematic errors, manufacturing tolerances, etc.), would not vary the least significant digit.

In addition, certain relationships between dimensions of the adjustable stroller and between features of the adjustable stroller are described herein using the term "substantially." As used herein, the terms "substantially" and "substantially equal" indicates that the equal relationship is not a strict relationship and does not exclude functionally similar variations therefrom. Unless context or the description indicates otherwise, the use of the term "substantially" or "substantially equal" in connection with two or more described dimensions indicates that the equal relationship between the dimensions includes variations that, using mathematical and industrial principles accepted in the art (*e.g.*, rounding, measurement or other systematic errors, manufacturing tolerances, etc.), would not vary the least significant digit of the dimensions. As used herein, the term "substantially constant" indicates that the constant relationship is not a strict relationship and

does not exclude functionally similar variations therefrom. As used herein, the term "substantially parallel" indicates that the parallel relationship is not a strict relationship and does not exclude functionally similar variations therefrom.

As discussed above, parents or guardians may find themselves in a situation wherein it is more convenient to transport two children in a stroller, but at the same time find it inconvenient to have both a single stroller and double stroller. Embodiments of the seat attachment solve this problem. In one aspect, an embodiment of the seat attachment for a stroller is capable of converting a single stroller into a double stroller. The seat attachment may support a seat such as, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example. Therefore, the parent or guardian does not require both a single stroller and a double stroller. A stroller configured to receive a seat attachment for converting a single stroller into a double stroller provides convenience to the user. The single stroller may be connected to a double stroller by attaching the seat attachment to the single stroller and then attaching the second seat. As such, an embodiment of the seat attachment for converting a single stroller into a double stroller can include at least one connector portion capable of connecting to a stroller frame and a seat support element capable of supporting a seat.

Figure 1 presents a side elevation view of a single stroller apparatus 10 according to one example embodiment of the disclosure. Referring to Figure 1, it shows only one side of the single stroller 10, however, most components include a complementary component on the other side of the single stroller but are not shown in Figure 1. The example single stroller 10 includes a frame 12 that supports a seat 13. The frame 12 may optionally include at least one, and in certain embodiments preferably two, folding mechanisms 16 that allow the stroller 10 to be folded to a more convenient size for storing or transporting the stroller 10.

In the example embodiment of Figure 1, the seat 13 is shown as a typical stroller seat. However, other types of seats may be used in a single stroller. The seat 13 may be permanently affixed to the frame 12 or releasably connected, such that it is capable of being removed and substituted with a different seat. As used herein, "releasably connected" or "releasably attached" means the connection is not a permanent connection and that the connection is capable of being connected and disconnected by the user of the stroller 10 without requiring special tools or special skills. Releasable connections include, but are not limited to, buttons, snaps, friction fittings, interference fits, threaded connections, locking tabs, keyed connections, other fasteners, or the

like. The frame 12 is supported on a pair of back wheels 14 and a pair of front wheels 15. In this example embodiment, the back wheels 14 are fixed and do not swivel or pivot on the frame 12 while the pair of front wheels 15 pivot to make turning the single stroller 10 easier and more convenient. Though, pivoting wheels may be preferred in certain strollers, strollers with fixed non-pivoting wheels are also common and considered as an option as part of this disclosure. In certain example embodiments, the single stroller 10 does not require pairs of front 15 or rear 14 wheels and either the front pair of wheels 15 or the back pair of wheels 14 may be substituted with a single wheel. In certain example embodiments, the single stroller 10, including umbrella strollers, jogging strollers, all-terrain strollers, as well as other strollers may only include one front wheel 15.

The example single stroller 10 may also include one or more seat attachments that are capable of converting any style of single stroller to a double stroller, including strollers with one or two front wheels. In one example embodiment, the stroller 10 can include two attachment portions 17. In one example, the attachment portions 17 can be positioned on or near the front of the stroller 10 to allow the seat attachment and the seat to be connected to the front portion of the stroller 10. The attachment portions 17 can allow a seat attachment such as the seat attachment for converting the single stroller 10 to a double stroller, as shown in Figure 3, to be connected to the stroller. While only one seat attachment is shown in Figure 3, the stroller 10 could typically include two seat attachments as shown in Figure 3 or one seat attachment that can include two seat support elements. In certain example embodiments, the stroller 10 can include a left side and a right side attachment portion 17. The seat attachment for the stroller 10 can further include corresponding connector portions capable of connecting to the stroller frame at the attachment portions 17. Though the seat attachment for the stroller is described in relation to a single stroller, the attachment may similarly be attached to a double stroller. As such, example embodiments of the seat attachment may therefore be used to convert a double stroller into a triple stroller, if desired.

Figure 2 presents a partial side elevation view of a seat attachment to convert a single stroller into a double stroller according to one example embodiment of the disclosure. Now referring to Figures 1 and 2, the example seat attachment 20 is shown in an unlocked and folded configuration. The seat attachment 20 includes a one or more connector portions 21 capable of connecting to the attachment frame members 24, two seat attachment elements 22 capable of

supporting a seat; and a wheel 23. In this example embodiment, the connector portions 21 are connected to the rear of the seat attachment 20 allowing the seat attachment 20 to be connected to the front of a stroller, such as stroller 10 shown in Figure 1. In other example embodiments, the seat attachment 20 may include more than one wheel 23, one connector portion 21, one seat support element, or combinations of these elements. In example embodiments of the stroller with one wheel, the attachment frame member may be on the forks of the front wheel, for example.

The seat attachment 20 can include a wheel support frame 26 connecting the wheel 23 to the attachment frame member 24 of the attachment 20. Each attachment frame member 24 has a first and a second end. The first end is capable of connecting to a stroller frame and the second end can be connected to the seat support element 22. As shown in Figure 2, the seat attachment 20 can include a wheel support frame 26 that is pivotally connected to two attachment frame members 24. The wheel support frame 26 or the attachment frame 24 may span the width of the stroller between the two attachment portions 17. The pivotal connection 27 allows the seat attachment 20 to be folded and conveniently stored or transported but is not necessary for all example embodiments of the disclosure. The pivotal connection 27 can be optional and provide more convenience, however, other example embodiments of the seat attachment 20 can include a releasably connected wheel support frame or a rigid frame that may be incorporated to produce a seat attachment that has greater strength for use in situations where a stronger seat attachment may be desired, such as with all-terrain or jogging strollers, for example. The wheel support frame 26 may be connected at any point on the attachment frame 24. In certain example embodiments the wheel support frame 26 is connected to the attachment frame 24 near the connector portion 21 or near the middle of the attachment frame 24.

In certain example embodiments, the seat attachment without a wheel may include connector portion 21 or attachment frame member 24, and seat attachment member 22, for example. In this example embodiment, there may be no need for the pivotal connection 27, wheel support frame 26, sliding connector 25, or wheel 23.

The seat attachment 20 can also include a folding mechanism that includes a sliding connector 25 connected to a first end of a strut 28. A second end of the strut 28 can be pivotally connected to wheel support frame 26. In such an embodiment, the sliding connector 25 may be moved between a first position and a second position on the attachment frame member 24. As the sliding connector 25 is moved, the strut 28 pushes the wheel support frame 26 from an in-use

position to a storage position. The storage position is more compact as shown in Figure 2. In addition, certain example embodiments of the seat attachment 20 can also include a locking mechanism 29 that is capable of securing the seat attachment 20 to a stroller, such as stroller 10 shown in Figure 1. The locking mechanism 29 can be engaged by moving the sliding connector 25 to the in-use position, in which the wheel support frame 26 and wheel 23 are extended. In certain example embodiments, the wheel 23 of the seat attachment 20 is pivotally connected to the connector portion 21 and when the wheel 23 is in the in-use position the releasable connection is locked and when the wheel 23 is moved to the storage position, the releasable connection is unlocked allowing the seat attachment 20 to be removed from stroller 10. The seat attachment 20 may be stored and the stroller 10 may be conveniently used as a single stroller. As designed, the seat attachment 20 may be reconnected to the stroller 10 for use as a double stroller when needed. The seat attachment portion may be secured into position on the stroller frame and a locking mechanism may be used with an embodiment with or without the wheel. Either the seat attachment or the stroller frame can include a locking mechanism for securing the stroller and seat attachment together. The locking mechanism may be any mechanism capable of securing the components together during use and may be a friction locking device, threaded connection, peg in a hole, or an interference locking device such as a pin in a hole, for example. As shown in the example embodiment of Figure 2, the locking mechanism 29 pivots with wheel support frame 26 as the seat attachment 20 is moved from an unfolded position to a folded position. The locking mechanism 29 may slide into a hole or notch in the attachment frame member 24 of the stroller 10 shown in Figure 1. As such, the seat attachment 20 may be attached to the stroller 10 by positioning the attachment (connector) portion 21 of the seat attachment 20 in the slot 18 of the attachment portion 17 of the stroller 10. The sliding connector 25 may be moved to the in-use position, the wheel support frame is moved, and the locking mechanism 29 is positioned into the locking slot 19 of the stroller 10.

In certain example embodiments, the connector portion 21 of the seat attachment 20 has a cylindrical or substantially cylindrical shape. The connector portion 21 may be inserted into a cylindrical or substantially cylindrical slot 18 of the attachment portion 17 of the stroller 10 of Figure 1 to secure the seat attachment and convert the single stroller into a double stroller, as shown in Figure 3. In other example embodiments, the seat attachment 20 may include any type of connector portion having any geometric or non-geometric shape. The connector portion 21 may

be of a solid or tubular construction and may be any cross-sectional shape including, but not limited to, circular, polygonal, square, rectangular, and triangular, for example. Other attachment mechanisms may be utilized to connect the seat attachment to the stroller 10 such as, but not limited to, a U-shaped bracket, a U-bolt, a pipe clamp, O-shaped bracket, screw, bolt, or other clamping or attachment means. The attachment frame member 24 of the stroller 10 can have a complimentary and/or cooperating shape that allows the connector portion 21 to be secured to the attachment portion of the stroller.

Figure 3 presents a side elevation view of a combination of the single stroller 10 of Figure 1 attached to the seat attachment 20 of Figure 2 according to one example embodiment of the disclosure. Referring now to Figure 3, the seat attachment 20 removably coupled to the single stroller 10 to form a double stroller. The double stroller configuration is shown with two stroller seats 13 in an inline configuration, though the other configurations, such as a stroller seat and a bassinet or a pram may also be supported on the double stroller. Further, the seat support element 22 of the seat attachment 20 may be capable of supporting the front stroller seat 13 in either a forward-facing or backward-facing position.

The example embodiment of the stroller 10 in Figure 3 is shown only as an example of one type of stroller, the frame of the stroller 10 may be any of many possible configurations. Example embodiments of the seat attachment accessory may be configured to be used on any such configuration of a stroller. For example, in another example embodiment, the baby stroller may not include two front wheels, may not include a folding mechanism or may only include only one folding mechanism. In addition, the baby stroller may include additional features not included in baby stroller 10. For example, the stroller may optionally include fixed front wheels, an entirely different frame configuration, or a storage basket underneath the seat of the stroller.

The seat support member may be any configuration capable of supporting the seat on the seat attachment 20. Figure 4 presents another example embodiment of a seat support member 40 for use with a car seat or other baby seat according to one example embodiment of the disclosure. Now referring to Figure 4, the seat support member 40 can include a main support 41. The main support 41 can include a cradle for supporting a central portion of the seat. Another portion of the seat may rest against support bar 42. In this example, the support bar 42 may be adjusted to accommodate seats of different shapes and sizes. The support bar 42 may be slid within the aperture 43 and locked in place when the support bar 42 is in the desired position to support a

certain seat. The seat is, therefore, supported on two main supports 41 and the support bar 42. The seat may be further secured in the seat attachment member 40 by wrapping belts 44 and 45 around the seat and locking the belts in this position with a buckle or other securing means.

Figure 5 presents a side elevation view of a combination 50 of the single stroller 10 of Figure 1 attached to an attachment in the form of a tricycle-like riding device according to one example embodiment of the disclosure. Referring to Figure 5, the combination 50 includes the stroller 10 and the seat attachment 51. In one example, the seat attachment 51 is a tricycle-like attachment that includes a connector portion 52, a frame 53 with a seat support element 56, a seat 57, and a wheel 55. The tricycle-like attachment may be attached to stroller 10 to allow one child to be pushed in the stroller 10 and one child to ride the seat attachment 51. The seat attachment 51 may be other shapes also such as cars, trucks, or animal shapes, for example.

In certain example embodiments, the stroller 10 can include an additional accessory attachment portion 58. The accessory attachment portion 58 attaches to a frame member of the stroller 10. An embodiment of the accessory attachment portion 58 is shown on Figure 6A. This embodiment is particularly useful for attaching a bag or purse 64, as shown in Figure 6B, to the stroller 10.

When using a stroller, parents or guardians typically carry other items, such as purses, grocery bags, cell phones, diapers, cleaning wipes, or other personal or baby related items. Some strollers have bottom storage baskets for placing such items. However, these storage baskets can be inconvenient to access or some light weight strollers do not include such storage baskets. Therefore, users of the stroller may hang purses or shopping bags on the handle of the stroller. This is convenient in that the bag is easy to access, but the weight of the bag on the handle may cause the stroller to be unbalanced and increase the tendency of the stroller to topple backwards. A heavy bag hung from the handle of a stroller may cause the stroller to tip backwards even with a child in the seat. The problem is worse if the stroller is facing uphill, on uneven terrain, being pushed up a curb, or occupied by a small child. The accessory attachment 58 may be attached to the frame of the stroller 10 by any of the clamping or attachment methods described above, for example. Preferably, the accessory attachment 58 is attached near the center of gravity of the stroller 10 to avoid creating an unbalanced condition of the stroller 10. As shown in Figure 6A, the accessory attachment 58 is connected to stroller frame 12 of stroller 10 near the folding mechanism. Certain example embodiments of the accessory attachment 58 include a first end 61

for connecting to a stroller frame and a distal second end 62 for releasably connecting to the accessory 64. The first end 61 can include an aperture 64 that may be connected to frame 12 of the stroller 10. In certain example embodiments, the aperture 64 is on an angle, such that when the axis of the accessory attachment portion 58 is horizontal or substantially horizontal. The accessory attachment 58 may, optionally, include a rib 63 for securing the accessory 64 to the accessory attachment 58. The rib 63 may be replaced with any other locking element or securing means including a friction fitting, a screwed fitting, or interference fitting, for example.

One example of an accessory 64 for attaching to an accessory attachment 58 is shown in Figure 6B. The accessory 64 in this example is a bag or purse. The accessory 64 can include an attachment portion 65 that is capable of being secured to the attachment portion 62 on the accessory attachment 58. The accessory 64 may be secured on stroller 10 by securing attachment portion 65 to attachment portion 62. The attachment portion 65 can slide over the cylindrical attachment portion 62 of accessory attachment 58. The attachment portion 65 may include an interior annular recess that receives the rib 63 securing the accessory 58 to the stroller 10. The accessory 64 is thus removably coupled to the stroller 10 in a center portion of the stroller as viewed from the side. Therefore, the bag or purse 64 is conveniently secured to stroller 10 while not contributing to an unbalanced condition of the stroller 10.

Figure 7 presents a perspective view of an attachment 70 for supporting a seat comprising one wheel 73 according to one example embodiment of the disclosure. Referring now to Figure 7, the example seat attachment 70 can include two seat attachment members 71, two connector portions 72, and a wheel 73. The two seat attachment members 71 and the wheel 73 can be disposed or otherwise positioned in a triangular relationship. In certain example embodiments, the wheel 73 provides additional stability to a stroller 10 connected to the seat attachment 70 if a heavier child is placed in a seat attached to the seat attachment members 71.

Figures 8A-H present multiple views of a stroller apparatus capable of being converted from a single seat stroller to a double seat stroller through the use of removable seat attachment adapters, according to another example embodiment of the disclosure. Referring now to Figures 8A-H, the example stroller apparatus 80 can include a stroller frame 81 capable of supporting one or more stroller seats 85, 86. In one example embodiment, the stroller frame 81 can be made of one or more pieces fixedly coupled and/or removably coupled to one another. The stroller frame

81 can include portions that are hollow tubing and other portions that are solid core tubing and can be made from metal, plastic, or other materials known in the art.

In one example embodiment, the stroller frame 81 can include a pair of front wheel support frames 81a (only the left front wheel support frame is shown), a pair of back wheel support frames 81b (only the left back wheel support frame is shown), a pair of upper tube support frames 81c (only the left upper tube support frame is shown), a handle portion 81d having a first end coupled to the left upper tube support frame 81c and a distal second end coupled to the right upper tube support frame 81c, and foot rest support frame 81f having a first end coupled to the left front wheel support frame 81a (either directly or via the first seat attachment housing 1105 discussed below in Figure 11) and a distal second end coupled to the right front wheel support frame 81a (either directly of via the second seat attachment housing 1110 discussed below in Figure 11). In certain example embodiments, each front wheel support frame 81a can be fixedly coupled or rotatably coupled to its corresponding upper tube support frame 81c. Further, in certain example embodiments, the left upper tube support frame 81c, handle 81d, and right upper tube support frame 81c can be made from a single unitary piece of material, such as a single piece of bent, hollow-core metal or plastic tubing. Alternatively, each of the left upper tube support frame 81c, handle 81d, and right upper tube support frame 81c can be separate pieces of the same or different material that are coupled to one another.

The exemplary stroller frame 81 can also include a pair of folding mechanisms 81e (only the left folding mechanism is shown). In one example, each folding mechanism 81e can be coupled, either directly or indirectly to the corresponding front wheel support frame 81a, back wheel support frame 81b, and upper tube support frame 81c on the corresponding side (left and right) of the stroller 80. In certain example embodiments, one or more of the corresponding front wheel support frame 81a, back wheel support frame 81b, and upper tube support frame 81c are rotatably coupled and rotatably adjustable about one or more axes defined through the folding mechanism 81e. As such, in certain example embodiments, the folding mechanism 81e allows the stroller 80 to be folded into a more compact size for storing or transportation. Figure 8B shows the stroller 10 in a folded configuration.

The example stroller 80 can also include at least one front wheel 82 coupled directly or indirectly (*e.g.*, via one of the seat attachment housings 1105, 1110, as shown in Figure 11) to the stroller frame 81. Figure 8B presents an example embodiment wherein the stroller 80 can include

two front wheels 82, one front wheel 82 being coupled to the stroller 80 adjacent the left front wheel support frame 81a and the second front wheel 82 being coupled to the stroller 80 adjacent the right front wheel support frame 81a. The example stroller 80 can also include at least one rear wheel 83 coupled directly or indirectly to the stroller frame 81 (*e.g.*, a corresponding back wheel support frame 81b). Figure 8B presents an example embodiment wherein the stroller 80 can include two back wheels 83, one back wheel 83 being coupled to the left back wheel support frame 81b and the second back wheel 83 coupled to the right back wheel support frame 81b.

The stroller 80 can also include a first stroller seat 86 either fixedly or removably coupled to the stroller frame 81. For example, the first stroller seat 86 can include a left connector on the left side of the first stroller seat 86 and a right connector on the right side of the first stroller seat 86 to removably couple and decouple the first stroller seat from the stroller frame 81. In one example, each of the left connector and right connector can be cavities in the first stroller seat 86 and can be configured to receive at least a portion of a corresponding seat attachment adapter (*e.g.*, a bayonet connector) therein. In another example embodiment, the left connector and the right connector can each be tabs or slots that are configured to be coupled to corresponding slots or tabs along the stroller frame 81.

The stroller 80 can also include a removable seat attachment adapter 84 that is removably coupled to the frame 81 such that the seat attachment adapter 84 can be decoupled from the frame 81 and stored when a second stroller seat is not being used with the stroller 80. In one example embodiment, each removable seat attachment adapters can be coupled to the frame by coupling the adapter 84 into a seat attachment housing disposed along the frame 81. In one example, the seat attachment housing (such as that described in Figures 11-14C below) can be integrally formed with all or a portion of the stroller frame (*e.g.*, integrally formed with front wheel support frame 81a). Alternatively, the seat attachment housing can be a separate apparatus that is coupled to the frame 81 or incorporated into the frame 81 by coupling multiple pieces of the frame 81 together. The frame 81 and each seat attachment housing can be made from the same or different materials, including, metals and plastics.

Though it cannot be seen in the side view of Figure 8A, a typical embodiment of the stroller 80 will include at least two removable seat attachment adapters 84 (at least one along each left and right side of the stroller 80 along the stroller frame 81). For example, at least one removable seat attachment adapter can support each lateral side of the second stroller seat 85. In certain example

embodiments, each of the removable seat attachment adapters 84 may be made up of one piece or multiple parts. The removable seat attachment adapters 84 may be of any design capable of securely supporting a seat on the stroller. In one example, the removable seat attachment adapter 84 is configured to have a first end that is removably coupled to the frame 81 and/or seat attachment housing and a distal second end that is configured to be removably coupled to a second stroller seat 85. The removable seat attachment adapter 84 is designed to be capable of supporting the second stroller seat 85 in front of the first stroller seat 86. The stroller 80 may also include a storage basket 87.

In certain examples, each of the removable seat attachment adapters 84 removably couples to the second stroller seat 85 at a vertical height that is substantially below the vertical height that the first stroller seat 86 attaches to the stroller frame 81, thereby positioning the second stroller seat 85 at a vertical position that is substantially below the vertical position of the first stroller seat 86 when both the first stroller seat 86 and the second stroller seat 85 are coupled to the stroller 80. The difference in vertical positioning of the second stroller seat 85 as compared to the first stroller seat 86 provides improved access to the first stroller seat 86 from the front of the stroller 10 when both stroller seats 85, 86 are coupled to the stroller 80. Further, in certain example embodiments, the front stroller seat 85 can be positioned substantially over the front wheels 82 so that the stroller 80 remains stable. For example, the second stroller seat 85 can be located substantially over the front wheels 82 and the first stroller seat 86 can be located substantially over the rear wheels 83. In addition, the seats 85, 86 can be positioned such that the center of gravity of the stroller 80 is between the front 82 and rear 83 wheels.

In certain example embodiments, the removable seat attachment adapter 84 is capable of supporting a second stroller seat 85 such that a child in the second stroller seat 85 is substantially above the frame 81 of the stroller 80 that is substantially adjacent to the connection point of the second stroller seat 85. This positioning of the second stroller seat 85 with respect to the frame 81 provides easier access to the second stroller seat 85, does not block access to the storage basket 87, allows more versatile configurations of the seats 85, 86, allows more variety of seats 85, 86 to be attached to the frame 81, and allows the parent or guardian to more easily monitor and see the child in each stroller seat 85, 86.

The example stroller of Figure 8A can also include the first stroller seat 86. In certain example embodiments, the first stroller seat 86 can be located generally closer to the handle portion

81d than to the front wheels 82. The first stroller seat 86 may be fixedly coupled or removably coupled to the frame 81. In certain example embodiments wherein the first stroller seat 86 is removably coupled to frame 81, the first stroller seat 86 may be adjustable from a forward-facing configuration to a rearward-facing configuration and vice-versa, as shown, for example, in Figures 8B-8C. In addition, the second stroller seat 85, when coupled to the corresponding removable seat attachment adapters 84, can be adjustable from a forward-facing configuration to a rearward-facing configuration and vice-versa.

Figures 8C-8H present additional examples of combinations for a variety of types of stroller seats that can be removably coupled to the stroller 80. For example, in Figure 8D, the second stroller seat 86 can be replaced by an infant carrier 93 that can be removably coupled to each of the at least two removable seat attachment adapters 84 and the first stroller seat 86 can be coupled to the stroller in a forward-facing position. In another example, as shown in Figure 8E, the first stroller seat 86 can be replaced by a child carrier 91 that may be coupled to the frame 81 and positioned in the first seat position and the second stroller seat 85 can be coupled to the stroller 80 by way of the at least two removable seat attachment adapters 84 in a rearward-facing position. In yet another example, as shown in Figure 8F, the child carrier 91, of Figure 8E, can be replaced with a pram 92 that is removably coupled to the stroller 80 in the first seat position. In still another example configuration, as shown in Figure 8G, two child carriers 91 may be removably coupled to the stroller frame 81. For example, the front child carrier can be coupled to the stroller by way of each of the at least two removable seat attachment adapters 84. In another example configuration, one of the child carriers 91 may be replaced with a pram or bassinet 92, as shown in Figure 8H.

In certain example embodiments, the stroller 80 may also include a second set of removable seat attachment adapters 89 removably coupled to the frame 81 (or another pair of seat attachment housings substantially similar to those 1105, 1110 described below) along the upper tube support frame 81c. The second set of removable seat attachment adapters 89 may be substantially the same as or exactly the same as the removable seat attachment adapters 84 described herein and may be coupled to the frame 81 (or corresponding seat attachment housings) in substantially the same manner as the removable seat attachment adapters 84, as discussed in more detail below. The second set of removable seat attachment adapters 89 can include at least two adapters (at least one along each left and right side of the stroller 80) for removably coupling and decoupling the first

stroller seat 86 or any other form of seat described herein to the stroller frame 81 or corresponding seat attachment housing.

In one example embodiment, as shown in Figures 9-10, the stroller 80 can include one or more, and preferably two, seat support elements 84. The seat support element 84 is connected to and can be removably coupled to the stroller 80 front wheel support frame 81a. In certain example embodiments, the seat support element 84 is adjacent to the front wheel support portion 81a of frame 81. Alternatively, the seat support element 84 is simply forward of and positioned at a vertical level lower than the attachment point for the first stroller seat 86 (Figure 8A) on the stroller 80. The seat support element 84 is capable of supporting a second stroller seat 85 in front of the stroller seat 86 (see Figure 8A). This provides convenience and versatility to a user of the stroller 80. Seat support element 84 may be fixedly attached or removably attached to front wheel support portion 81a. In certain example embodiments, the front seat 85 may be positioned substantially over the front wheels 15 so the stroller 80 remains stable. Preferably, the seats 85, 86 should be positioned such that the center of gravity of the stroller 80 is between the front 15 and rear 14 wheels. If not an additional wheel may be placed on the attachment as previously described. The seat support element 84 can further include a seat connector 88. In one example, the seat connector 88 can be disposed along a top end of the seat support element 84. The example seat connector 88 may be a multipurpose general connector that allows different seats to be interchanged on the seat support element 84. Any style seat may be configured to connect to the seat connector 88, such as but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example. As shown in Figure 9, the seat support element 84 can also include a connector portion 21. The connector portion 21 is capable of connecting the seat attachment to the frame 81 via the attachment portion 17 and the slot 18.

In certain example embodiments, the connector portion 21 of the seat attachment 20 has a cylindrical or substantially cylindrical shape. The connector portion 21 may be inserted into a cylindrical or substantially cylindrical slot 18 of the attachment portion 17 of the stroller 80 of Figure 9-10 to secure the seat attachment and convert the single stroller into a double stroller, as shown in Figure 8A. The connector portion 21 may be of a solid or tubular construction and may be any cross-sectional shape including, but not limited to, circular, polygonal, square, rectangular, and triangular, for example.

Figure 11 is a partial perspective view of the stroller 80 showing a seat attachment housing 1105 according to one example embodiment of the disclosure. Referring now to Figures 8A and 11, the example stroller 80 can include a first seat attachment housing 1105 and the second seat attachment housing 1110. The first seat attachment housing 1105 can include a first end 1105a having a cavity for slidably receiving and fixedly or slidably coupling the first end 1105a to a first end of the left front wheel support frame 81a. For example, the left front wheel support frame 81a can have a substantially circular or oval cross-section and the cavity of the first end 1105a can have a corresponding circular or oval cross-section to slidably receive a portion of the left front wheel support frame 81a into the cavity. In one example, the left front wheel support frame 81a can be held in the cavity of the first end 1105a by a press fit hold. Alternatively, a spring-loaded button on the left front wheel support frame 81a can be positioned into a corresponding opening along one of the sides of the first seat attachment housing 1105.

The first seat attachment housing 1105 can also include a second end 1105b that includes a second cavity for coupling one of the front wheels 82 to the first seat attachment housing 1105. The wheel 82 may be removably coupled to the second end 1105b of the first seat attachment housing 1105 by a press fit hold. Alternatively, a spring-loaded button 82a on the front wheel apparatus 82 can be positioned into the cavity of the second end 1105b and positioned into a corresponding opening 1115 along one of the sides of the first seat attachment housing 1105. In one example embodiment, the first seat attachment housing 1105 can include an attachment arm 1120 extending off of one side of the first seat attachment housing 1105 in a generally orthogonal direction to the longitudinal axis of the housing 1105. The attachment arm 1120 can include a free end 1105c that includes a cavity for receiving therein and fixedly coupling or slidably coupling the first seat attachment housing 1105 to a first end of the foot rest support frame 81f. The foot rest support frame 81f may be removably coupled to the free end 1105c of the attachment arm 1120 by a press fit hold. Alternatively, a spring-loaded button on the foot rest support frame 81f can be positioned into the cavity of the free end 1105c and positioned into a corresponding opening along one of the sides of the attachment arm 1120.

The second seat attachment housing 1110 can include a first end 1110a having a cavity for slidably receiving and fixedly or slidably coupling the first end 1110a to a first end of the right front wheel support frame 81a. For example, the right front wheel support frame 81a can have a substantially circular or oval cross-section and the cavity of the first end 1110a can have a

corresponding circular or oval cross-section to slidably receive a portion of the right front wheel support frame 81a into the cavity. In one example, the right front wheel support frame 81a can be held in the cavity of the first end 1110a by a press fit hold. Alternatively, a spring-loaded button on the right front wheel support frame 81a can be positioned into a corresponding opening along one of the sides of the second seat attachment housing 1110.

The second seat attachment housing 1110 can also include a second end 1110b that includes a second cavity for coupling one of the front wheels 82 to the second seat attachment housing 1110. The wheel 82 may be removably coupled to the second end 1110b of the second seat attachment housing 1110 by a press fit hold. Alternatively, a spring-loaded button on the front wheel apparatus 82 can be positioned into the cavity of the second end 1110b and positioned into a corresponding opening along one of the sides of the second seat attachment housing 1110. In one example embodiment, the second seat attachment housing 1110 can include an attachment arm 1125 extending off of one side of the second seat attachment housing 1110 in a generally orthogonal direction to the longitudinal axis of the housing 1110. The attachment arm 1125 can include a free end 1110c that includes a cavity for receiving therein and fixedly coupling or slidably coupling the second seat attachment housing 1110 to a second distal end of the foot rest support frame 81f. The second end of the foot rest support frame 81f may be removably coupled to the free end 1110c of the attachment arm 1125 by a press fit hold. Alternatively, a spring-loaded button on the foot rest support frame 81f can be positioned into the cavity of the free end 1110c and positioned into a corresponding opening along one of the sides of the attachment arm 1125.

In certain example embodiments, all or a portion of each of the seat attachment housings 1105, 1110 can be hollowed out with exterior sides. Each of the seat attachment housings 1105, 1110 can include an opening 1130 positioned along a top side of the respective seat attachment housings 1105, 1110. The opening 1130 can provide access to an adapter receiving cavity (see Figure 12) for receiving therein at least a portion of the removable seat attachment adapter 84 (see Figure 13A). Each seat attachment housing 1105, 1110 can also include a sliding door 1135. The sliding door 1135 is configured to be manually adjustable from a closed position to an open position by slidably opening the door 1135 along the top side of the seat attachment housing 1105, 1110 to provide access to the opening 1130 and adapter receiving cavity when the parent or guardian wants to insert and couple the removable seat attachment adapter 84 to the seat attachment housing 1105, 1110 and frame 81 in order to couple the second stroller seat 85 to the

stroller 80. In one example, each seat attachment housing 1105, 1110 can include one or more rails either disposed above or below a top surface of the seat attachment housing 1105, 1110 that provide a guide way for slidably opening and closing the door 1135. In one example, the door 1135 can include a tab 1140 extending upward from a top surface of the door 1135 to provide a gripping area to grip the door 1135 and slide it open and closed. For example, a parent or guardian can use a finger against the tab 1140 and apply pressure against the tab 1140 to open the door 1135 from a closed configuration to an open configuration.

The sliding door 1135 is also configured to be manually adjustable from an open configuration to a closed configuration by slidably closing the door 1135 along the top side of the seat attachment housing 1105, 1110 to prevent access to the opening 1130 and adapter receiving cavity when the second stroller seat 85 is not in use. In one example, the parent or guardian can press a finger against the tab 1140 and apply pressure against the tab 1140 to slide the door 1135 from the open configuration to the closed configuration.

Figure 12 is a partial perspective view of one of the seat attachment housings 1105, 1110 according to one example embodiment of the disclosure. Referring now to Figures 8A, 11, and 12, the door [[1130]]1135 of the seat attachment housing 1105, 1110 is shown having been slid into the open configuration exposing the opening 1130 and the adapter receiving cavity 1205. The adapter receiving cavity 1205 can have any size and shape for removably coupling a portion of a removable seat attachment adapter 84 therein. In one example embodiment, all or a portion of the cross-sectional shape of the adapter receiving cavity 1205 can be keyed or have a keyed shape 1210 and all or a portion of the removable seat attachment adapter 84 can have a corresponding outer perimeter shape such that the removable seat attachment adapter 84 can only be inserted into the adapter receiving cavity 1205 in one, proper orientation.

Figures 13A-C are partial perspective views of the removable seat attachment adapter 84 coupled to the seat attachment housing 1105 according to one example embodiment of the disclosure. Now referring to Figures 8A, 11, 12, and 13A-C, once the door 1135 has been moved into the open configuration exposing the opening 1130 and the adapter receiving cavity 1205, a first end 84a of the removable seat attachment adapter 84 can be inserted into the adapter receiving cavity 1205. In certain example embodiments, the adapter receiving cavity 1205 can include one or more stop flanges 1315, 1320 that extend out from an inner surface of the cavity 1205 and into the cavity area to abut against a bottom side of the first end 84a of the removable seat attachment

adapter 84 when the adapter 84 has penetrated a sufficient amount into the adapter receiving cavity 1205. Once the adapter 84 is inserted into the cavity 1205 and removably coupled to the seat attachment housing 1105, a stroller seat can be removable coupled to a seat connector disposed on or adjacent to the second end 84b of the removable seat attachment adapter 84. The seat connector on the second end 84b can be a multipurpose general connector that allows different seats to be interchangeably connected to the removable seat attachment adapter 84. Any style seat may be configured to connect to the seat connector including, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example.

The removable seat attachment adapter 84 can also include a stop collar 1335 disposed a predetermined distance up from the first end 84a of the adapter 84. In one example embodiment, the stop collar 1335 is sized and shaped so that it will not fit into the opening 1130 and will not fit into the adapter receiving cavity 1205 as the first end 84a of the adapter 84 is being inserted into the adapter receiving cavity 1205. The size and shape of the outer surface of the stop collar 1335, being greater than that of the outer surface of the previous portion of the first end 84a inserted into the adapter receiving cavity 1205 will contact and abut an outer surface of the seat attachment housing 1105 when the adapter 84 has penetrated a sufficient amount into the adapter receiving cavity 1205.

The removable seat attachment adapter 84 can also include a spring-loaded latching tab 1305 disposed along one side of the adapter 84 between the first end 84a and the stop collar 1335. In certain example embodiments, the spring-loaded latching tab 1305 can be spring biased into an extended position (as shown in Figure 13B) via, for example, a spring (not shown). As the adapter 84 is first being inserted into the adapter receiving cavity 1205, the width of the adapter 84 at the point of the spring-loaded latching tab 1305, is greater than the width of the cavity 1205, which causes one or more side walls of the cavity 1205 to apply a force to the spring-loaded latching tab 1305 and push it inward from the extended position towards a retracted position, thereby allowing the first end 84a of the adapter 84 to continue moving into the adapter receiving cavity 1205. When the adapter 84 is inserted into the adapter receiving cavity 1205 a sufficient distance (which can be configurable based on the design specifics on the stroller), the spring-loaded latching tab 1305 can be positioned adjacent a tab receiver 1307. The tab receiver 1307 can be a cut-out or opening along one of the side walls of the cavity 1205 that allows the tab 1305 to move back to the extended position. The tab receiver 1307 can include a tab retainer surface 1310 that abuts a top side of the

tab 1305 and prevents the removable seat attachment adapter 84 from being removed from the adapter receiving cavity 1205 while the spring-loaded latch tab 1305 is in the extended position.

The removable seat attachment adapter 84 can also include a tab release button 1330 that is operatively coupled to and configured to move the spring-loaded latching tab 1305 from the extended position to the retracted position via, for example, a guide wire 1325 or other attachment mechanism. For example, when the removable seat attachment adapter 84 is latched into the seat attachment housing 1105, a parent or guardian can grab the removable seat attachment adapter 84 and depress the tab release button 1330, causing the guide wire to pull the spring-loaded latching tab 1305 inward from the extended position to the retracted position with a force greater than the spring biasing force on the tab 1305 and allowing the parent or guardian to remove the removable seat attachment adapter 84 from the adapter receiving cavity 1205 using only a single hand. Thereby, the ease of decoupling the removable seat attachment adapter 84 from the stroller frame 81 is improved.

In addition, as shown in Figure 13B, in certain example embodiments, the bottom end of the adapter receiving cavity 1205 and corresponding bottom end of the seat attachment housing 1105 can be open 1340 to the environment. Leaving the bottom side of the cavity 1205 open 1340 to the environment helps to prevent liquid and material build-up in the cavity 1205 when the removable seat attachment adapter 84 is not coupled into the cavity 1205 by allowing the liquid and materials to pass through the cavity 1205 and out of the bottom of the seat attachment housing 1105. This is especially beneficial when the parent or guardian removes the removable seat attachment adapter 84 from the cavity 1205 but does slide the door 1135 into the closed position to close up the opening 1130.

Figures 14A-C are partial perspective views of an alternative embodiment of the seat attachment housing 1405, 1410 according to another example embodiment of the disclosure. Referring now to Figures 8A, 11, and 14A-C, the seat attachment housings 1405, 1410 are substantially the same as the seat attachment housings 1105, 1110 described in Figures 11-13C except for as described below. Therefore, the description of the seat attachment housings 1105, 1110 in Figures 11-13C above is incorporated herein for the alternative seat attachment housings 1405, 1410, except with regard to the distinctions described below.

As shown in Figure 14C, each seat attachment housing 1405, 1410 includes an opening or open end 1130 positioned along a top side of the respective seat attachment housings 1405, 1410.

The opening 1130 can provide access to an adapter receiving cavity 1205. Each seat attachment housing 1405, 1410 also includes one or more stop flanges 1315, 1320 that extend out from an interior wall 1411 of the cavity 1205 and into the cavity area. In addition, the bottom end of the adapter receiving cavity 1205 and corresponding bottom end of each seat attachment housing 1405, 1410 can have an opening or open end 1340 to the environment and with the cavity 1205 and opening 1130 provides a through-hole 1413 through the seat attachment housing 1405, 1410. Each seat attachment housing 1405, 1410 can include a rotating door 1415 rotatably coupled to the seat attachment housing 1405, 1410. For example, the rotating door 1415 can have a fixed end that is rotatably coupled to the top side of the seat attachment housing 1405, 1410 or an interior wall 1411 of the opening 1130 or adapter receiving cavity 1205 by way of or more hinges 1420. Alternatively, other devices may be used to allow the door 1415 to rotate from a closed configuration 1415a to an open configuration 1415b, as shown in Figure 14C. In certain example embodiments, the door 1415 and/or the rotating mechanism or hinge 1420 that the door 1415 is coupled to can be spring-biased into the closed configuration 1415a through the use of a spring or other biasing means. Spring-biasing the door 1415 into a closed configuration 1415a can help to prevent fluids and other material contaminants from entering the adapter receiving cavity 1205 when the removable seat attachment adapter 84 is not coupled into the adapter receiving cavity 1205.

When a parent or guardian wants to add a second stroller seat 85 to the stroller 80, they can insert the removable seat attachment adapter 84 into the adapter receiving cavity 1205 by pressing or applying a force with the first end 84a of the removable seat attachment adapter 84 against the top side of the rotating door 1415 with a force that is greater than the spring-biasing force. This will cause the door 1415 to rotate from the closed configuration 1415a towards the open configuration 1415b and allow the first end 84a of the removable seat attachment adapter to enter into the adapter receiving cavity 1205 and be coupled to the seat attachment housing 1405, 1410.

When the parent or guardian removes the removable seat attachment adapter 84, as described above with regard to Figures 13A-C, as the first end 84a of the removable seat attachment adapter 84 exits the adapter receiving cavity 1205 and opening 1130, the spring-bias of the hinge 1420 or door 1415 will cause the door 1415 to automatically rotate from the open configuration 1415b to the closed configuration 1415a, thereby limiting access to the opening 1130 and the adapter receiving cavity 1205 from the top side of the seat attachment housing 1405, 1410.

While the above description contains many specifics, these specifics should not be construed as limitations on the scope of the disclosure, but merely as exemplifications of the disclosed embodiments. Those skilled in the art will envision many other possible variations that are within the scope of the disclosure.

CLAIMS

What is claimed is:

1. A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first front wheel support frame adjustable with respect to the first upper tube support frame;

a second front wheel support frame adjustable with respect to the second upper tube support frame;

a first back wheel support frame rotatable with respect to the first upper tube support frame; and

a second back wheel support frame rotatable with respect to the second upper tube support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position;

a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position and wherein the second vertical position and the third vertical position are at a same vertical height.

2. The stroller of claim 1, further comprising:

a first seat attachment housing disposed adjacent the first front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the second front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

3. The stroller of claim 2, wherein the first seat attachment housing extends into the first front wheel support frame and the second seat attachment housing extends into the second front wheel support frame.

4. The stroller of claim 2, wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end.

5. The stroller of claim 4, wherein the first end comprises a connector portion and is coupled to one of the first seat attachment housing and the second seat attachment housing.

6. The stroller of claim 4, wherein the second seat is configured to be removably coupled to the second end.

7. The stroller of claim 1, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

8. The stroller of claim 1, further comprising:

a third seat attachment adapter coupled to the stroller frame at the first vertical position; and

a fourth seat attachment adapter coupled to the stroller frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

9. The stroller of claim 1, further comprising a handle comprising a first end coupled

to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

10. A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a front wheel support frame adjustable with respect to the first upper tube support frame;

a back wheel support frame rotatable with respect to the first upper tube support frame; and

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position;

a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position.

11. The stroller of claim 10, wherein the front wheel support frame comprises a first front wheel support frame member and a second front wheel support frame member.

12. The stroller of claim 10, wherein the back wheel support frame comprises a first back wheel support member and a second back wheel support member.

13. The stroller of claim 10, further comprising:

a first seat attachment housing disposed adjacent the front wheel support frame at the

second vertical position;

a second seat attachment housing disposed adjacent the front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

14. The stroller of claim 13, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion configured to be coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is configured to be removably coupled to the second end.

15. The stroller of claim 10, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

16. The stroller of claim 10, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame at the first vertical position; and

a fourth seat attachment adapter coupled to the second upper tube support frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

17. A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first back wheel support frame;

a second back wheel support frame;

a first front wheel support frame;

a second front wheel support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled to the stroller frame at a first vertical position of the stroller frame;

a first seat attachment housing disposed adjacent the first front wheel support frame:

a second seat attachment housing disposed adjacent the second front wheel support frame;

a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position;

a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position;

wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter.

18. The stroller of claim 17, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion configured to be coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is configured to be removably coupled to the second end.

19. The stroller of claim 17, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

20. The stroller of claim 17, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame; and

a fourth seat attachment adapter coupled to the second upper tube support frame;

wherein the first seat is removably coupled to the third seat attachment adapter and the

fourth seat attachment adapter.

REMOVABLE SEAT ATTACHMENT FOR A STROLLER

ABSTRACT

A stroller is provided with the ability to removably couple and decouple a seat from the stroller as needed. The stroller can include a stroller frame. The stroller can also include one or more front wheels attached to the stroller frame and one or more rear wheels attached to the stroller frame. The stroller can also include a first seat couple to the stroller frame. The stroller can include first and second seat attachment housings. Each of the seat attachment housings can include a cavity for receiving a corresponding one of the first and second seat attachment adapters. Each of the seat attachment housings can also include a door or cover to prevent access to the respective cavity when not in use. The seat attachment adapters can be coupled to the respective seat attachment housings and a second seat can be coupled to the seat attachment adapters.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	34757-2430
	Application Number	
Title of Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Jon	Hee	Lee	

Residence Information (Select One) ● US Residency Non US Residency Active US Military Service

City	State/Province	Country of Residence
Highwood	IL	US

Mailing Address of Inventor:

Address 1	228 S. Central Avenue
Address 2	
City	Highwood
State/Province	IL
Postal Code	60040
Country	US

Inventor 2 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Megan		Roe	

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

City	State/Province	Country of Residence
Kalamazoo	MI	US

Mailing Address of Inventor:

Address 1	4029 Heights Lane
Address 2	
City	Kalamazoo
State/Province	MI
Postal Code	49008
Country	US

Inventor 3 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Stacy	Noel	Simpson	

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	34757-2430
	Application Number	
Title of Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

City	Portage	State/Province	MI	Country of Residence	US

Mailing Address of Inventor:

Address 1	6035 Chablis Lane
Address 2	
City	Portage
State/Province	MI
Postal Code	49024
Country	US

Inventor 4 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Mark		Zehfuss	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Glen Allen	State/Province	VA	Country of Residence	US

Mailing Address of Inventor:

Address 1	10804 Cherry Hill Drive
Address 2	
City	Glen Allen
State/Province	VA
Postal Code	23059
Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	134811		
Email Address	patentdocket@eversheds-sutherland.com	Add Email	Remove Email

Application Information:

Title of the Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER		
Attorney Docket Number	34757-2430	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	18	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	34757-2430
	Application Number	
Title of Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	134811		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	15912901	2018-03-06

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	34757-2430
	Application Number	
Title of Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15912901	Continuation of	15225326	2016-08-01	9944305	2018-04-17

Prior Application Status	Expired	Remove

Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
15225326	Claims benefit of provisional	62311224	2016-03-21

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15225326	Continuation in part of	14597420	2015-01-15	9403550	2016-08-02

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14597420	Continuation of	14261558	2014-04-25	8955869	2015-02-07

Prior Application Status	Abandoned	Remove

Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14261558	Continuation of	12631375	2009-12-04

Prior Application Status	Expired	Remove

Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
12631375	Claims benefit of provisional	61119920	2008-12-04

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	34757-2430
	Application Number	
Title of Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	34757-2430
	Application Number	
Title of Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

PTO/AIA/14 (02-18)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	34757-2430
	Application Number	
Title of Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 — Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	BABY JOGGER, LLC		
Mailing Address Information For Applicant:			
Address 1	8575 Magellan Parkway		
Address 2	Suite 1000		
City	Richmond	**State/Province**	VA
Country	US	Postal Code	23227
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	34757-2430
	Application Number	
Title of Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☒

Organization Name	

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/James M. Hannon/			Date (YYYY-MM-DD)	2020-03-27
First Name	James	Last Name	Hannon	Registration Number	48565

Additional Signature may be generated within this form by selecting the Add button. Add

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	34757-2430
	Application Number	
Title of Invention	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Filer:	James Michael Hannon/LaYonda Prue
Attorney Docket Number:	34757-2430

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1720**

Electronic Acknowledgement Receipt

EFS ID:	38990476
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	James Michael Hannon
Filer Authorized By:	
Attorney Docket Number:	34757-2430
Receipt Date:	27-MAR-2020
Filing Date:	
Time Stamp:	14:17:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1720
RAM confirmation Number	E20203QE18556146
Deposit Account	195029
Authorized User	JAMES HANNON

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Oath or Declaration filed	34757-2430_Declaration.pdf	443771 24eb4193ed05a8f1a1e0522eb0239a3aa179754a	no	7
Warnings:					
Information:					
2	Drawings-only black and white line drawings	34757-2430_Drawings.pdf	1043652 2e5a434e75500b1d57245ad85b360a52df8df976	no	18
Warnings:					
Information:					
3		34757-2430_POA.pdf	253649 5e779346aacac3511019ab084f759d353410cde1	yes	2

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Power of Attorney	2	2

Warnings:					
Information:					
4		34757-2430_Specification.pdf	162029 6c55b1ea5b782b7eaaab0af4f63dab3a09e34610	yes	30

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Specification	1	23
	Claims	24	29

	Abstract		30	30	
Warnings:					
Information:					
5	Application Data Sheet	34757-2430_ADS.pdf	1256775 015c8d5f5e10d535a96a62871c8c59570f72b1df	no	10
Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	34832 aacfe9c2354397c0f07f9445921cba9400e9c273	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	3194708		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

U.S. Patent Appln. No. 15/225,326 Attorney Docket No. 34757-1526
Filed: August 1, 2016

PARTIES TO THE ASSIGNMENT

Assignor(s):

JON HEE LEE
228 S. Central Ave
Highwood, IL 60040

MEGAN ROE
4029 Heights Lane
Kalamazoo, MI 49008

STACY NOEL SIMPSON
6035 Chablis Lane
Portage, MI 49024

MARK ZEHFUSS
10804 Cherry Hill Drive
Glen Allen, VA 23059

Assignee:

BABY JOGGER, LLC
8575 Magellan Parkway, Suite 1000
Richmond, VA 23227

AGREEMENT

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled **"REMOVABLE SEAT ATTACHMENT FOR A STROLLER"** (Invention) for which a non-provisional application for United States Letters Patent

☒ was filed on August 1, 2016, and accorded U.S. Application No. 15/225,326 ; or

☐ will be filed concurrently with the submission of this executed PATENT ASSIGNMENT for recordation.

ASSIGNOR(S) hereby authorizes and requests ASSIGNEE'S legal representatives, of Sutherland Asbill and Brennan LLP, associated with Customer No. 134811, to insert in the header above and here in

parentheses (U.S. Application No. 15/225,326 , filed August 1, 2016), this application's U.S. application number and filing date, when known.

WHEREAS, ASSIGNEE, a corporation of the State of Virginia, is desirous of acquiring the entire right, title and interest in and to the Invention and in and to any letters patent that may be granted therefor in the United States and in any and all foreign countries;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE its successors and assigns, the entire right, title and interest in and to said Invention and any improvements thereto, said Application and any and all letters patent which may be granted for said Invention in the United States of America and its territorial possessions and in any and all foreign countries, and in any and all provisional, divisions, reissues, re-examinations and continuations thereof, including the right to file foreign applications directly in the name of ASSIGNEE and to claim priority rights deriving from said application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said Invention, application and all letters patent on said Invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR(S) had this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks to issue all letters patent on said Invention to ASSIGNEE. ASSIGNOR(S) agree to execute all instruments and documents required for the making and prosecution of applications for United States and foreign letters patent on said Invention, for litigation regarding said letters patent, or for the purpose of protecting title to said Invention or letters patent therefor.

AND ASSIGNOR(S) DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any

violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said letters patent before or after issuance.

AND ASSIGNOR(S) DOES HEREBY covenant and agree that ASSIGNOR(S) will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Invention or said application, and testify in any legal proceeding, assist in the preparation of any other patent property relating to the application and the Invention or any improvements made thereto, sign/execute all lawful papers, provide all requested documents, execute and make all rightful oaths and/or declarations in connection with the application and the Invention including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Invention in all countries. These provisions are binding upon our heirs, legal representatives, administrators, and assigns.

CORRESPONDENCE ADDRESS

I hereby direct all correspondence and telephone calls in connection with this application be addressed to the number associated with the customer number listed below, which is:

134811

PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

U.S. Patent Appln. No. 15/225,326
Filed: August 1, 2016

Attorney Docket No. 34757-1526

DECLARATION

As a below named inventor, I hereby declare that this declaration is directed to:

☐ the attached application; or

☒ United States application number 15/225,326 filed on August 1, 2016; or

☐ PCT international application number _____ filed on _____.
(We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application when known)

The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

Legal name of inventor: **JON HEE LEE**

Jon Hee Lee

07/28/16
Date

STATE OF Illinois
ss.
COUNTY OF Cook

This 28 day of July, 2016 before me personally came the above-named **Jon Hee Lee**, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

Seal

(Notary Public)

OFFICIAL SEAL
ANTHONY KEITH WINSTON
Notary Public - State of Illinois
My Commission Expires 08/21/2018

37061224.1

PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

Attorney Docket No. 34757-1526

U.S. Patent Appln. No. 15/225,326
Filed: August 1, 2016

X United States application number 15/225,326 filed on August 1, 2016; or

PCT international application number _____ filed on _____.
(We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application when known)

The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed Invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

Legal name of inventor: **MEGAN ROE**

Megan Roe

07.28.16
Date

STATE OF Michigan
ss.
COUNTY OF Kalamazoo

This 28th day of July, 2016 before me personally came the above-named **Megan Roe**, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

Seal

Diane L. Martin
(Notary Public)

DIANE L. MARTIN, Notary Public
State of Michigan, County of Cass
My Commission Expires 09/18/2022
Acting in the County of Kalamazoo

87061224.1

PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

Attorney Docket No. 34757-1526

U.S. Patent Appln. No. 15/225,326
Filed: August 1, 2016

DECLARATION

As a below named inventor, I hereby declare that this declaration is directed to:

- ☐ the attached application; or
- ☒ United States application number 15/225,326 filed on August 1, 2016; or
- ☐ PCT international application number _____ filed on _____
  (We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application when known)

The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed Invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

Legal name of inventor: **STACY NOEL SIMPSON**

Stacy Noel Simpson

7/25/2016
Date

STATE OF
ss.
COUNTY OF

This 25th day of July, 2016 before me personally came the above-named **Stacy Noel Simpson**, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

Seal

Diane L Martin
(Notary Public)

DIANE L. MARTIN, Notary Public
State of Michigan, County of Cass
My Commission Expires 09/16/2022
Acting in the County of Kalamazoo

37061224.1

PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

U.S. Patent Appln. No. 15/225,326
Filed: August 1, 2016

Attorney Docket No 34757-1526

DECLARATION

As a below named inventor, I hereby declare that this declaration is directed to:

☐ the attached application; or

☒ United States application number 15/225,326 filed on August 1, 2016; or

☐ PCT international application number _____ filed on _____.
(We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application when known)

The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

Legal name of inventor: MARK ZEHFUSS

Mark Zehfuss

8/2/16
Date

STATE OF Virginia
ss.
COUNTY OF Henrico

This 2nd day of August, 2016 before me personally came the above-named **Mark Zehfuss**, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

Seal

DARNELL TREVON TAYLOR
COMMONWEALTH OF VIRGINIA
REG. NO. 7508517 EXP. 8-31-18
NOTARY PUBLIC

Darnell Trevon Taylor
(Notary Public)

37061224.1

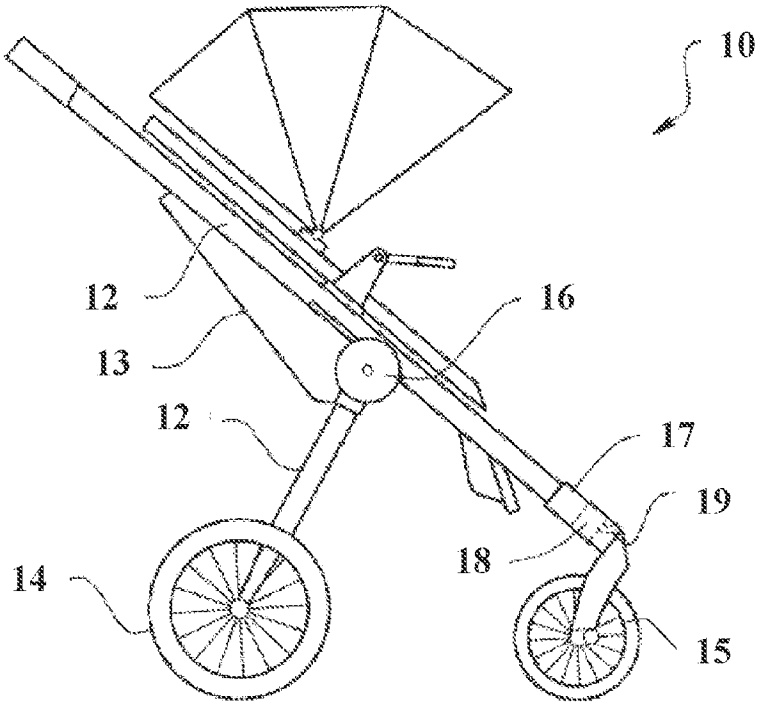


FIGURE 1

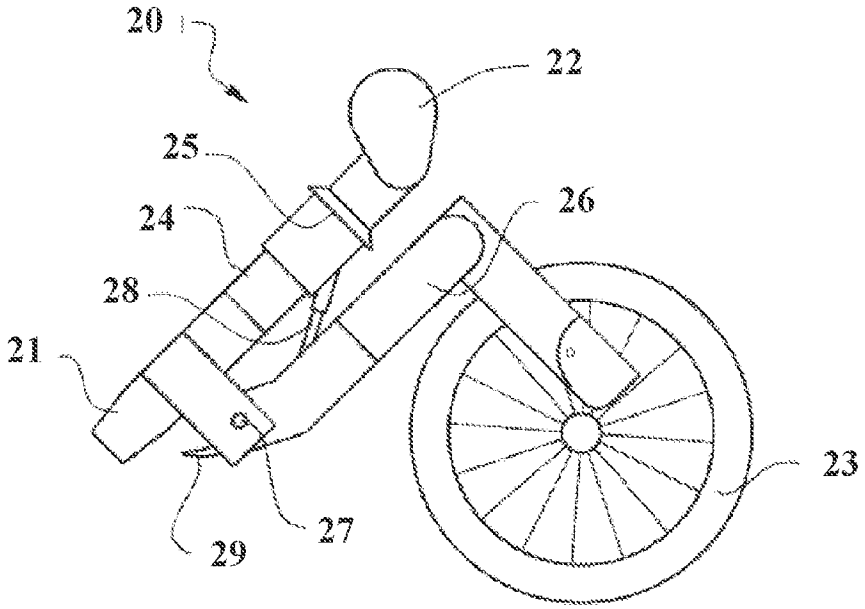


FIGURE 2

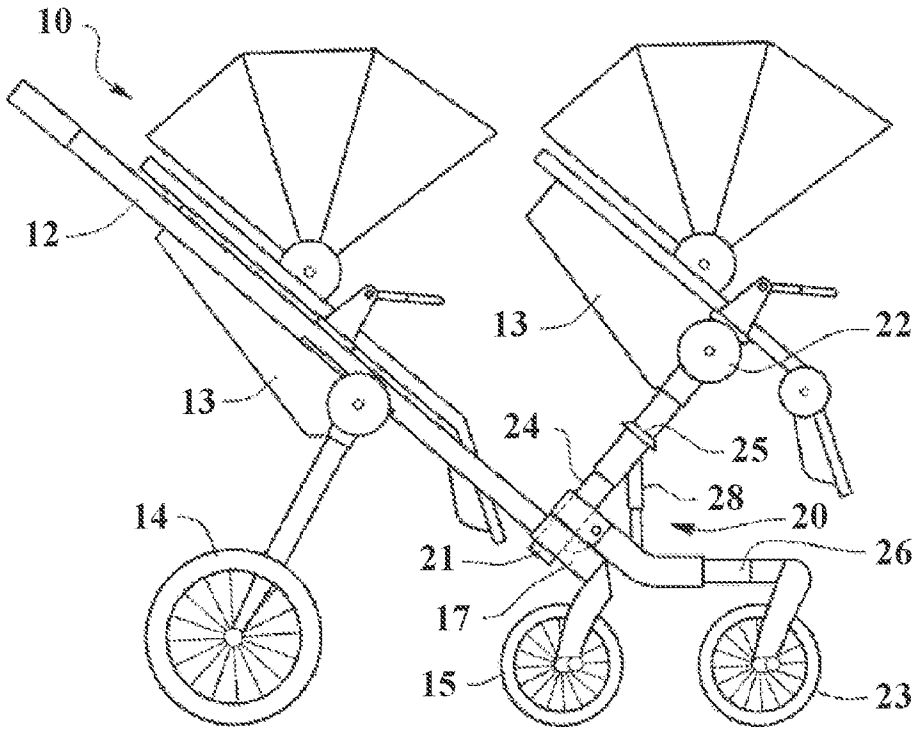


FIGURE 3

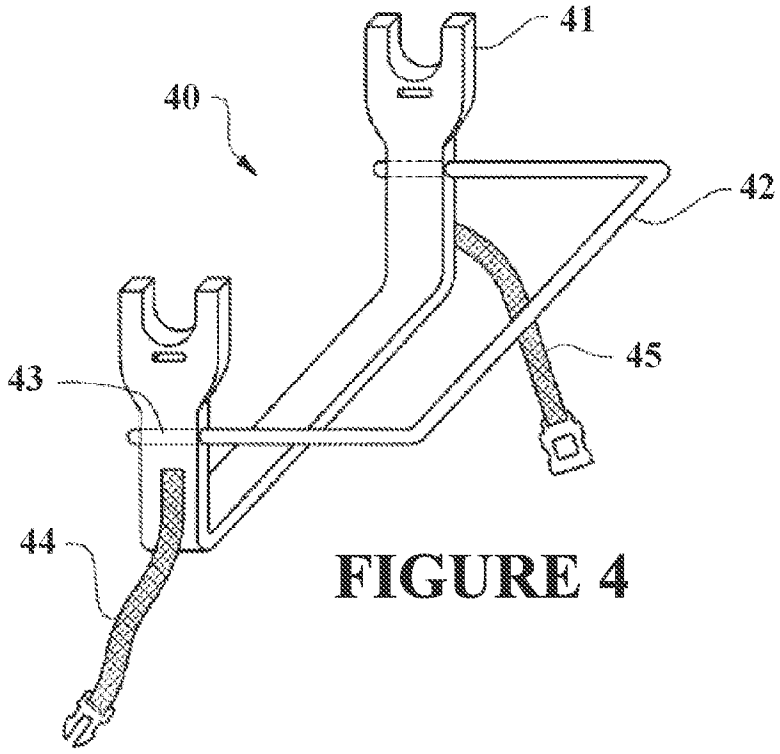


FIGURE 4

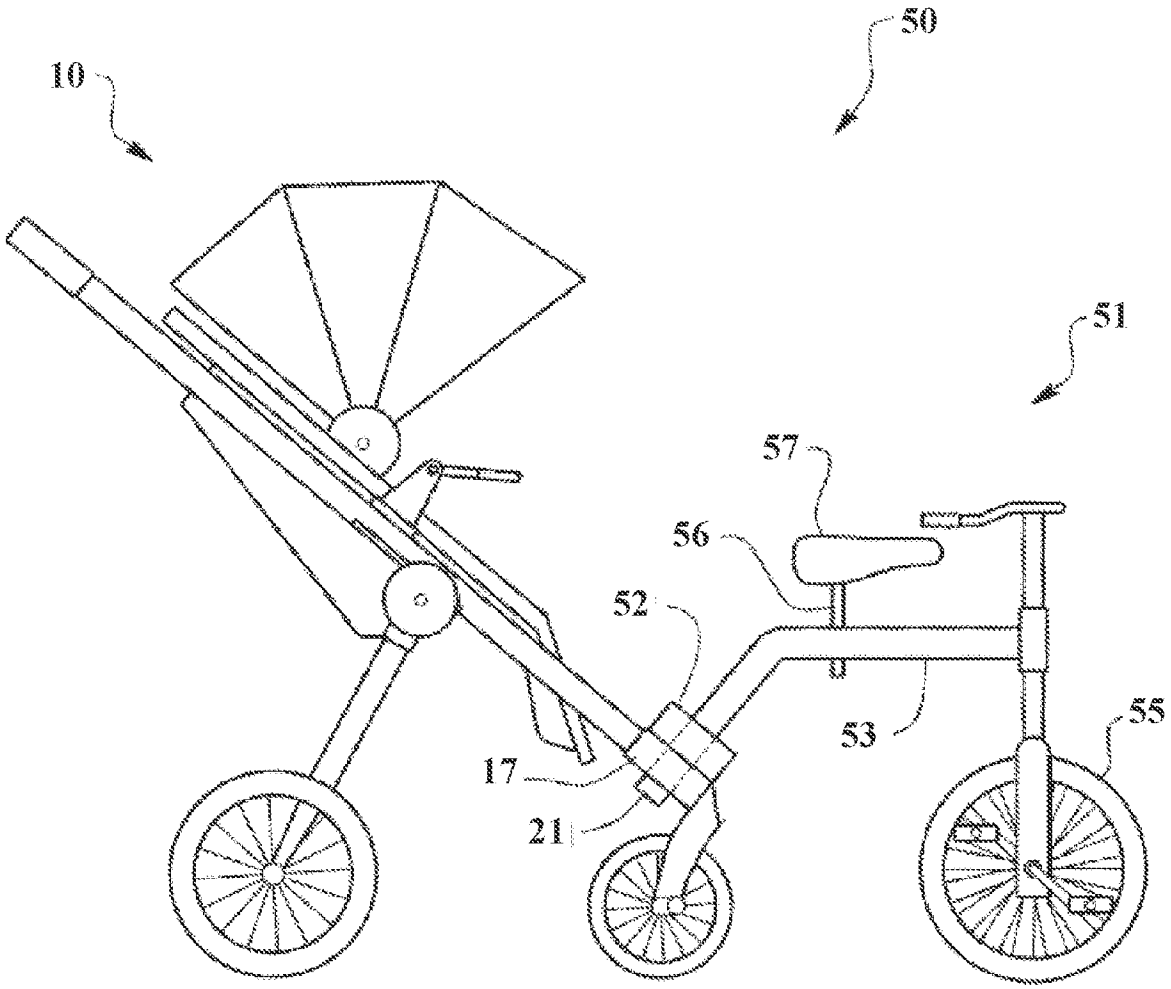


FIGURE 5

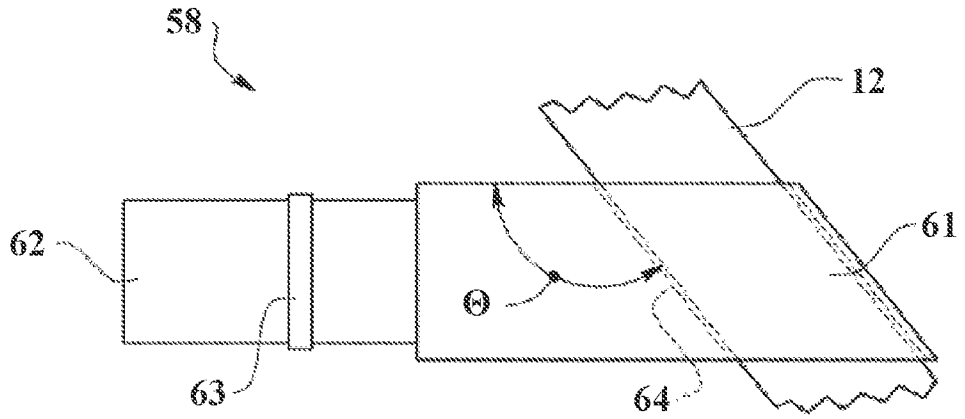


FIGURE 6A

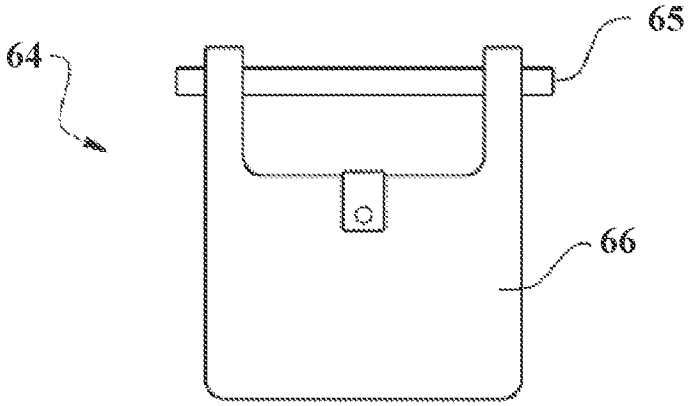


FIGURE 6B

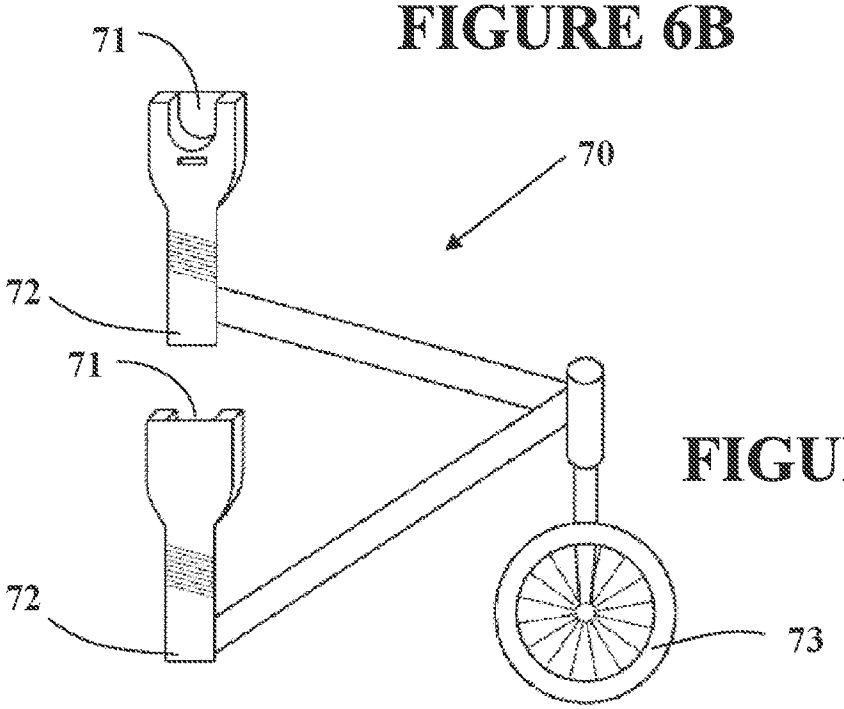


FIGURE 7

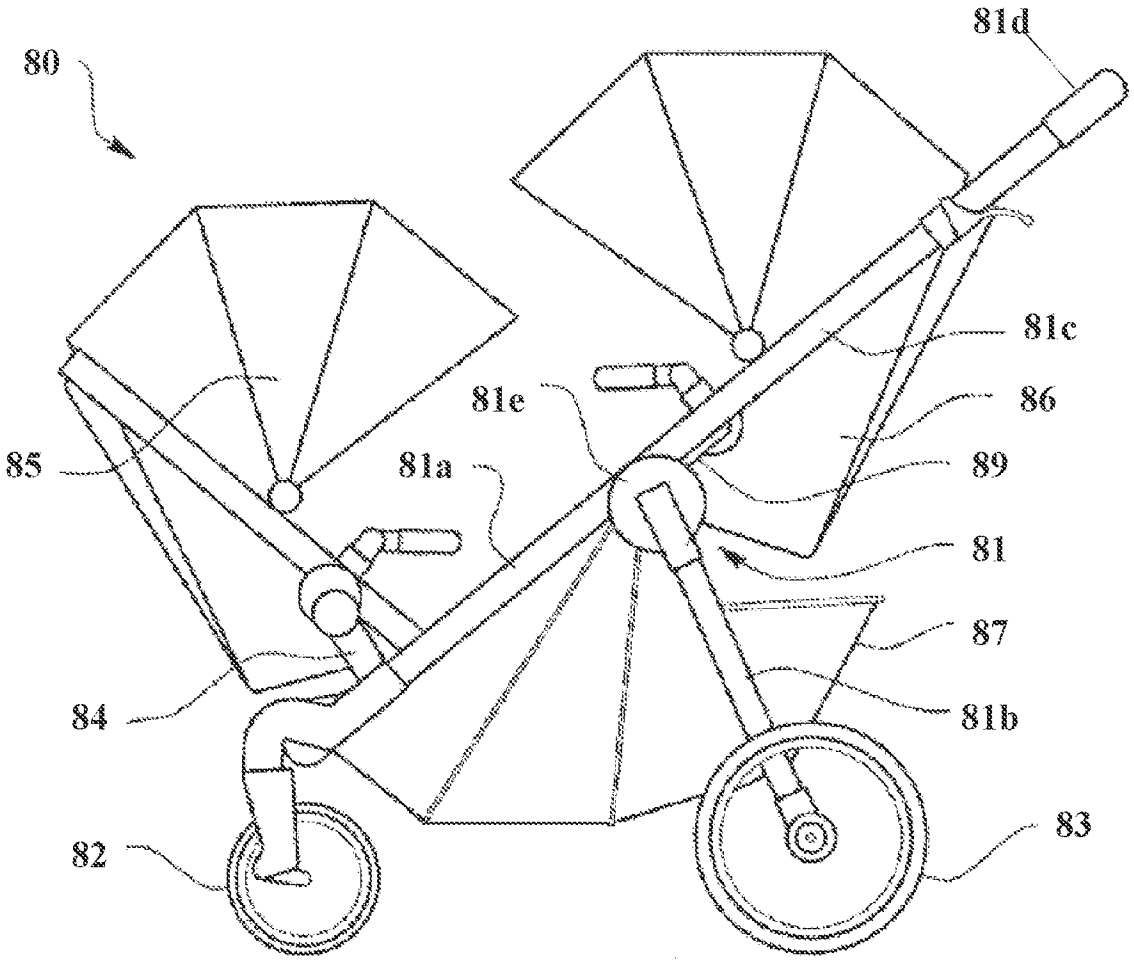


FIGURE 8A

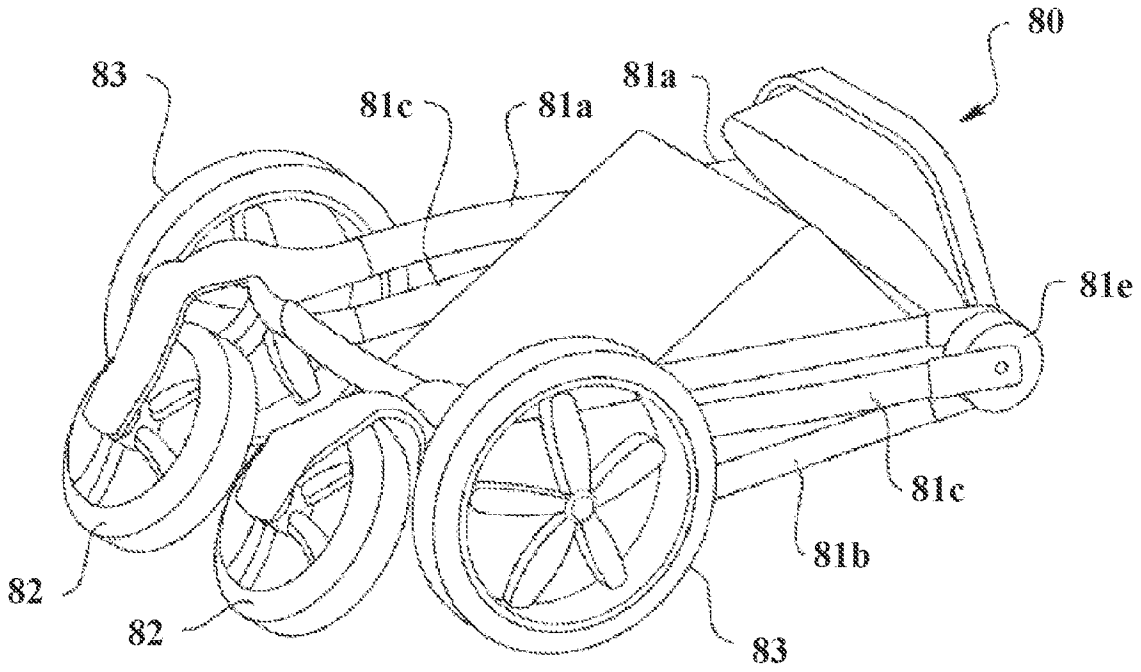


FIGURE 8B

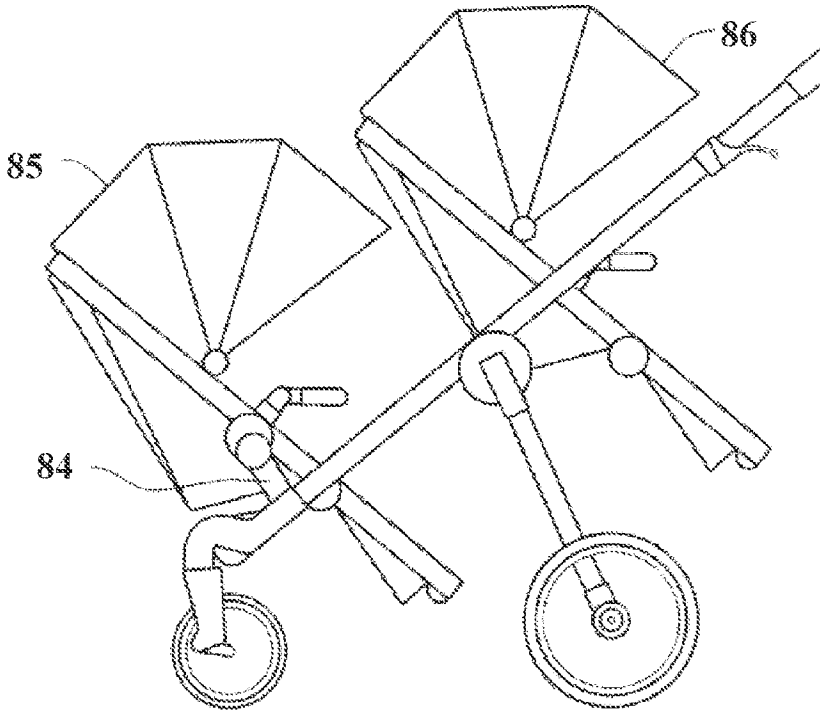


FIGURE 8C

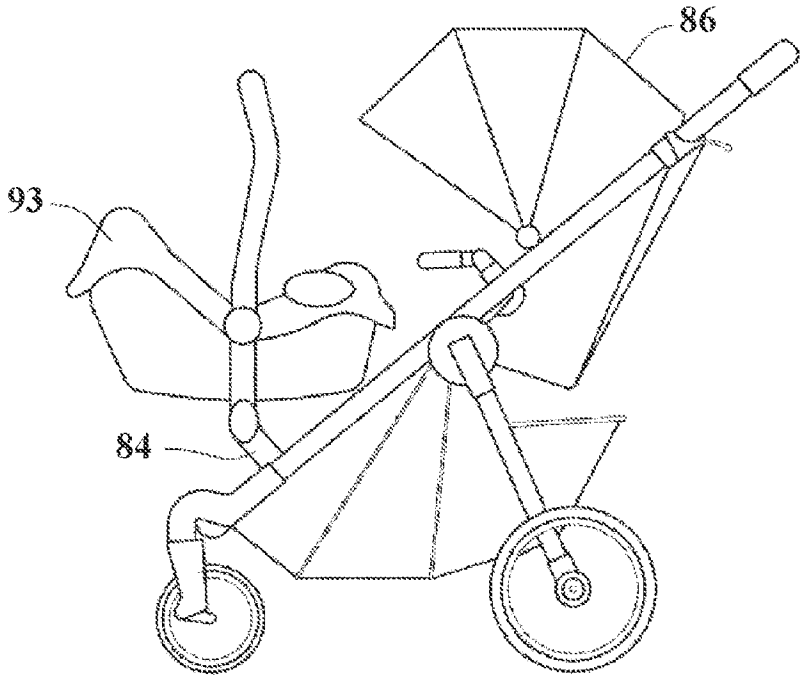


FIGURE 8D

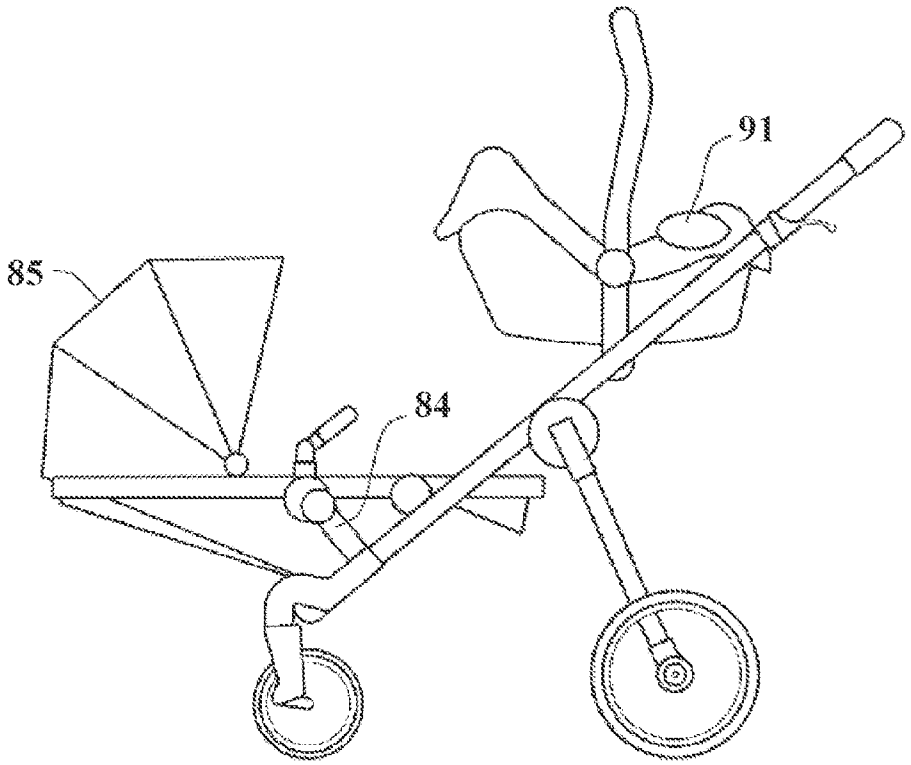


FIGURE 8E

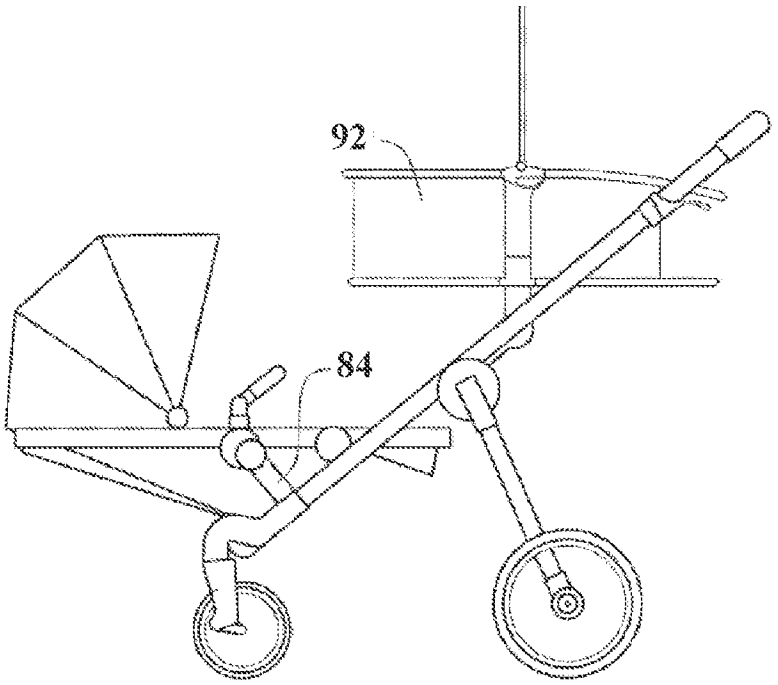


FIGURE 8F

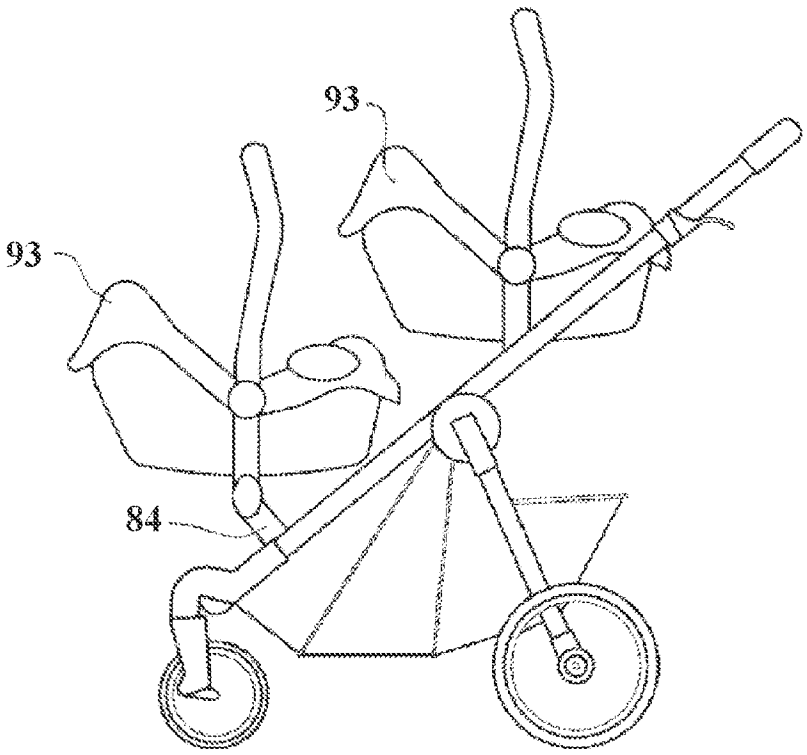


FIGURE 8G

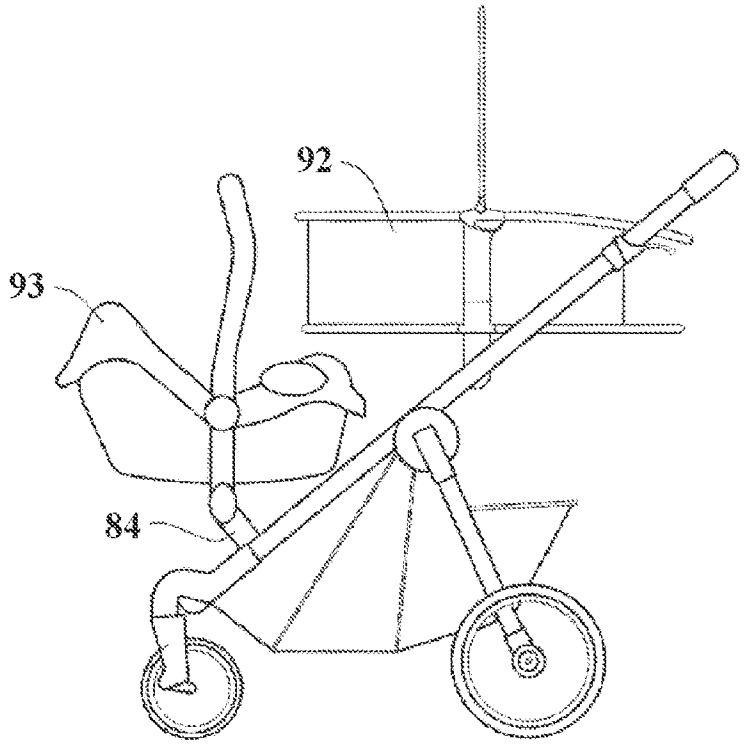


FIGURE 8H

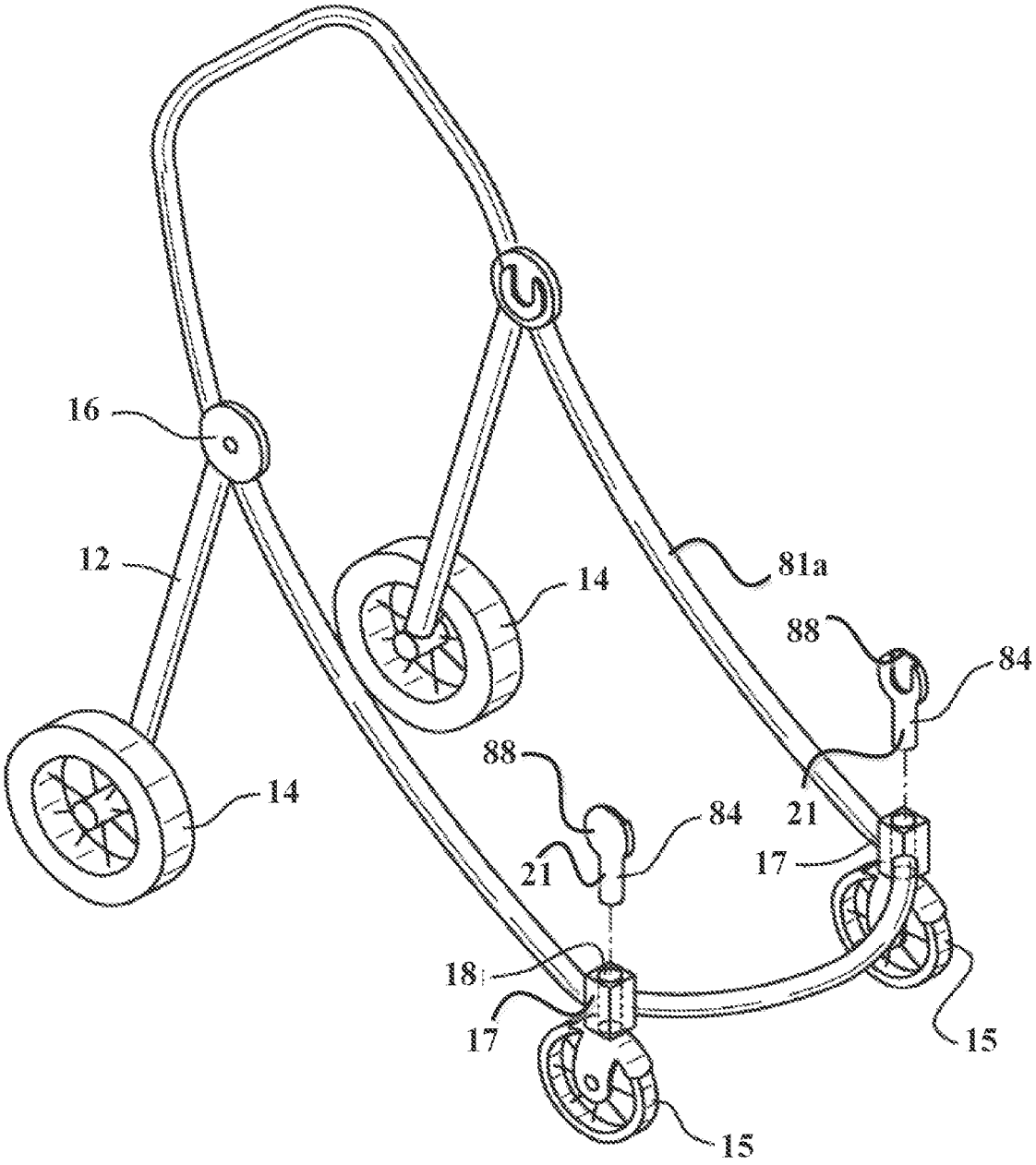


FIGURE 9

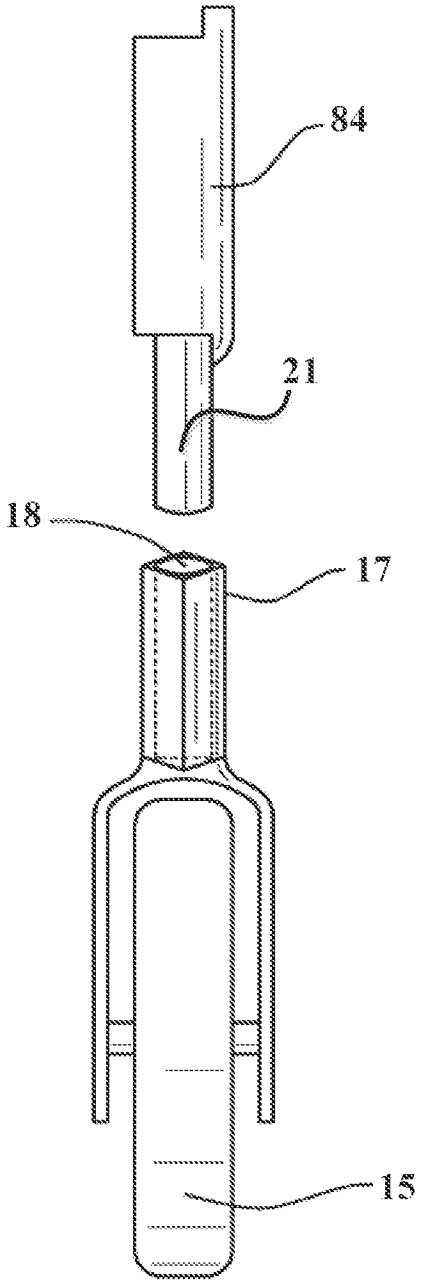
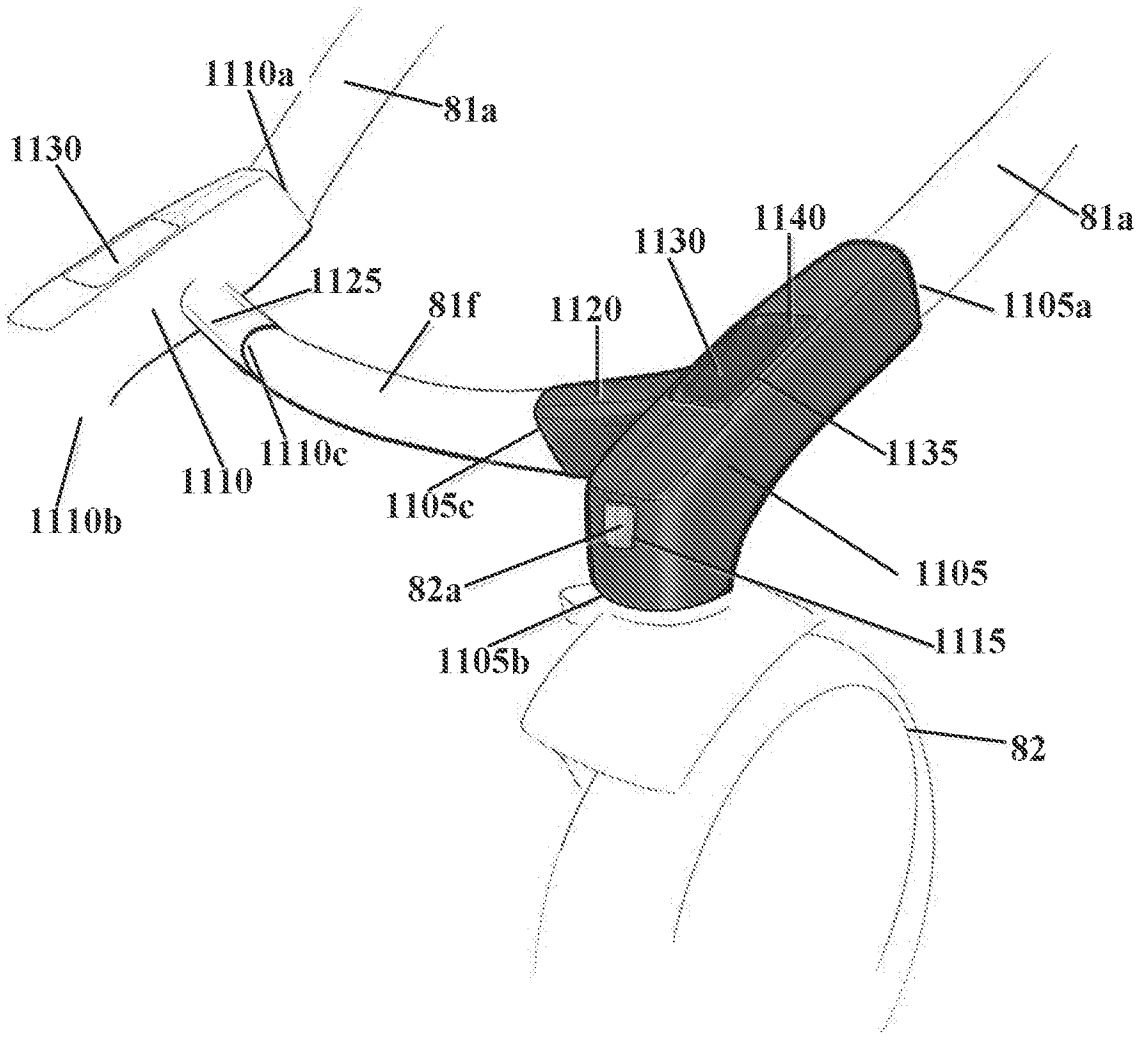


FIGURE 10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82

FIGURE 11

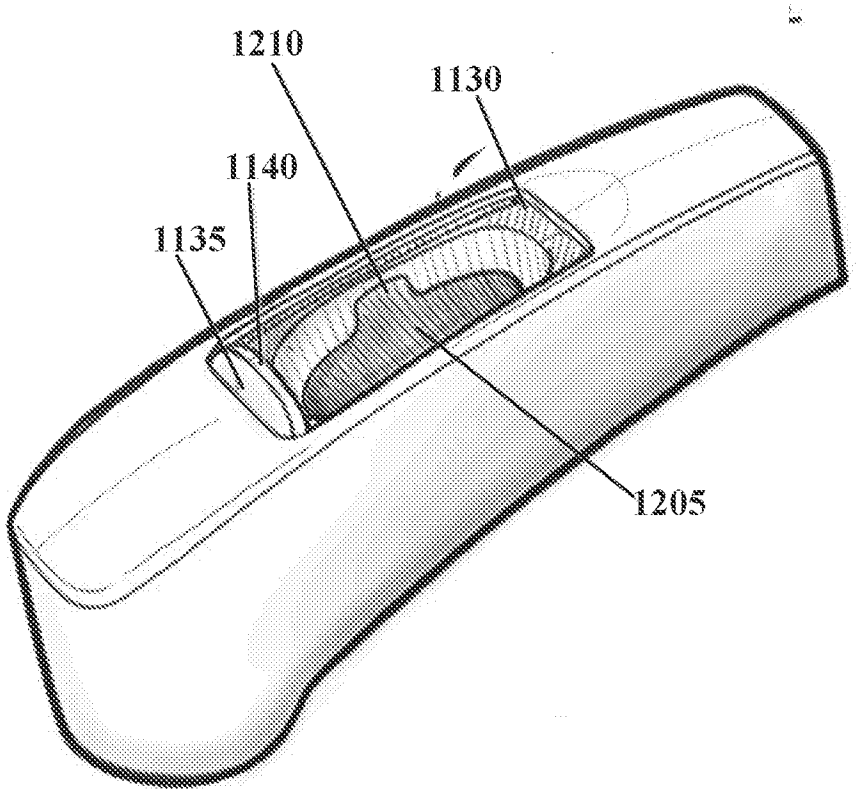

FIGURE 12

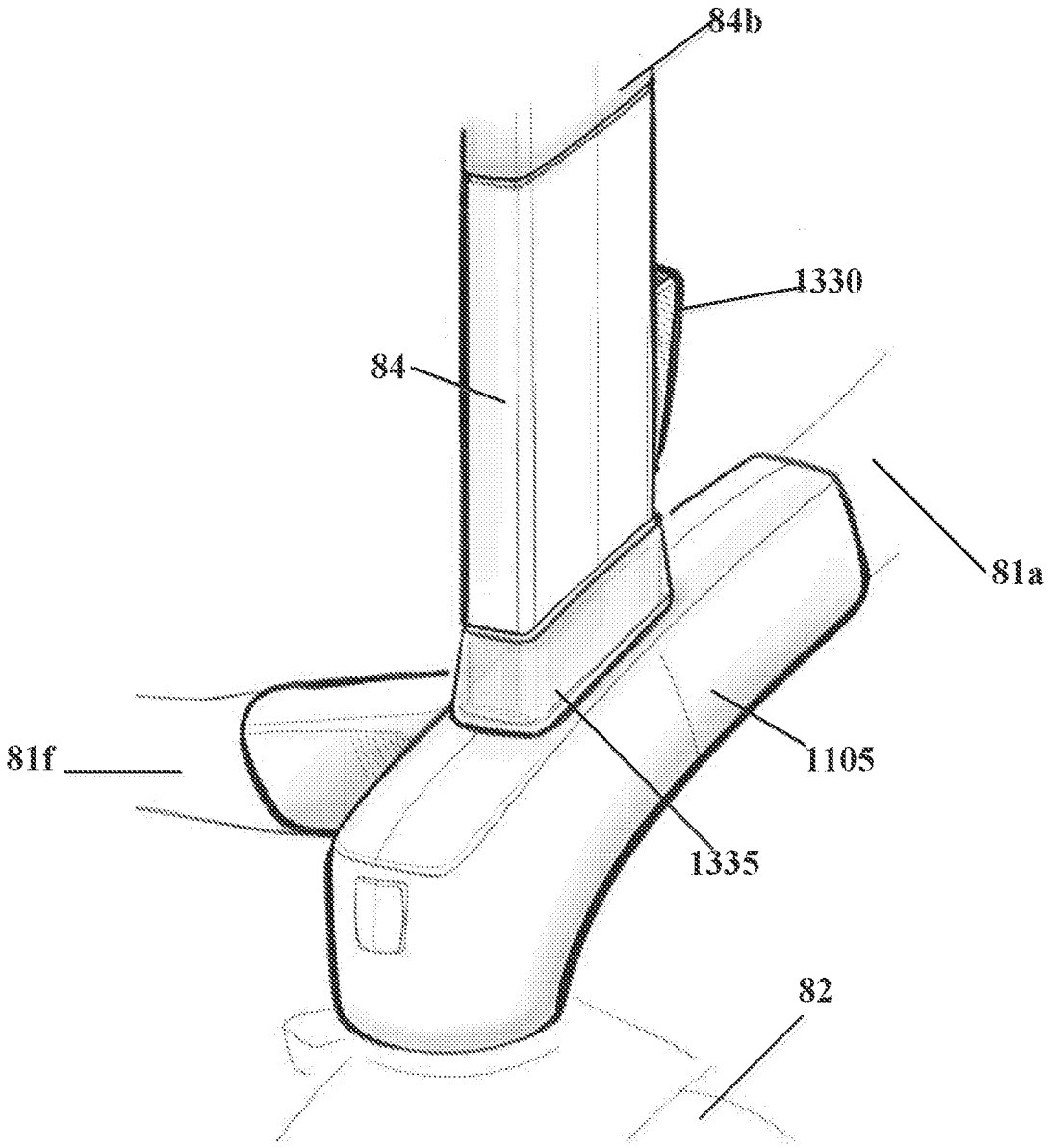

FIGURE 13A

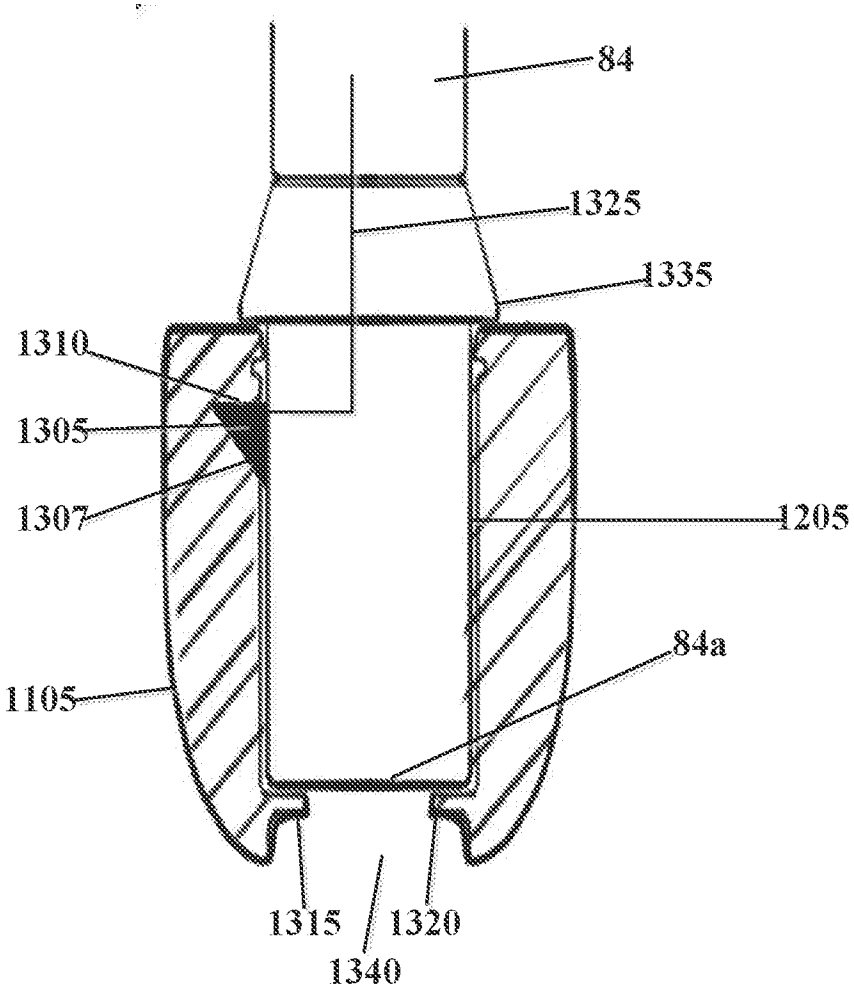

FIGURE 13B

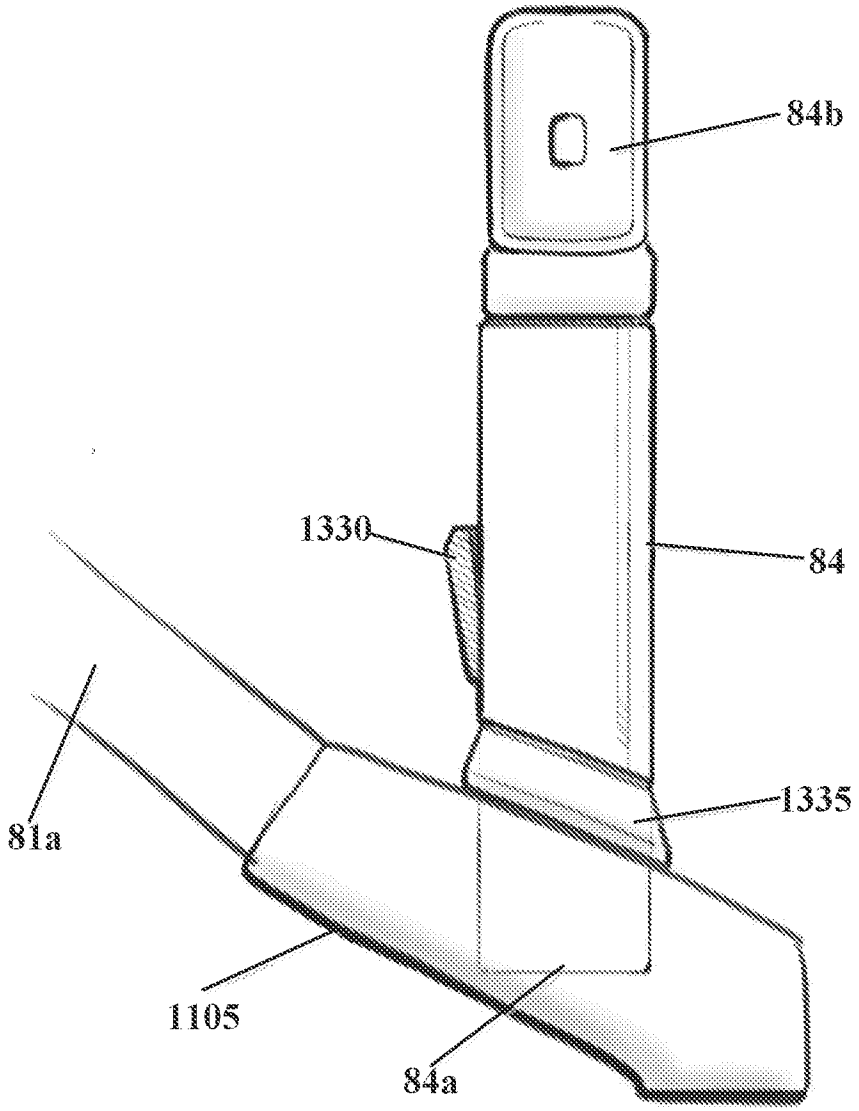

FIGURE 13C

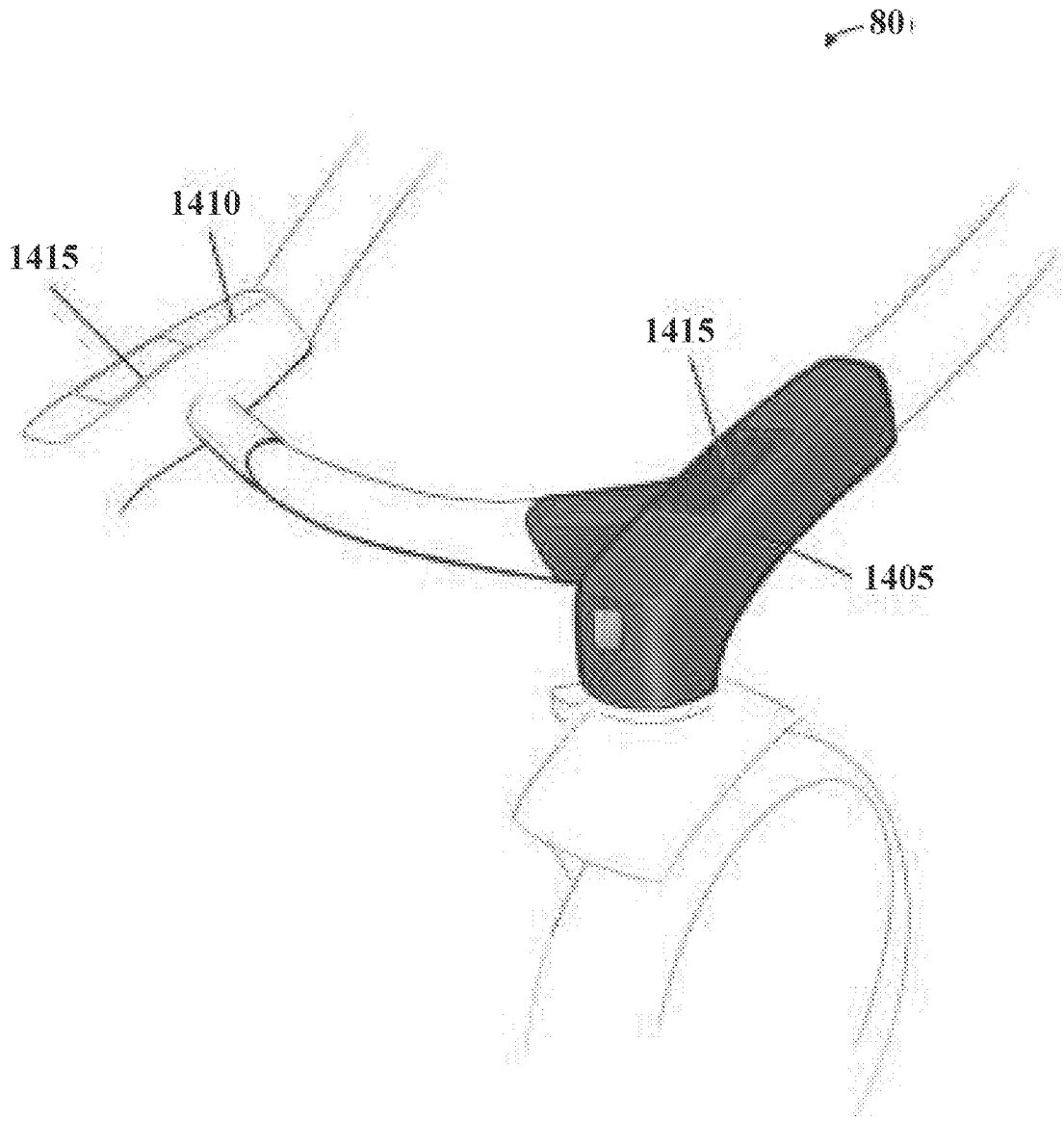

FIGURE 14A

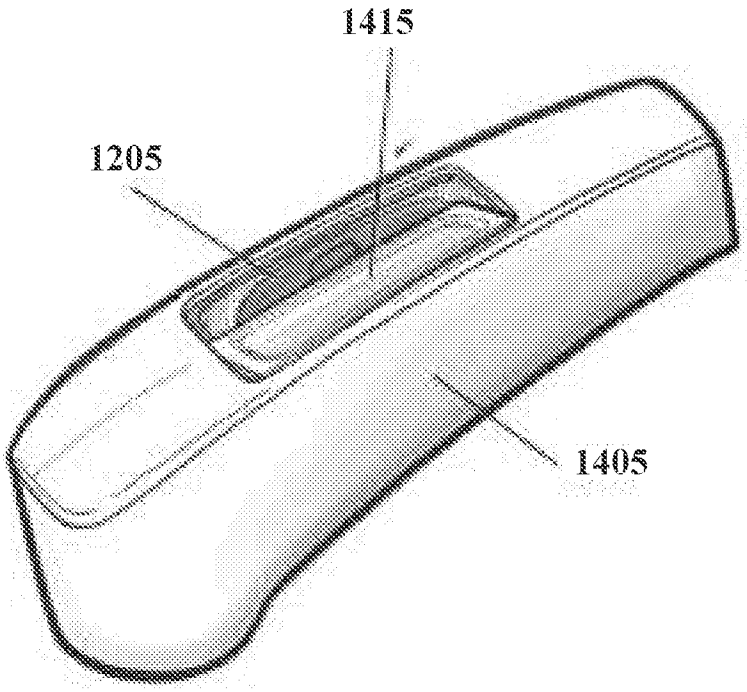

FIGURE 14B

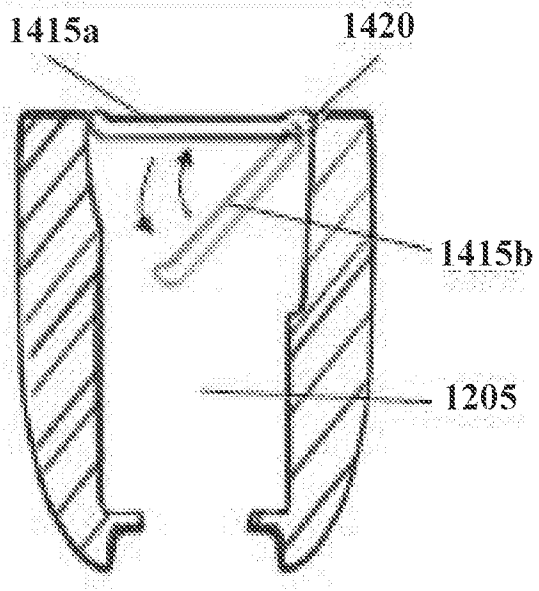

FIGURE 14C

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82A (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	New Application
Filing Date	March 27, 2020
First Named Inventor	Jon Hee Lee
Title	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	34757-2430

SIGNATURE of Applicant or Patent Practitioner

Signature	/James M. Hannon/	Date (Optional)	2020-03-27
Name	James M. Hannon	Registration Number	48,565
Title (if Applicant is a juristic entity)	Attorney of Record		
Applicant Name (if Applicant is a juristic entity)	BABY JOGGER, LLC		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

CD Submission Review Results

Internal Worksheet Only - Do Not Scan

Application Number	16832429	Receipt Date	Mar 27, 2020

X	New Application		Response To Notice	Date Of Response

[ ] Jumbo – Large tables are included on the CD

[X] **There are no problems with the CDs in the submission.**

Items checked below are to be selected in the PALM Pre-Exam CD problem list.

Omitted Items

	Files on compact disc are unreadable:
	Disc(s) of either set not readable:
	Disc(s) do not contain file names listed:
	Amended CD missing unamended files
	Missing compact discs

Missing Parts

	Disc(s) do not contain file names listed
	Discs contains files that are non-ASCII files:
	Only one copy of the CD, no duplicate:
	Wrong media type, e.g., CD-RW:
	The transmittal letter and specification do not list information:
	Both disc(s) contain unreadable files:
	One disc(s) contain unreadable files:
	Compact disc(s) contain viruses, but are still readable:
	EFS/Paper Submission:
	Table does not maintain data in proper alignment:
	Not proper subject matter for CD's:

Informality

	No statement in transmittal letter that CD's are the same:
	No incorporation by reference statement for the CD's:
	CD's not labeled "Copy 1" and "Copy 2":
	Deficient CD packaging:
	Deficient Labeling on CD's:
	The transmittal letter does not list information:
	The specification does not list information:
	Table less than 51 pages submitted on CD:

File Directory Attachment

	Copy of file directory listing is attached and should be mailed to applicant
	Copy of file directory listing is not attached
	Copy of file directory listing is not attached because it is over one page long

Additional Comments

Internal Worksheet Only - Do Not Scan

SCORE Placeholder Sheet for IFW Content

Application Number: 16832429 Document Date: 03/27/2020

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

- Drawing

At the time of document entry (noted above):

- USPTO employees may access SCORE content via DAV or via the SCORE web page.
- External customers may access SCORE content via PAIR using the Supplemental Content tab.

Form Revision Date: March 1, 2019

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/832,429	03/27/2020	3618	1720	34757-2430	20	3

CONFIRMATION NO. 8948

FILING RECEIPT

134811
Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

OC000000118039552

Date Mailed: 04/08/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Jon Hee Lee, Highwood, IL;
Megan Roe, Kalamazoo, MI;
Stacy Noel Simpson, Portage, MI;
Mark Zehfuss, Glen Allen, VA;

Applicant(s)

BABY JOGGER, LLC, Richmond, VA;

Power of Attorney: The patent practitioners associated with Customer Number 134811

Domestic Priority data as claimed by applicant

This application is a CON of 15/912,901 03/06/2018
which is a CON of 15/225,326 08/01/2016 PAT 9944305
which claims benefit of 62/311,224 03/21/2016
and is a CIP of 14/597,420 01/15/2015 PAT 9403550
which is a CON of 14/261,558 04/25/2014 PAT 8955869
which is a CON of 12/631,375 12/04/2009 ABN
which claims benefit of 61/119,920 12/04/2008

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 04/07/2020

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/832,429**

Projected Publication Date: 07/16/2020

Non-Publication Request: No

Early Publication Request: No

Title

REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Preliminary Class

280

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 16/832,429

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	660
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*			OR	x 100 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*				x 460 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1720

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

To: patentdocket@eversheds-sutherland.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 134811

Apr 08, 2020 04:12:31 AM

Dear PAIR Customer:

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 134811 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

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Application	Document	Mailroom Date	Attorney Docket No.
16832429	APP.FILE.REC	04/08/2020	34757-2430

To view your correspondence online or update your email addresses, please visit us anytime at https://sportal.uspto.gov/secure/myportal/privatepair.

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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

134811 7590 05/15/2020

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

EXAMINER	
DOLAK, JAMES M	

ART UNIT	PAPER NUMBER
3618	

NOTIFICATION DATE	DELIVERY MODE
05/15/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@eversheds-sutherland.com

Office Action Summary	Application No. 16/832,429	Applicant(s) Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 3/27/2020.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☐ Claim(s) _____ is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☑ Claim(s) 1-20 are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☑ Other: Restriction requirement.

2DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Election/Restrictions

2. This application contains the following patentably distinct species (not all of which currently have claims directed thereto):

a. **Species A – directed to the embodiment of Fig.1-3 (single stroller with seat attachment);**

b. **Species B – directed to the embodiment of Fig.4 (seat attachment capable of supporting a car seat);**

c. **Species C – directed to the embodiment of Fig.5 (single stroller attached to an embodiment of the attachment in the form of a tricycle-like riding device);**

d. **Species D – directed to the embodiment of Fig.6A-6B (accessory attachment for supporting an accessory on a stroller);**

e. **Species E – directed to the embodiment of Fig.7 (attachment for supporting a seat comprising one wheel);**

f. **Species F – directed to the embodiment of Fig.8A-8H (stroller apparatus capable of being converted from a single seat stroller to a double seat stroller through the use of removable seat attachment adapters);**

g. **Species G – directed to the embodiment of Fig.9&10 (double seat stroller with two removable seat attachment adapters 84 for first seat and separate upper second seat attachment portion);**

h. **Species H – directed to the embodiment of Fig.11-13C (stroller with seat attachment housing according to one example embodiment of the disclosure and removable seat attachment adapter removably coupled to the seat attachment housing according to one example embodiment of the disclosure);**

i. **Species I – directed to the embodiment of Fig.14A-C (an alternative embodiment of the seat attachment housing according to another example embodiment of the disclosure).**

3. The species are independent or distinct because each of Species A-I are directed to a various different strollers and/or stroller attachments. The related inventions are distinct if: (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed are materially different in design. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, or a single grouping of patentably indistinct species, for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently,

as best understood, **no claims appear generic**. However, Applicant is advised to also determine whether any of the claims appear generic to all of the above species.

There is a search and/or examination burden for the patentably distinct species as set forth above because at least the following reason(s) apply: the species of patentably distinct inventions require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search strategies or search queries). **For example, the currently species of invention contain claims which would require complex text searching based on the numbers of seats and attachment points on the stroller of the various options disclosed**.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or a grouping of patentably indistinct species to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species or grouping of patentably indistinct species**, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after

the election, applicant must indicate which of these claims are readable on the elected species or grouping of patentably indistinct species.

Should applicant traverse on the ground that the species, or groupings of patentably indistinct species from which election is required, are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing them to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES M DOLAK whose telephone number is (571)270-7757. The examiner can normally be reached on 9-530 EST Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J ALLEN SHRIVER can be reached on 303-297-4337. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES M DOLAK/
Primary Examiner, Art Unit 3618

To: patentdocket@eversheds-sutherland.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 134811

May 15, 2020 04:32:23 AM

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UNITED STATES

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Application	Document	Mailroom Date	Attorney Docket No.
16832429	CTRS	05/15/2020	34757-2430

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Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

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PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
John Hee Lee, et al.	)	Confirmation No.: **8948**
	)	
Application No.: **16/832,429**	)	Art Unit: **3618**
	)	
Filed: **March 27, 2020**	)	Examiner: **James M. Dolak**
	)	
For: **Removable Seat Attachment for a Stroller**	)	
	)	
	)	
	)	

RESPONSE TO SPECIES RESTRICTION REQUIREMENT

Via EFS-Web
Mail Stop Amendment
Commissioner for Patents
Alexandria, VA 22313-1450

Dear Examiner Dolak:

This Response is submitted in response to the Species Restriction Requirement with a Notification Date of May 15, 2020. In light of the amendments and remarks included herein, it is respectfully asserted that all pending claims are patentable, and it is respectfully requested that this application be allowed.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks begin on page 8 of this paper.

I hereby certify that this correspondence is being electronically filed via EFS-WEB to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Attn: Examiner Dolak, GAU 3618, on July 15, 2020.

/Christopher J. Chan/
Christopher J. Chan
Reg. No. 44,070

AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below. This listing of claims will replace all prior versions and listing of claims for this application.

1. (Original) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first front wheel support frame adjustable with respect to the first upper tube support frame;

a second front wheel support frame adjustable with respect to the second upper tube support frame;

a first back wheel support frame rotatable with respect to the first upper tube support frame; and

a second back wheel support frame rotatable with respect to the second upper tube support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position;

a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position and wherein the second vertical position and the third vertical position are at a same vertical height.

2. (Original) The stroller of claim 1, further comprising:

a first seat attachment housing disposed adjacent the first front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the second front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

3. (Original) The stroller of claim 2, wherein the first seat attachment housing extends into the first front wheel support frame and the second seat attachment housing extends into the second front wheel support frame.

4. (Original) The stroller of claim 2, wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end.

5. (Original) The stroller of claim 4, wherein the first end comprises a connector portion and is coupled to one of the first seat attachment housing and the second seat attachment housing.

6. (Original) The stroller of claim 4, wherein the second seat is configured to be removably coupled to the second end.

7. (Original) The stroller of claim 1, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

8. (Original) The stroller of claim 1, further comprising:

a third seat attachment adapter coupled to the stroller frame at the first vertical position; and

a fourth seat attachment adapter coupled to the stroller frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

9. (Original) The stroller of claim 1, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

10. (Original) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a front wheel support frame adjustable with respect to the first upper tube support frame;

a back wheel support frame rotatable with respect to the first upper tube support frame; and

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position;

a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position.

11. (Original) The stroller of claim 10, wherein the front wheel support frame comprises a first front wheel support frame member and a second front wheel support frame member.

12. (Original) The stroller of claim 10, wherein the back wheel support frame comprises a first back wheel support member and a second back wheel support member.

13. (Original) The stroller of claim 10, further comprising:

a first seat attachment housing disposed adjacent the front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

14. (Original) The stroller of claim 13, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion configured to be coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is configured to be removably coupled to the second end.

15. (Original) The stroller of claim 10, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

16. (Original) The stroller of claim 10, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame at the first vertical position; and

a fourth seat attachment adapter coupled to the second upper tube support frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

17. (Original) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first back wheel support frame;

a second back wheel support frame;

a first front wheel support frame;

a second front wheel support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled to the stroller frame at a first vertical position of the stroller frame;

a first seat attachment housing disposed adjacent the first front wheel support frame:

a second seat attachment housing disposed adjacent the second front wheel support frame;

a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position;

a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position;

wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter.

18. (Original) The stroller of claim 17, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion configured to be coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is configured to be removably coupled to the second end.

19. (Original) The stroller of claim 17, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

20. (Original) The stroller of claim 17, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame; and

a fourth seat attachment adapter coupled to the second upper tube support frame;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

REMARKS

Claims 1-20 were subject to a species restriction imposed in the Office Action on May 15, 2020. After entry of this Response, claims 1-20 remain pending. This Response elects a species restriction is traversed Allowance of the application and pending claims is respectfully requested.

I. Species Restriction Requirement

The Examiner has identified the following species based on the figures as follows:

Species A: Figures 1-3, single stroller with seat attachment;

Species B: Figure 4, seat attachment capable of supporting a car seat;

Species C: Figure 5, single stroller attached to an embodiment of the attachment in the form of a tricycle-like riding device;

Species D: Figures 6A-6B, accessory attachment for supporting an accessory on a stroller;

Species E: Figure 7, attachment for supporting a seat comprising one wheel;

Species F: Figures 8A-8H, stroller apparatus capable of being converted from a single seat stroller to a double seat stroller through the use of removable seat attachment adapters;

Species G: Figures 9-10, double seat stroller with two removable seat attachment adapters 84 for first seat and separate upper second seat attachment portion;

Species H: Figures 11-13C, stroller with seat attachment housing according to one example embodiment of the disclosure and removable seat attachment adapter removably couples to the seat attachment housing according to one example embodiment of the disclosure; and

Species I: Figures 14A-C, an alternative embodiment on the seat attachment housing according to another example.

A. Election of Species

Applicant elects, without traverse, Species F, Figures 8A-8H. Claims 1-20 are at least directed to Species F, Figures 8A-8H.

Applicant reserves the right to file a divisional application directed to any unelected species at a later date if so desired. Upon entry of this response, claims 1-20 remain pending and not withdrawn in this application with claims 1, 10, and 17 being the independent claims.

CONCLUSION

The foregoing is submitted as a full and complete response to the Species Restriction Requirement with a Notification Date of May 15, 2020. Applicant and the undersigned thank Examiner Dolak for the consideration of these amendments and remarks. Applicant has made a proper election in response to the Examiner's restriction requirement. Examination of claims 1-20 is hereby courteously solicited.

It is not believed that extensions of time or fees for addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 19-5029.

If the Examiner believes that there are any issues that can be resolved by a telephone conference, or that there are any formalities that can be corrected by an Examiner's amendment, please contact the undersigned at 404-853-8049.

Respectfully submitted,

/Christopher J. Chan/

Christopher J. Chan
Reg. No. 44,070

DATE: **July 15, 2020**

EVERSHEDS SUTHERLAND (US) LLP
999 Peachtree Street NE
Atlanta, Georgia 30309-3996
Telephone: (404) 853-8049
Facsimile: (404) 853-8806

Attorney Docket No.: **34757-2430**

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(Not for submission under 37 CFR 1.99)

Application Number	16832429
Filing Date	2020-03-27
First Named Inventor	Jon Hee Lee
Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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	Art Unit	3618
	Examiner Name	James M. Dolak
	Attorney Docket Number	34757-2430

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Christopher J. Chan/	Date (YYYY-MM-DD)	2020-07-15
Name/Print	Christopher J. Chan	Registration Number	44070

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Application Number	16832439
Filing Date	2020-03-27
First Named Inventor	John Hee Lee
Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

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	9	9840168	B2	2017-12-12	Yi et al.	
	10	10207731	B2	2019-02-19	Taylor et al.	
	11	10023218	B2	2018-07-17	Paxton	
	12	6286844	B1	2001-09-11	Cone II, et al.	
	13	7475900	B2	2009--1-13	Cheng	
	14	D593459	S	2009-06-02	Liao	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20100140902	A1	2010-06-10	Zehfuss	Corresponds to CN 103921830 A.
	2	20140333039	A1	2014-11-13	Zehfuss	Corresponds to CN 102256856 A.

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16832439
Filing Date	2020-03-27
First Named Inventor	John Hee Lee
Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	102256856	CN	A	2011-11-23	DYNAMIC BRANDS LLC	Corresponds to US 2014/0333039 A1.	
	2	103909960	CN	A	2014-07-09	KOLCRAFT ENTPR INC	Corresponds to US 2014/0191483 A1 (previoulsy submitted).	
	3	103921830	CN	A	2014-07-16	DYNAMIC BRANDS LLC	Corresponds to US 2010/0140902 A1.	
	4	201626448	CN	U	2010-11-10	GE LUO		
	5	201646823	CN	U	2010-11-24	GOODBABY CHILD PRODUCTS CO LTD		

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	OFFICE ACTION issued in Chinese Application No. 201710169826.4, dated October 31, 2018, 11 pages.	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	16832439
	Filing Date	2020-03-27
	First Named Inventor	John Hee Lee
	Art Unit	3618
	Examiner Name	James M. Dolak
	Attorney Docket Number	34757-2430

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	16832439
	Filing Date	2020-03-27
	First Named Inventor	John Hee Lee
	Art Unit	3618
	Examiner Name	James M. Dolak
	Attorney Docket Number	34757-2430

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Christopher J. Chan/	Date (YYYY-MM-DD)	2020-07-15
Name/Print	Christopher J. Chan	Registration Number	44070

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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IP Australia

ABN 38 113 072 755

Discovery House, Phillip ACT 2606
PO Box 200, Woden ACT 2606
Australia

P 1300 651 010
Int +61 2 6283 2999
www.ipaustralia.gov.au

Address: Griffith Hack
GPO Box 1285
Melbourne VIC 3001
Australia

Date of issue: 1 April 2014

Patent Examination Report No. 1

Application Details

Patent Application No.:	2009322149
Applicant/s:	DYNAMIC BRANDS, LLC
Your reference:	PNF:NJA:P87221.AU
Earliest Priority Date:	04 December 2008
Examination Request Date:	08 March 2013

Your application has been examined under Section 45 of the *Patents Act 1990*. I consider that the application does not meet the requirements of the Act for the reasons indicated below.

Actions you can take

NOTE: There is a current postponement of acceptance in place. If you overcome all other objections before the expiration of that postponement, the Commissioner will only accept the application at that time if you have filed a clear and unambiguous statement requesting the withdrawal of that postponement. Otherwise, a further adverse report will be issued.

You have **21 months** from the date of this report to overcome all my objection(s) otherwise your application will lapse.

You will need to pay a monthly fee for any response you file after 12 months from the date of the first report.

You will also need to pay any annual continuation fees that apply. Information about fees may be obtained by phoning 1300 651 010 or by visiting www.ipaustralia.gov.au.

Basis of the report

Last amendment item no. 2 .

In examining your application I have taken into account:

- the PCT pamphlet as originally filed
- the proposed amendments under S104 filed on 08 March 2013

Statement of Novelty, Inventive Step and Patentable Subject Matter

Novelty/Inventive Step	Claim No. NONE	**Yes**
	Claim No. 1-15, 16-18, 27-29, 30-50, 56	**No**
Patentable Subject Matter	Claim No. 1-15, 16-18, 27-29, 30-50, 56	**Yes**
	Claim No. NONE	**No**

Section 40 (Fair Basis, Full Description, Clarity, Lack of Unity)

1 The specification does not comply with Section 40(4) because the claims do not relate to one invention only. I have found different inventions based on the following features that separate the claims into distinct groups:

- Claims 1 to 15, and 56 (in part) are directed to a seat attachment for a stroller. The feature of "a seat support element capable of supporting a seat in either a forward or backward position" is specific to this group of claims.
- Claims 16 to 18 and 56 (in part) are directed to a double stroller. The feature of "the second seat is attached in front of the first seat" is specific to this group of claims.
- Claims 19 to 26 and 56 (in part) are directed to a double stroller. The feature of "a second seat attachment capable of supporting a child seat" is specific to this group of claims.
- Claims 27 to 29 and 56 (in part) are directed to a stroller. The feature of "the seat attachment comprises a connector portion and a seat support element" is specific to this group of claims.
- Claims 30 to 50 and 56 (in part) are directed to a stroller. The feature of "a seat attachment for converting the stroller into a double stroller, the seat attachment comprising: a connector... and a seat attachment element capable of supporting a second seat in either a forward or backward position" is specific to this group of claims.
- Claims 51 to 55 and 56 (in part) are directed to a stroller capable of being converted to a double stroller. The feature of "a releasably connected first seat...in a forward or backward facing position" and "a releasably connected second seat... in a forward or backward facing position" is specific to this group of claims.

Unity of invention is only fulfilled when there is at least one "special technical feature" present in the claims that both:

- provides a technical relationship among all the claims; and,
- makes a contribution over the prior art.

When there is no special technical feature common to all the claimed inventions there is no unity of invention.

In the above groups of claims, the identified features may have the potential to make a contribution over the prior art but are not common to all the claimed inventions and therefore

cannot provide the required technical relationship. The only feature common to all of the claimed inventions and which provides a technical relationship among them is a stroller with a seat. However it is considered that this feature is generic in this particular art. Therefore this common feature cannot be a special technical feature. Hence there is no special technical feature common to all the claimed inventions and the requirements for unity of invention are consequently not satisfied *a priori*.

As a consequence of this I have restricted the examination to the first (Claims 1-15 and 56 in part), second (Claims 16-18 and 56 in part), fourth (Claims 27-29 and 56 in part) and fifth (Claims 30-50 and 56 in part) inventions which are referring to a stroller and the mechanical arrangement of its seat attachment and connector portion. While regarding the third (Claims 19-26 and 56 in part) and sixth inventions (Claims 51-55 and 56 in part), which mainly refer to a stroller with seat attachments supporting a child seat and a stroller with seats being one of a stroller seat, car seat, bassinet seat are not examined in this report, and any comment on the validity of any claims relating to the third and sixth inventions is withheld pending the applicant's response to this report.

Documents Cited or Considered Relevant

D1 : US 2007/0085303 A1 (CHENG) 19 April 2007 ^
Category: X Claims: 27-40, 44, 45, 47-50, 56
Category: Y Claims: 1-18, 41-43, 46

D2 : US 2007/0252352 A1 (ROHL) 01 November 2007 ^
Category: Y Claims: 1-18, 41-43, 46

^ D1 and D2 are earlier publications of US 7475900 and US 7677585, respectively, which were raised in US Exam Report (Final Rejection) dated 28 March 2013 for US Application No. US 12/631,375

Special categories of cited documents:

X: The claimed invention cannot be considered novel under subsection 7(1) in light of the document and/or cannot be considered to involve an inventive step under subsection 7(2) of the Act in light of the common general knowledge considered together with the document.
Y: The claimed invention cannot be considered to involve an inventive step under subsection 7(2) of the Act in light of the common general knowledge when considered together with a combination of the document and one or more other such documents.

Novelty and Inventive Step

2 Claims 27-29, 30-40, 44 and 45 are not novel and lack an inventive step in light of D1 as discussed in item 17 pages 6-9 of the US Exam Report on US 12/631, 375 dated 28 March 2013.

Note that, D1 (US 2007/0085303 A1) is an earlier publication of US 7475900 discussed in above US exam report.

Also note that, above Australian Claims 27, 28, 29, 30-37, 38-40, 44 and 45 are having substantially the same scope as US Claims 28, 32, 33, 35-42, 44-46, 50 and 51 (dated 07 Jan 2013),respectively.

While the objection regarding these documents was not made under Australian law, I agree with the reasons given in that report and consider that they support a corresponding objection against the Australian claims.

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3 Claims 1-15, 16-18, 41-43 and 46 lack an inventive step in light of the prior art documents (D1 and D2) as discussed in items 19-22 pages 9-17 of the US Exam Report on US 12/631, 375 dated 28 March 2013.

Note that, D1 (US 2007/0252352 A1) is an earlier publication of US 7677585 B2 discussed in above US exam report.

Also note that, above Australian Claims 1-15, 16, 17, 18, 41-43 and 46 are having substantially the same scope as US Claims 1-15, 16, 18, 19, 47-49 and 53 (dated 07 Jan 2013), respectively.

While the objection regarding these documents was not made under Australian law, I agree with the reasons given in that report and consider that they support a corresponding objection against the Australian claims. It is considered that a person skilled in the art, in view of the problem to be solved and the general state of the art at the time, would have ascertained, understood and regarded these documents as relevant. It is also considered that in seeking a solution to the problem a person skilled in the art would be motivated to combine the disclosures of these documents and arrive at a solution that is the same as the claimed invention.

4 Furthermore, appended claims 47-50 add only features that are either common in the art or mere design choices and which therefore cannot contribute to providing a patentable invention.

5 Omnibus claim 56, when refers to the broadest form of the accompany drawings, the differences are only resides in common general knowledge or mere design choices and therefore do not contribute to provide and inventive step.

Formalities

6 The Commissioner is not satisfied that the applicant is entitled to the grant of a patent under Section 15. You are required to file a Notice of Entitlement before the application can be accepted.

Additional Comments

Attorney's attention is further drawn to US exam report for US application No. 12/631,375 dated 02 August 2013.

I apologise for any inconvenience resulting from your application not being considered within the time limit set out in our Customer Service Charter.

How to contact us

Examiner: Aisha Qi
A4 - Mechanical
Patent Examination B
(02) 6283 2951

Corporate Telephone: 1300 651 010
(9am-5pm Mon- Fri)

Website: www.ipaustralia.gov.au

Mail: IP Australia
PO Box 200
Woden, ACT 2606

Website QR code

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Please note: From February 2014 all service requests to IP Australia should be submitted via the eServices channel. Service requests sent by email to IP Australia will not be accepted after this date. We encourage all customers to begin using the eServices channel as soon as they are able.

123 of 1090 UPPABABY ET AL. EX. 1019

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ABN 38 113 072 755
Discovery House, Phillip ACT 2606
PO Box 200, Woden ACT 2606
Australia
P 1300 651 010
Int +61 2 6283 2999
www.ipaustralia.gov.au

Address: Griffith Hack
GPO Box 1285
Melbourne VIC 3001
Australia

Date of issue: 2 December 2014

Patent Examination Report No. 2

Application Details

Patent Application No.:	2009322149
Applicant/s:	DYNAMIC BRANDS, LLC
Your reference:	P87221.AU
Earliest Priority Date:	04 December 2008
Examination Request Date:	08 March 2013

Your application has been examined under Section 45 of the *Patents Act 1990*. I consider that the application does not meet the requirements of the Act for the reasons indicated below.

Actions you can take

You have until **01 January 2016** to overcome all my objection(s) otherwise your application will lapse.

You will need to pay a monthly fee for any response you file after 12 months from the date of the first report.

You will also need to pay any annual continuation fees that apply. Information about fees may be obtained by phoning 1300 651 010 or by visiting www.ipaustralia.gov.au.

Basis of the report

In examining your application I have considered:

- the PCT pamphlet as originally filed
- allowed and/or proposed amendment/s under S104 up to and including amendment item number 4, filed on 6 November 2014.

Statement of Novelty, Inventive Step and Patentable Subject Matter

Novelty/Inventive Step	Claim No. 1-5, 9-29 Claim No. 6-8	**Yes** **No**
Patentable Subject Matter	Claim No. 1-29 Claim No. NONE	**Yes** **No**

Section 40 (Fair Basis, Full Description, Clarity, Lack of Unity)

7 Claim 9 is not clear with regard to "separate left and right seat attachment portions..." and "the seat attachment portions comprising: a connector portion..., and a seat support element...".

First, it is indeterminate whether the term "separate" means the two seat attachment portions are "separate" to each other, or they are (as together) separate from the first stroller seat and the two attachment frame members.

Therefore, if it means 'the left and right seat attachments are separate from the first stroller and two attachment members', then "the seat attachment portions comprising: a connector portion..., and a seat support element..." may have a meaning of the (separate left and right) seat attachments together comprising a single (joint) connector portion and a single (joint) seat support element---if the left and right seat attachments are in some way joint together.

But, if it means 'the left and right seat attachment portions are "separate" to each other', then above feature may be construed as the separate left and right seat attachments each respectively comprises a connector portion and a seat support element---since they are separate to each other, they can't have a joint single connector and seat support element.

For the purpose of this report, the above feature is considered as a separate left seat attachment portion and a separate right seat attachment portion, and each of the seat attachment portions comprising a connector portion and a seat support element respectively (eg. similar to the attachment portion defined in claims 1 and 23). However, if the feature is to be construed in a different way (eg. a joint left and right seat attachments together having a connector portion and a seat support element), the novelty/inventive step of the said feature will be further considered accordingly.

(please also note, at the 5th line of claim 9, "left from wheel" seems to be an error/typo of "left front wheel").

8 The specification does not comply with Section 40(4) because the claims do not relate to one invention only. I have found different inventions based on the following features that separate the claims into distinct groups:

- Claims 1-5 and 23-29 are directed to a seat attachment for a stroller. The feature of the seat attachment with separate left and right attachment frame members which respectively further comprise a connector portion to removably connect to a stroller frame and a seat support element for removably connecting a seat is specific to this

group of claims.

- Claims 6-8 are directed to a stroller. The feature of the stroller with two attachment frame members capable of removably receiving and supporting separate right and left seat attachment portions is specific to this group of claims. It is noted that, the claim *per se* is only directed to a stroller attachment frame capable of receiving/supporting separate seat attachment, and such that, the seat attachment *per se*, as relating to the connector portion and seat support element, is not considered as part of the defined features of the claim.

- Claims 9-22 are directed to a stroller. The feature of the stroller comprising separate left and right seat attachment portions for converting the stroller to a double stroller is specific to this group of claims.

Unity of invention is only fulfilled when there is at least one "special technical feature" present in the claims that both:

- provides a technical relationship among all the claims; and,

- makes a contribution over the prior art.

When there is no special technical feature common to all the claimed inventions there is no unity of invention.

In the above groups of claims, the identified features may have the potential to make a contribution over the prior art but are not common to all the claimed inventions and therefore cannot provide the required technical relationship. The only feature common to all of the claimed inventions is a stroller frame. However it is considered that this feature is generic in this particular art. Therefore there is no special technical feature common to all the claimed inventions and the requirements for unity of invention are consequently not satisfied *a priori*.

Documents Cited or Considered Relevant

D1 : US 2007/0085303 A1 (CHENG) 19 April 2007 ^
Category: **A**

D2 : US 2007/0252352 A1 (ROHL) 01 November 2007 ^
Category: **A**

D3 : WO 2008/135974 A2 (KATZ, GEVA et al.) 13 November 2008 **
Category: **X** Claims: 6-8

** Cited in the EP European search opinion dated 15 November 2013 for Application No. 09831215.0.
^ Cited in the previous examination report.

New Documents

Document D3 brought to my attention from EP examination reports in light of the amended claims.

I apologise for any inconvenience that raising new citation/s at this stage may have caused.

Special categories of cited documents:

X: The claimed invention cannot be considered novel under subsection 7(1) in light of the document and/or cannot be considered to involve an inventive step under subsection 7(2) of the Act in light of the common general knowledge considered together with the document.
A: Document defining the general state of the art which is not considered to be of particular relevance.

Novelty and Inventive Step

9 Claim 6 is not novel and also lacks an inventive step in light of the disclosures in D3.

D3, in Figs 18-19 and accompanying texts in [00108]-[00109] discloses a stroller (200) with a stroller seat (as from Figs 18-19), two front wheels and two rear wheels attached to its frame (206).

In particular to the stroller 200 at the back (Fig 19), feature regarding "two attachment frame members ... capable removably receiving and supporting right and left seat attachment portions" is disclosed as the left and right parallel bars 202 & 204, which adjacent the two front wheels (small wheels) and capable of removably receiving and supporting the other left and right parallel bars (202 & 204) of the front stroller.

Note that, although D3 in Figs 18-19 does not explicitly disclose feature regarding "a separate right and left seat attachment portions, wherein each of the seat attachment portions ... for removably connecting a stroller seat between the seat attachment portions", it is considered that, the claim *per se*, only defines the attachment frame members capable of removably receiving and supporting separate right and left seat attachment portions with such given features, wherein "capable" only directs to a capability. In another word, according to the claim, the two attachment frame members only need to have the capability to removably receive and support the separate right and left seat attachments with features given in the claim. Since there is no further definition in limiting the type/shape of the connector portions, for example, for not being in the shape of parallel bars as shown in Figs 18-19, the attachment frame members 202 & 204 of the stroller at back would be capable of removably receiving and supporting a separate right and left seat attachment wherein their connector portions are also parallel bars for connecting into the attachment frame members 202 & 204.

However, if the claim is directed to the two attachment frame members removably connecting (receiving and supporting) separate right and left seat attachment portions with given features in the claim, wherein the removable left and right seat attachments are part of the defined features of the claim, then the claims should be amended accordingly.

Further, appended claims 7-8 add features regarding "frame members comprise a slot for removably receiving the connector portion", or "a second seat being selected from stroller seat, infant carrier... or a car seat" which are either disclosed in D3 or common in the art that represent mere design choice and therefore do not contribute to provide a patentable invention.

How to contact us

Examiner: Aisha Qi
A4 - Mechanical
Patent Examination B
(02) 6283 2951

Corporate Telephone: 1300 651 010
(9am-5pm Mon- Fri)

Website: www.ipaustralia.gov.au

Mail: IP Australia
PO Box 200
Woden, ACT 2606

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17 December 2015 (17-12-2015)

RIDOUT & MAYBEE LLP
250 University Avenue
5TH Floor
TORONTO Ontario
M5H 3E5

Application No.	:	**2,745,914**
PCT No.	:	**US2009066817**
Owner	:	BABY JOGGER, LLC
Title	:	**SEAT ATTACHMENT FOR A STROLLER**
Classification	:	B62B 9/28 (2006.01)
Your File No.	:	**49127-3012**
Examiner	:	Matthew Chisholm

YOU ARE HEREBY NOTIFIED OF A REQUISITION BY THE EXAMINER IN ACCORDANCE WITH SUBSECTION 30(2) OF THE *PATENT RULES*. IN ORDER TO AVOID ABANDONMENT UNDER PARAGRAPH 73(1)(a) OF THE *PATENT ACT*, A WRITTEN REPLY MUST BE RECEIVED WITHIN THE **SIX (6)** MONTH PERIOD AFTER THE ABOVE DATE.

This application has been examined taking into account the:

Description,	as originally filed;
Claims,	1-30, as received on 9 December 2014 (09-12-2014) during the national phase; and
Drawings,	as originally filed.

The number of claims in this application is 30.

A search of the prior art has thus far failed to reveal any pertinent references.

The examiner has identified the following defects in the application:

Claims 1, 24, 27 are indefinite and do not comply with subsection 27(4) of the *Patent Act*. The element "a stroller frame", is defined with an indefinite article, causing a lack of clarity as to whether it is intended to refer to the same element "a stroller frame" as was previously defined in the claims or an additional element thereto.

The description does not correctly and fully describe the invention and does not comply with subsection 27(3) of the *Patent Act*. Statements such as those found at page 13, line 12 indicating that the claims are to be viewed as broader than the teachings of the description do not correctly describe the invention and should be removed.

In view of the foregoing defects, the applicant is requisitioned, under subsection 30(2) of the *Patent Rules*, to amend the application in order to comply with the *Patent Act* and the *Patent Rules* or to provide arguments as to why the application does comply.

Under section 34 of the *Patent Rules*, any amendment made in response to this requisition must be accompanied by a statement explaining the nature thereof, and how it corrects each of the above identified defects.

Matthew Chisholm
Senior Patent Examiner
819-639-7839

As per CIPO Client Service Standards, a response to a telephone enquiry or voice mail should be provided by the end of the next business day. In the event that attempts to reach the examiner are unsuccessful, the examiner's Section Head, David Kerr, can be reached at 819-639-7866.

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2745914A_misc.docm

The Examination Search Report is provided for reference only and is not part of any requisition made by the examiner in accordance with the *Patent Act* or *Rules*. The applicant is not required to respond to the information contained in the Examination Search Report.

Examination Search Report

Box I: General Information

Application No.	2,745,914	Search Report Date	16-12-2015
Title	SEAT ATTACHMENT FOR A STROLLER		
Examiner	Matthew Chisholm	Search Conducted?	Yes

Box II: Family Prosecution

Family Member	File Wrapper Reviewed	Status of Prosecution
PCT/US2009/066817	16-12-2015	Completed
US8955869	16-12-2015	Completed

Box III: Prior Art Submissions

Type of submissions	Reviewed?

Box IV: Search History

Claims Searched	1-30	Date of Search	16-12-2015

Type of Search Conducted (select all that apply):

Canadian first to file search	■	Supplemental/top up search	☐
Inventor/applicant search	☐	Non laid open search	☐
Comprehensive search	☐	In-house searcher	☐

Search History from Databases Consulted:

```
##### CANADIAN PATENT DATABASE ##########

(filing-date <= 2010-12-04 <AND> filing-date > 1000-01-01 ) <AND> (filing-date
>=2004-12-04) <AND> ((B62B 9/28 <OR> B62B 7/00) <IN> ipc)
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Version 8

国家知识产权局

100005

北京市东城区建国门南大街7号万豪中心A座2202室 北京律盟知识产权代理有限责任公司
张世俊(10-85187141-17)

发文日：

2018年10月31日

申请号或专利号：201710169826.4　　发文序号：2018102601342040

申请人或专利权人：贝贝漫步有限责任公司

发明创造名称：用于手推童车的可拆卸式座椅附接件

第一次审查意见通知书

1. ☒应申请人提出的实质审查请求，根据专利法第35条第1款的规定，国家知识产权局对上述发明专利申请进行实质审查。

☐根据专利法第35条第2款的规定，国家知识产权局决定自行对上述发明专利申请进行审查。

2. ☒申请人要求以其在：

US专利局的申请日2016年03月21日为优先权日，

US专利局的申请日2016年08月01日为优先权日。

☒申请人已经提交了经原受理机构证明的第一次提出的在先申请文件的副本。

☐申请人尚未提交经原受理机构证明的第一次提出的在先申请文件的副本，根据专利法第30条的规定视为未要求优先权要求。

3. ☐经审查，申请人于_____提交的修改文件，不符合专利法实施细则第51条第1款的规定，不予接受。

4. 审查针对的申请文件：

☒原始申请文件。☐分案申请递交日提交的文件。☐下列申请文件：

5. ☐本通知书是在未进行检索的情况下作出的。

☒本通知书是在进行了检索的情况下作出的。

☒本通知书引用下列对比文件(其编号在今后的审查过程中继续沿用)：

编号	文件号或名称	公开日期（或抵触申请的申请日）
1	CN 103909960A	20140709
2	CN 201626448U	20101110
3	CN 201646823U	20101124

6. 审查的结论性意见：

关于说明书：

☐申请的内容属于专利法第5条规定的不授予专利权的范围。

☐说明书不符合专利法第26条第3款的规定。

☐说明书不符合专利法第33条的规定。

210401 2018.8　纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路6号　国家知识产权局专利局受理处收
电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

☐说明书的撰写不符合专利法实施细则第 17 条的规定。

☐_____

关于权利要求书：

☐权利要求_____不符合专利法第 2 条第 2 款的规定。

☐权利要求_____不符合专利法第 9 条第 1 款的规定。

☒权利要求 1, 13 不具备专利法第 22 条第 2 款规定的新颖性。

☒权利要求 2-12, 14-20 不具备专利法第 22 条第 3 款规定的创造性。

☐权利要求_____不具备专利法第 22 条第 4 款规定的实用性。

☐权利要求_____属于专利法第 25 条规定的不授予专利权的范围。

☐权利要求_____不符合专利法第 26 条第 4 款的规定。

☐权利要求_____不符合专利法第 31 条第 1 款的规定。

☐权利要求_____不符合专利法第 33 条的规定。

☐权利要求_____不符合专利法实施细则第 19 条的规定。

☐权利要求_____不符合专利法实施细则第 20 条的规定。

☐权利要求_____不符合专利法实施细则第 21 条的规定。

☐权利要求_____不符合专利法实施细则第 22 条的规定。

☐_____

☐申请不符合专利法第 26 条第 5 款或者实施细则第 26 条的规定。

☐申请不符合专利法第 20 条第 1 款的规定。

☐分案申请不符合专利法实施细则第 43 条第 1 款的规定。

上述结论性意见的具体分析见本通知书的正文部分。

7. 基于上述结论性意见，审查员认为：

☐申请人应当按照通知书正文部分提出的要求，对申请文件进行修改。

☐申请人应当在意见陈述书中论述其专利申请可以被授予专利权的理由，并对通知书正文部分中指出的不符合规定之处进行修改，否则将不能授予专利权。

☒专利申请中没有可以被授予专利权的实质性内容，如果申请人没有陈述理由或者陈述理由不充分，其申请将被驳回。

☐_____

8. 申请人应注意下列事项：

(1) 根据专利法第 37 条的规定，申请人应在收到本通知之日起的 4 个月内陈述意见，如果申请人无正当理由逾期不答复，其申请将被视为撤回。

(2) 申请人对其申请的修改应当符合专利法第 33 条的规定，不得超出原说明书和权利要求书记载的范围，同时申请人对专利申请文件进行的修改应当符合专利法实施细则第 51 条第 3 款的规定，按照本通知书的要求进行修改。

(3) 申请人的意见陈述书和/或修改文本应邮寄或递交国家知识产权局专利局受理处，凡未邮寄或递交给受理处的文件不具备法律效力。

(4) 未经预约，申请人和/或代理人不得前来国家知识产权局专利局与审查员举行会晤。

(5) 对进入实质审查阶段的发明专利申请，在第一次审查意见通知书答复期限届满前（已提交答复意见的除外），主动申请撤回的，可以请求退还 50%的专利申请实质审查费。

9. 本通知书正文部分共有 6 页，并附有下述附件：

☐引用的对比文件的复印件共_____份_____页。

☐_____

审查员：曾靖　　联系电话：020-28958768　　审查部门：专利审查协作广东中心机械发明审查部

国家知识产权局

第一次审查意见通知书

申请号:2017101698264

本申请涉及一种用于手推童车的可拆卸式座椅附接件，经审查，现提出如下审查意见。

1、权利要求1要求保护一种手推童车，对比文件1（CN103909960A）公开了一种容易操纵的婴儿车，其实质上公开了一种手推童车，并具体公开了如下技术特征（参见对比文件1说明书第41-42,73段、说明书附图1-3,10）：说明书附图10公开的实施例包括：手推童车框架102；耦合到所述手推童车框架的多个车轮110,114；耦合到所述手推童车框架的第一座椅106；沿着所述手推童车框架的第一部分安置的第一座椅附接件外壳（参见说明书附图1,3,10，未给出附图标记）；沿着所述手推童车框架的第二部分安置的第二座椅附接件外壳（参见说明书附图1,3,10，未给出附图标记）；第一可拆卸式座椅附接件配接器108（参见附图10，婴儿座椅安装件108），其经配置以可拆卸方式耦合到所述第一座椅附接件外壳；和第二可拆卸式座椅附接件配接器108，其经配置以可拆卸方式耦合到所述第二座椅附接件外壳。由此可见，对比文件1已经公开了该权利要求的全部技术特征，且对比文件1所公开的技术方案与该权利要求所要求保护的技术方案属于同一技术领域，并能产生相同的技术效果，因此该权利要求所要求保护的技术方案不具备专利法第二十二条第二款规定的新颖性。

2、权利要求2是对权利要求1的进一步限定，对于其附加技术特征，对比文件1还公开了如下技术特征（参见说明书第73段、说明书附图10）：其中所述第一座椅附接件外壳和所述第二座椅附接件外壳中的每一个包括：配接器接纳空腔（第73段记载“从凹口1002移除座椅安装件108”，即公开了配接器接纳空腔），其经配置以接纳所述第一和所述第二可拆卸式座椅附接件配接器中的相应一个的至少一部分。至于剩余的附加技术特征，其构成了本申请与对比文件1的区别技术特征。基于上述区别技术特征，可以确定本申请相对于对比文件1实际解决的技术问题是：如何根据实际的工作状态而对配接器接纳空腔进行遮盖保护。然而，对比文件2（CN201626448U）公开了一种多功能童车，并具体公开了如下技术特征（参见对比文件2说明书第12段、说明书附图1-3）：该多功能童车具有车架，车架上设置侧扶手1，侧扶手具有外壳（其相当于座椅附接件外壳），侧扶手上设置有凹槽1（其相当于配接器接纳空腔），另设有连接座5（相当于座椅附接件配接器）；此外，设置有扶手盖4（相当于门），其邻近所述相应侧扶手外壳的顶面安置，且经配置以从防止所述相应连接座从所述顶面进出所述凹槽的关闭配置移动到允许所述相应连接座从所述顶面进出所述凹槽的打开配置，而且该特征在对比文件2中所起的作用与其在本申请中为解决其技术问题所起的作用相同，都是通过在座椅附接件外壳的顶面设置门，从而在座椅被拆卸后，通过门对配接器接纳空腔进行遮盖保护，也就是说对比文件2给出了将该技术特征用于该对比文件1以解决其技术问题的启示。在这一技术启示下，本领域技术人员有动机对对比文件1进行修改，在凹口1002的顶部位置设置门，并根据需要进行关闭配置或打开配置。因此，当其引用的权利要求1不具备新颖性时，该权利要求不具备专利法第二十二条第三款规定的创造性。

3、权利要求3是对权利要求2的进一步限定，对于其附加技术特征，具体限定了门的打开方式，然而，门通过滑动方式打开为现有的一种开门方式，门具体通过滑动方式耦合到相应座椅附接件外壳，且经配置以从所述关闭配置滑动到所述打开配置属于本领域的一种常规选择，上述设置方式并不需要付出创造性的劳动，也没有带来预料不到的技术效果。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

4、权利要求4是对权利要求2的进一步限定，对于其附加技术特征，对比文件2还公开了如下技术特征（参见说明书第12段、说明书附图1）：所述扶手盖4可旋转地耦合到所述相应侧扶手外壳，且其中所述扶手盖经配置以从所述关闭配置旋转到所述打开配置。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

5、权利要求5是对权利要求4的进一步限定，对于其附加技术特征，对比文件2还公开了如下技术特征

（参见说明书附图 1）：进一步包括铰链，所述铰链具有耦合到所述扶手盖的第一部分和耦合到所述相应侧扶手外壳的第二部分，其中所述铰链将所述扶手盖可旋转地耦合到所述相应侧扶手外壳。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

6、权利要求 6 是对权利要求 2 的进一步限定，对于其附加技术特征，对比文件 1 还公开了如下技术特征（参见对比文件 1 说明书附图 10）：所述配接器接纳空腔包括：第一开口端 1002（参见附图 10 的凹口 1002）。至于剩余的附加技术特征，本领域技术人员在面对配接器接纳空腔的具体结构设置时，将配接器容纳腔设置为具有两个开口的穿孔属于本领域的一种现有技术（具体可参见检索报告中给出的现有技术 CN103921830A、CN102256856A），其仅仅是容纳腔形式的一种简单变换，并未带来预料不到的技术效果。对应地，在配接器接纳空腔设置第二开口远端，并使配接器接纳空腔提供穿过相应第一或第二座椅附接件外壳的穿孔是一种适应性设置，并不需要付出创造性的劳动。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

7、权利要求 7 是对权利要求 2 的进一步限定，对于其附加技术特征，对比文件 1 还公开了如下技术特征（参见对比文件 1 说明书第 73 段、说明书附图 10）：所述配接器接纳空腔包括：至少一个侧壁，其从所述空腔的第一端延伸到所述空腔的第二远端。至于剩余的附加技术特征，为了使可拆卸式座椅附接件配接器能够在配接器接纳空腔内限位，防止可拆卸式座椅附接件配接器从第二远端中穿出，具体设置至少一个止挡凸缘，并使止挡凸缘从所述至少一个侧壁向外延伸到所述空腔中，其属于本领域的一种常规设置，而且采用止挡凸缘这一形式的限位机构并不需要付出创造性的劳动，也没有带来预料不到的技术效果。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

8、权利要求 8 是对权利要求 1 的进一下限定，对于其附加技术特征，对比文件 1 还公开了如下技术特征（参见对比文件 1 说明书第 73 段、说明书附图 10）：其中每个所述第一可拆卸式座椅附接件配接器和所述第二可拆卸式座椅附接件配接器中的每一个包括：第一端；第二远端；外表面。至于剩余的附加技术特征，其构成了本申请与对比文件 1 之间的区别技术特征。基于上述区别技术特征，可以确定本申请相对于对比文件 1 实际解决的技术问题是：如何实现可拆卸式座椅附接件配接器的锁定。然而，对比文件 3（CN201646823U）公开了一种可坐兜换向的儿童推车，并具体公开了如下技术特征（参见对比文件 3 说明书第 19-20 段、说明书附图 1-3）：坐兜框架 1 的围框管上设有两个插件 13（相当于可拆卸式座椅附接件配接器），插件 13 包括：第一端；第二远端；外表面；弹性突起 131（相当于闩锁突片），其沿着所述外表面安置于所述第一端与所述第二远端之间，而且该特征在对比文件 3 中所起的作用与其在本申请中为解决其技术问题所起的作用相同，都是通过设置闩锁突片，从而使可拆卸式座椅附接件配接器通过闩锁突片实现卡接锁定，也就是说对比文件 3 给出了将该技术特征用于该对比文件 1 以解决其技术问题的启示。在这一技术启示下，本领域技术人员有动机对对比文件 1 进行修改，在对比文件 1 的可拆卸式座椅附接件配接器 108 的外表面设置闩锁突片，从而实现可拆卸式座椅附接件配接器 108 与座椅附接件外壳卡接锁定。因此，当其引用的权利要求不具备新颖性，该权利要求不具备专利法第二十二条第三款规定的创造性。

9、权利要求 9 是对权利要求 8 的进一步限定，对于其附加技术特征，对比文件 3 进一步公开了通过按压弹性突起 131 进行解锁（参见说明书第 20 段）。至于附加技术特征限定手动可调式突片释放按钮，然而，本领域技术人员为了使闩锁突片进行解锁，具体设置手动可调式突片释放按钮，并使其沿着所述相应可拆卸式座椅附接件配接器的所述外表面安置，且以可操作方式耦合到所述闩锁突片为本领域的一种常规选择，其仅仅是解锁位置的一种简单变换，而且通过按钮和联动机构实现闩锁突片的致动并不存在技术上的困难和跨越。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

10、权利要求 10 是对权利要求 9 的进一步限定，对于其附加技术特征，为了实现闩锁突片的解锁，对应地使所述突片释放按钮经配置以在按压所述突片释放按钮时将所述闩锁突片以从延伸位置移动到缩回位置，

其属于本领域的一种适应性设置，而且并不需要付出创造性的劳动。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

11、权利要求 11 是对权利要求 9 的进一步限定，对于其附加技术特征，本领域技术人员为了限制可拆卸式座椅附接件配接器的插入深度，对应于座椅附接件外壳的开口，具体使第一可拆卸式座椅附接件配接器和所述第二可拆卸式座椅附接件配接器中的每一个进一步包括安置于所述第一端与所述第二远端之间的止挡环管，其中所述止挡环管的外表面从所述相应可拆卸式座椅附接件配接器的所述外表面向外延伸，从而通过止挡环管改变可拆卸式座椅附接件配接器的径向尺寸进行限位，上述设置方式属于本领域的一种常规设置，且其技术效果是可以预期的。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

12、权利要求 12 是对权利要求 1 的进一步限定，对于其附加技术特征，为了使可拆卸式座椅附接件配接器锁定在座椅附接件外壳中，具体使所述闩锁突片安置于所述止挡环管与所述相应可拆卸式座椅附接件配接器的所述第一端之间，其属于本领域的一种常规设置。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

13、权利要求 13 要求保护一种将第二手推童车座椅附接到手推车的方法，对比文件 1（CN103909960A）公开了一种容易操纵的婴儿车，其涉及一种将第二手推童车座椅附接到手推车的方法，并具体公开了如下技术特征（参见对比文件 1 说明书第 41-42, 73 段、说明书附图 1-3, 10）：所述方法包括：提供手推童车，所述手推童车，所述手推童车包括：手推童车框架 102；耦合到所述手推童车框架的多个车轮 110, 114；耦合到所述手推童车框架的第一手推童车座椅 106；沿着所述手推童车框架的第一部分安置的第一座椅附接件外壳（参见说明书附图 1, 3, 10，未给出附图标记）；沿着所述手推童车框架的第二部分安置的第二座椅附接件外壳（参见说明书附图 1, 3, 10，未给出附图标记）；第一可拆卸式座椅附接件配接器 108（参见附图 10，婴儿座椅安装件 108）；和第二可拆卸式座椅附接件配接器 108；其中所述第一和所述第二可拆卸式座椅附接件配接器中的每一个包括第一端和第二端，所述第二端包括座椅连接器（参见说明书附图 10）；将所述第一可拆卸式座椅附接件配接器的所述第一端插入到第一座椅附接件外壳中；将所述第二可拆卸式座椅附接件配接器的所述第一端插入到所述第二座椅附接件外壳中；和将所述第二手推童车座椅耦合到所述第一可拆卸式座椅附接件配接器和所述第二可拆卸式座椅附接件配接器中的每一个的所述座椅连接器。由此可见，对比文件 1 已经公开了该权利要求的全部技术特征，且对比文件 1 所公开的技术方案与该权利要求所要求保护的技术方案属于同一技术领域，并能产生相同的技术效果，因此该权利要求所要求保护的技术方案不具备专利法第二十二条第二款规定的新颖性。

14、权利要求 14 是对权利要求 13 的进一步限定，其附加技术特征构成了本申请与对比文件 1 之间的区别技术特征。基于上述区别技术特征，可以确定本申请相对于对比文件 1 实际解决的技术问题是：如何根据实际的工作状态而对座椅附接件外壳中的连接结构进行遮盖保护。然而，对比文件 2（CN201626448U）公开了一种多功能童车，并具体公开了如下技术特征（参见对比文件 2 说明书第 12 段、说明书附图 1-3）：该多功能童车具有车架，车架上设置侧扶手 1，侧扶手具有外壳（其相当于座椅附接件外壳），并且设置有侧扶手盖 4（相当于门），即其公开了本申请的手推童车包括邻近所述第一座椅附接件外壳的顶面安置的第一门，和邻近所述第二座椅附接件外壳的顶面安置的第二门；此外，进一步公开了：另设有连接座 5（相当于座椅附接件配接器），翻转的扶手盖 4 能盖住在凹槽上，连接座与接收装置组成侧的可拆卸装置，实现汽车座椅或提篮的固定或拆卸，即其公开了本申请的在将所述第一可拆卸式座椅附接件配接器的所述第一端插入到第一座椅附接件外壳中之前，将所述第一门从防止进出第一座椅附接件外壳的关闭配置调整到允许进出所述第一座椅附接件外壳的打开配置；在将所述第二可拆卸式座椅附接件配接器的所述第一端插入到所述第二座椅附接件外壳中之前，将所述第二门从所述关闭配置调整到所述打开配置，而且该特征在对比文件 2 中所起的作用与其在本申请中为解决其技术问题所起的作用相同，都是通过在座椅附接件外壳的顶面设置门，从而在座椅

被拆卸后，通过门对配接器接纳空腔进行遮盖保护，并能在座椅安装前打开该门，也就是说对比文件2给出了将该技术特征用于该对比文件1以解决其技术问题的启示。在这一技术启示下，本领域技术人员有动机对对比文件1进行修改，在凹口1002的顶部位置设置门，并根据需要进行关闭配置或打开配置。因此，当其引用的权利要求不具备新颖性时，该权利要求不具备专利法第二十二条第三款规定的创造性。

15、权利要求15是对权利要求13的进一步限定，对于其附加技术特征，对比文件3（CN201646823U）公开了一种可坐兜换向的儿童推车，并具体公开了如下技术特征（参见对比文件3说明书第19-20段、说明书附图1-3）：坐兜框架1的围框管上设有两个插件13（相当于可拆卸式座椅附接件配接器），插件13包括：第一端；第二远端；外表面；弹性突起131（相当于闩锁突片），其沿着插件13的外表面安置于所述第一端与所述第二远端之间，而且该特征在对比文件3中所起的作用与其在本申请中为解决其技术问题所起的作用相同，都是通过设置闩锁突片，从而使可拆卸式座椅附接件配接器通过闩锁突片实现卡接锁定，也就是说对比文件3给出了将该技术特征用于该对比文件1以解决其技术问题的启示。在这一技术启示下，本领域技术人员有动机对对比文件1进行修改，在对比文件1的可拆卸式座椅附接件配接器108的外表面设置闩锁突片，从而实现可拆卸式座椅附接件配接器108与座椅附接件外壳卡接锁定。至于剩余的附加技术特征，对比文件3进一步公开了通过按压弹性突起131进行解锁（参见说明书第20段）。对于附加技术特征具体限定的手动可调式突片释放按钮，然而，本领域技术人员为了使闩锁突片进行解锁，具体设置手动可调式突片释放按钮，并使其沿着所述第一可拆卸式座椅附接件配接器的所述外表面安置，且以可操作方式耦合到所述闩锁突片为本领域的一种常规选择，其仅仅是解锁位置的一种简单变换，而且通过按钮和联动机构实现闩锁突片的致动并不存在技术上的困难和跨越。在此基础上，为了实现闩锁突片的致动，所述方法进一步包括：按压所述突片释放按钮以将所述闩锁突片从延伸位置移动到缩回位置；和从所述第一座椅附接件外壳移除所述第一可拆卸式座椅附接件配接器，这对本领域技术人员而言是一种容易想到的操作方式。因此，当其引用的权利要求不具备新颖性时，该权利要求不具备专利法第二十二条第三款规定的创造性。

16、权利要求16要求保护一种手推童车，对比文件1（CN103909960A）公开了一种容易操纵的婴儿车，其实质上公开了一种手推童车，并具体公开了如下技术特征（参见对比文件1说明书第41-42,73段、说明书附图1-3,10）：说明书附图10公开的实施例包括：手推童车框架102；第一座椅附接件外壳（参见说明书附图1,3,10，未给出附图标记），其沿着所述手推童车框架的第一部分安置，且包括第一配接器接纳空腔；第二座椅附接件外壳（参见说明书附图1,3,10，未给出附图标记），其沿着所述手推童车框架的第二部分安置，且包括第二配接器接纳空腔；第一可拆卸式座椅附接件配接器108（参见附图10，婴儿座椅安装件108），其经配置以可拆卸方式耦合到所述第一座椅附接件外壳；和第二可拆卸式座椅附接件配接器108，其经配置以可拆卸方式耦合到所述第二座椅附接件外壳；其中所述第一可拆卸式座椅附接件配接器和所述第二可拆卸式座椅附接件配接器中的每一个包括：第一端；第二远端；外表面。因此，权利要求1所要求保护的内容与对比文件1所公开的内容相比，其区别在于：闩锁突片，其沿着所述外表面安置于所述第一端与所述第二端之间。

基于上述区别技术特征，可以确定本申请相对于对比文件1实际解决的技术问题是：如何实现可拆卸式座椅附接件配接器的锁定。然而，对比文件3（CN201646823U）公开了一种可坐兜换向的儿童推车，并具体公开了如下技术特征（参见对比文件3说明书第19-20段、说明书附图1-3）：坐兜框架1的围框管上设有两个插件13（相当于可拆卸式座椅附接件配接器），插件13包括：第一端；第二远端；外表面；弹性突起131（相当于闩锁突片），其沿着所述外表面安置于所述第一端与所述第二远端之间，而且该特征在对比文件3中所起的作用与其在本申请中为解决其技术问题所起的作用相同，都是通过设置闩锁突片，从而使可拆卸式座椅附接件配接器通过闩锁突片实现卡接锁定，也就是说对比文件3给出了将该技术特征用于该对比文件1以解决其技术问题的启示。在这一技术启示下，本领域技术人员有动机对对比文件1进行修改，在对比文件1的可拆卸式座椅附接件配接器108的外表面设置闩锁突片，从而实现可拆卸式座椅附接件配接器108与座椅附接件外壳卡接锁定。

由此可知，在对比文件1的基础上结合对比文件3得出该权利要求所要求保护的技术方案，对本领域的

技术人员来说是显而易见的，因此该权利要求所要求保护的技术方案不具有突出的实质性特点和显著的进步，因而不具备专利法第二十二条第三款规定的创造性。

17、权利要求 17 是对权利要求 16 的进一步限定，对于其附加技术特征，对比文件 2（CN201626448U）公开了一种多功能童车，并具体公开了如下技术特征（参见对比文件 2 说明书第 12 段、说明书附图 1-3）：该多功能童车具有车架，车架上设置两个侧扶手 1，侧扶手具有外壳（其相当于座椅附接件外壳），扶手上设置有凹槽 1（其相当于配接器接纳空腔），并且设置有扶手盖 4（相当于门），此外，进一步公开了：另设有连接座 5（相当于座椅附接件配接器），翻转的扶手盖 4 能盖住在凹槽上，连接座与接收装置组成侧扶手的可拆卸装置，实现汽车座椅或提篮的固定或拆卸；即其公开了其中所述第一座椅附接件外壳和所述第二座椅附接件外壳中的每一个进一步包括门，所述门邻近所述相应第一及第二座椅附接件外壳中的每一个的顶面安置，且经配置以防止所述相应座椅附接件配接器从所述顶面进出所述第一和第二配接器接纳空腔中的所述相应一个的关闭配置移动到允许所述相应座椅附接件配接器从所述顶面进出所述第一和第二配接器接纳空腔中的所述相应一个的打开配置，而且该特征在对比文件 2 中所起的作用与其在本申请中为解决其技术问题所起的作用相同，都是通过在座椅附接件外壳的顶面设置门，从而在座椅被拆卸后，通过门对配接器接纳空腔进行遮盖保护，并能在座椅安装前打开该门，也就是说对比文件 2 给出了将该技术特征用于该对比文件 1 以解决其技术问题的启示。在这一技术启示下，本领域技术人员有动机对对比文件 1 进行修改，在凹口 1002 的顶部位置设置门，并根据需要进行关闭配置或打开配置。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

18、权利要求 18 是对权利要求 17 的进一步限定，对于其附加技术特征，具体限定了门的打开方式，然而，门通过滑动方式打开为现有的一种开门方式，每一门具体通过滑动方式耦合且可旋转地耦合到所述第一和第二座椅附接件外壳中的所述相应一个中的至少一个，且经配置以从所述关闭配置移动到所述打开配置属于本领域的一种常规选择，上述设置方式并不需要付出创造性的劳动，也没有带来预料不到的技术效果。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

19、权利要求 19 是对权利要求 17 的进一步限定，对比文件 2 还公开了如下技术特征（参见说明书第 12 段、说明书附图 1）：进一步包括铰链，所述铰链具有耦合到所述扶手盖的第一部分和耦合到所述相应侧扶手外壳的第二部分，其中所述铰链将所述扶手盖可旋转地耦合到所述相应侧扶手外壳。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

20、权利要求 20 是对权利要求 16 的进一步限定，对于其附加技术特征，对比文件 3 进一步公开了通过按压弹性突起 131 进行解锁（参见说明书第 20 段）。对于附加技术特征具体限定的手动可调式突片释放按钮，然而，本领域技术人员为了使闩锁突片进行解锁，具体设置手动可调式突片释放按钮，并使其沿着所述第一可拆卸式座椅附接件配接器和所述第二可拆卸式座椅附接件配接器中的每一个的所述外表面安置，且以可操作方式耦合到所述相应闩锁突片为本领域的一种常规选择，其仅仅是解锁位置的一种简单变换，而且通过按钮和联动机构实现闩锁突片的致动并不存在技术上的困难和跨越。在此基础上，为了实现闩锁突片的致动，其中所述突片释放按钮经配置以在按压所述突片释放按钮时将所述闩锁突片从延伸位置移动到缩回位置这对本领域技术人员而言是一种容易想到常规设置。因此，当其引用的权利要求不具备创造性时，该权利要求也不具备专利法第二十二条第三款规定的创造性。

基于上述理由，本申请的独立权利要求及从属权利要求都不具备新颖性或创造性，同时说明书中也没有记载其他任何可以授予专利权的实质性内容，因而即使申请人对权利要求进行重新组合和/或根据说明书记载的内容作进一步的限定，本申请也不具备被授予专利权的前景。如果申请人不能在本通知书规定的答复期限内提出表明本申请具有创造性的充分理由，本申请将被驳回。

另根据国家知识产权局《关于停征和调整部分专利收费的公告》（第 272 号）规定，对进入实质审查的发

明专利申请，在第一次审查意见通知书答复期限前（已提交答复意见的除外）主动申请撤回的，可以请求退还50%的专利申请实质审查费。

审查员姓名:曾靖

审查员代码:343015

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路6号 国家知识产权局专利局受理处收

电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

检索报告

申请号：2017101698264	申请日：20170321	首次检索
申请人：贝贝漫步有限责任公司	最早的优先权日：20160321	
权利要求项数：20	说明书段数：76	
审查员确定的 IPC 分类号：B62B7/06,B62B7/00,B62B9/12,B62B7/12		

检索记录信息：CN103909960A: 131 CNTXT, (B62B7/+/ic) and ((座椅 or 篮 or 兜) s (拆 or 装) s (按压 or 按钮)), 转库至 CNABS

CNABS, 转库结果 1

CN201626448U: 68 CNABS, (B62B7/+/ic) and (((座椅 or 篮 or 兜) s (拆 or 装)) s (车架 or 框架) s (腔 or 槽))

CN201646823U: 178 CNTXT, (B62B9/+/ic) and ((座椅 or 篮 or 兜) s (拆 or 装) s (按压 or 按钮)), 转库至 CNABS

CNABS, 转库结果 1

US6286844B1: 1 VEN, us6286844/pn 获自欧局同族审查过程

WO2014042524A1: 获自欧局同族审查过程

CN103921830A: 5 CNABS, 策富斯/pa/in 追踪发明人

CN102256856A: 5 CNABS, 策富斯/pa/in 追踪发明人

相关专利文献

类型	国别以及代码[11]给出的文献号	代码[43]或[45]给出的日期	IPC 分类号	相关的段落和/或图号	涉及的权利要求
X	CN103909960A	20140709	B62B7/10	说明书第41-42,73 段、说明书附图 1-3,10	1,13

Y	CN103909960A	20140709	B62B7/10	说明书第41-42,73段、说明书附图1-3,10	2-12,14-20
Y	CN201626448U	20101110	B62B7/04	说明书第73段、说明书附图10	2-7,14,17-19
Y	CN201646823U	20101124	B62B9/12	说明书第19-20段、说明书附图1-3	8-12,15-20
X	US6286844B1	20010911	B62B7/08	全文	1-2,4-6,13-14
X	WO2014042524A1	20140320	B62B9/28	全文	1,13
A	CN103921830A	20140716	B62B9/12	全文	1-20
A	CN102256856A	20111123	B62B7/00	全文	1-20

相关非专利文献					
类型	书名（包括版本号和卷号）	出版日期	作者姓名和出版者名称	相关页数	涉及的权利要求
类型	期刊或文摘名称 （包括卷号和期号）	发行日期	作者姓名和文章标题	相关页数	涉及的权利要求

表格填写说明事项：

1. 审查员实际检索领域的 IPC 分类号应当填写到大组和 / 或小组所在的分类位置。
2. 期刊或其它定期出版物的名称可以使用符合一般公认的国际惯例的缩写名称。
3. 相关文件的类型说明：

X：一篇文件影响新颖性或创造性；

Y：与本报告中的另外的 Y 类文件组合而影响创造性；

A：背景技术文件；

R：任何单位或个人在申请日向专利局提交的、属于同样的发明创造的专利或专利申请文件。

P：中间文件，其公开日在申请的申请日与所要求的优先权日之间的文件；

E：抵触申请。

审 查 员：曾靖　　审查部门：专利审查协作广东中心机械发明审查部

2018 年 10 月 21 日

(TRANSLATION)

SECOND OFFICE ACTION OF CHINA STATE INTELLECTUAL PROPERTY OFFICE

Date of Issuance: 8 June 2013

Application No.: 200980148829.3

The applicant filed a response and amended application documents on 15 March 2013. After reviewing the above documents, the examiner continued examination of the subject application and had the following comments:

I. Claims 1-18 lack inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

1. Claim 1 seeks to protect a seat attachment for a stroller. Citation 1 (WO2005/105546A1) discloses a seat attachment 1 for a stroller 2, which comprises: two separate attachment frame members 1, 18, and 19, in which each attachment frame member comprises: a connector portion 4, 5, 6, 18, and 19 capable of reversibly connecting to a stroller frame adjacent a front wheel of the stroller; and a seat support element 16 (*see* pages 7-11 of the specification and Figs. 1-7).

   In view of the above, the distinguishing technical feature of Claim 1 over Citation 1 is that: the seat support element of each attachment member together are capable of supporting a seat between the seat support elements in either a forward or backward position.

   However, Citation 2 discloses that (*see* page 2 of the specification and Figs. 4-8) the seat support elements 410, 420 are capable of supporting a seat between the seat support elements in either a forward or backward position. Given this, the above distinguishing technical feature of Claim 1 is disclosed in Citation 2, and it plays the same role in Citation 2 as in this invention for solving the technical problem to be solved. Thus, persons skilled in the art would be motivated to incorporate the above distinguishing technical feature into Citation 1 so as to arrive at the technical solution claimed in Claim 1, which needs no creative effort. Therefore, Claim 1 lacks prominent substantive features and does not represent notable progress, and thus it lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

2. Claim 2 depends upon Claim 1. Citation 1 (*see* Fig.6) discloses that the seat attachment comprises a wheel 30. Given this, the dependent technical feature of Claim 2 is disclosed in Citation 1. Since Claim 1 upon which Claim 2 depends lacks an inventive step, Claim 2 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

3. Claim 3 depends upon Claim 2. Citation 1 (*see* pages 7-11 of the specification and Figs. 1-7) discloses (the seat attachment) comprising a wheel support frame 10, 12, and 12a connecting the wheel 30 to the attachment frame member 1. Given this, the

dependent technical feature of Claim 3 is disclosed in Citation 1. Since Claim 2 upon which Claim 3 depends lacks an inventive step, Claim 3 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

4. Claim 4 depends upon Claim 3. Citation 1 (*see* pages 7-11 of the specification and Figs. 1-7) discloses that the wheel support frame 10, 12, and 12a is pivotally connected to the attachment frame member 1. Given this, the dependent technical feature of Claim 4 is disclosed in Citation 1. Since Claim 3 upon which Claim 4 depends lacks an inventive step, Claim 4 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

5. Claim 5 depends upon Claim 4. Citation 1 (*see* pages 7-11 of the specification and Figs. 1-7) discloses that the wheel support frame 10, 12, and 12a is pivotally connected near the middle of the attachment frame member 1. Given this, the dependent technical feature of Claim 5 is disclosed in Citation 1. Since Claim 4 upon which Claim 5 depends lacks an inventive step, Claim 5 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

6. Claim 6 depends upon Claim 5. Citation 1 (*see* Figs. 6 and 7) discloses (the seat attachment) further comprising a folding mechanism. Given this, the dependent technical feature of Claim 6 is disclosed in Citation 1. Since Claim 5 upon which Claim 6 depends lacks an inventive step, Claim 6 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

7. Claim 7 depends upon Claim 6. Citation 1 (*see* pages 12-14 on the specification and Figs. 8-31) discloses that the folding mechanism comprises a sliding connector 143, 144 slidingly connected to the attachment frame member and a strut 142 having a first end connected to the sliding member and a second end connected to the wheel support frame. Given this, the dependent technical feature of Claim 7 is disclosed in Citation 1. Since the above features are disclosed in an embodiment of Citation 1, persons skilled in the art may combine these features with the technical solution disclosed in other parts of Citation 1 so as to arrive at the technical solution claimed in Claim 7, which needs no creative effort. Therefore, since Claim 6 upon which Claim 7 depends lacks an inventive step, Claim 7 lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

8. Claim 8 depends upon Claim 4. Citation 1 (*see* pages 7-11 on the specification and Figs. 1-7) discloses that the wheel support frame 10, 12, and 12a is capable of pivoting from a first position to a second position. Given this, the dependent technical feature of Claim 8 is disclosed in Citation 1. Since Claim 4 upon which Claim 8 depends lacks an inventive step, Claim 8 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

9. Claim 9 depends upon Claim 8. Citation 1 (*see* pages 7-11 on the specification and Figs. 1-7) discloses that the first position is a locked and in-use position and the second position is an unlocked and folded position. Given this, the dependent technical feature of Claim 9 is disclosed in Citation 1. Since Claim 8 upon which Claim 9 depends lacks an inventive step, Claim 9 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

10. Claim 10 depends upon Claim 1. Citation 1 (*see* Fig. 6) discloses that the seat is a baby seat. Given this, the dependent technical feature of Claim 10 is disclosed in Citation 1. Since Claim 1 upon which Claim 10 depends lacks an inventive step, Claim 10 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

11. Claim 11 depends upon Claim 1. Citation 1 (*see* Figs. 2 and 6) discloses that the attachment frame member 1 has a first end and a second end. Given this, the dependent technical feature of Claim 11 is disclosed in Citation 1. Since Claim 1 upon which Claim 11 depends lacks an inventive step, Claim 11 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

12. Claim 12 depends upon Claim 11. Citation 1 (*see* Fig. 6) discloses that the first end is capable of connecting to a stroller frame. Given this, the dependent technical feature of Claim 12 is disclosed in Citation 1. Since Claim 11 upon which Claim 12 depends lacks an inventive step, Claim 12 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

13. Claim 13 depends upon Claim 12. Citation 1 (*see* Fig. 5) discloses that the second end is connected to the seat attachment member 1. Given this, the dependent technical feature of Claim 13 is disclosed in Citation 1. Since Claim 1 upon which Claim 13 depends lacks an inventive step, Claim 13 also lacks inventiveness as stipulated in Paragraph 2, Article 22 of the Patent Law.

14. Claim 14 depends upon Claim 1, but its dependent technical feature has been limited in Claim 1. Thus, Claim 14 also lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

15. Claim 15 depends upon Claim 1. Citation 2 discloses (*see* page 2 of the specification and Figs. 4-8) that (the seat attachment) further comprises a stroller seat 71, 72, 8, and 9, wherein the seat support element 410, 420 is capable of supporting the stroller seat 71, 72, 8, and 9 in either a forward or backward position. Given this, the dependent technical feature of Claim 15 is disclosed in Citation 2, and persons skilled in the art can incorporate these features into Citation 1 so as to obtain the technical solution claimed in Claim 15, which needs no creative effort. Therefore, since Claim 1 upon which Claim 15 depends lacks an inventive step, Claim 15 also lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

16. Claim 16 claims a double stroller. Citation 1 discloses a double stroller (*see* pages 7-11 of the specification and Figs. 1-7), which comprises: a stroller frame 2 comprising two front wheels 3, a frame 4, a first seat 2 and two attachment portions 1, 18, and 19 connected to the frame 4; wherein one attachment portion is connected adjacent to one front wheel; a seat attachment 16, two seat support elements 23, 16, a second seat 20, 21, and 22, and two connector portions 4, 5, 6, 18, and 19, each connector portion 4, 5, 6, 18, and 19 capable of releasably connecting to the attachment portion 1, 18, and 19, wherein the second seat 20, 21, and 22 is attached in front of the first seat 2 between the two front wheels 3.

The distinguishing technical feature of Claim 16 over Citation 1 is that: the other attachment portion is connected to the frame adjacent to the other front wheel.

However, Citation 2 discloses that (*see* page 2 of the specification and Figs. 4-8) the seat support elements 410, 420 are connected to the frame adjacent to the two front wheels 33. Moreover, such a feature plays the same role in Citation 2 as in this invention for solving the technical problem to be solved. Persons skilled in the art would be motivated to incorporate the above distinguishing technical feature into Citation 1 so as to render the other attachment portion connected to the frame adjacent to the other front wheel, thereby arriving at the technical solution claimed in Claim 16, which needs no creative effort. Therefore, Claim 16 lacks prominent substantive features and does not represent notable progress, and thus it lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

17. Claim 17 depends upon Claim 16. Citation 2 discloses (*see* page 2 of the specification and Figs. 4-8) that the second seat is releasably connected to the seat support element 410, 420. Given this, the dependent technical feature of Claim 17 is disclosed in Citation 2. Therefore, since Claim 16 upon which Claim 17 depends lacks an inventive step, Claim 17 lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

18. Claim 18 depends upon Claim 17. Citation 2 discloses (*see* page 2 of the specification and Figs. 4-8) that the seat support elements 410, 420 are capable of supporting a seat between the seat support elements 410, 420 in either a forward or backward position. Given this, the dependent technical feature of Claim 18 is disclosed in Citation 2. Therefore, since Claim 17 upon which Claim 18 depends lacks inventiveness, Claim 18 also lacks an inventive step as stipulated in Paragraph 3, Article 22 of the Patent Law.

In view of the above, all of the independent and dependent claims of this application lack an inventive step. Moreover, no substantial contents which can be granted a patent right were disclosed in the specification. Thus, even if the applicant rearranges the claims and/or further defines the claims based on the description in the specification, the present application still cannot be granted a patent right. If the applicant cannot provide convincing reasons why the present application possesses novelty and inventiveness, this application will be rejected.

Examiner: Anle Wei
Code: 193214

THE RELEVANT PROVISIONS

THE PRC PATENT LAW

Article 22

Any invention or utility model for which patent right may be granted must possess novelty, inventiveness and practical applicability.

Novelty means that an invention or utility model is not an existing technology, and before the date of filing, no identical invention or utility model has been filed by any entity or individual with the Patent Administration Department under the State Council and will be disclosed in the patent application documents or patent documents published after the said date of filing.

Inventiveness means that, in comparison with the existing technology, the invention has prominent substantive features and represents notable progress and that the utility model has substantive features and represents progress.

Practical applicability means that the invention or utility model can be made or used and can produce effective results.

The term "existing technology" used in this Law refers to any technology known to the public in China and abroad before the date of filing.

中华人民共和国国家知识产权局

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北京市东长安街一号东方广场东方经贸城西一办公楼十层1008室 北京律盟知识产权代理有限责任公司

刘国伟

发文日：

2013年06月08日

24H

申请号或专利号：200980148829.3　　发文序号：2013060500760670

申请人或专利权人：戴那米克品牌股份有限公司

发明创造名称：用于手推童车的座椅附接件

第二次审查意见通知书

1. ☒审查员已经收到申请人于2013年03月15日提交的意见陈述书，在此基础上审查员对上述专利申请继续进行实质审查。

☐根据国家知识产权局专利复审委员会于_____年_____月_____日作出的复审决定，审查员对上述专利申请继续进行实质审查。

☐_____

2. ☐经审查，申请人于_____提交的修改文件，不符合专利法实施细则第51条第3款的规定，不予接受。

3. 继续审查是针对下列申请文件进行的：

☐上述意见陈述书中所附的经修改的申请文件。

☒前次审查意见通知书所针对的申请文件以及上述意见陈述书中所附的经修改的申请文件替换文件。

☐前次审查意见通知书所针对的申请文件。

☐上述复审决定所确定的申请文件。

☐_____

4. ☒本通知书未引用新的对比文件。

☐本通知书引用下列对比文件(其编号续前，并在今后的审查过程中继续沿用)：

编号	文件号或名称	公开日期（或抵触申请的申请日）

5. 审查的结论性意见：

关于说明书：

☐申请的内容属于专利法第5条规定的不授予专利权的范围。

☐说明书不符合专利法第26条第3款的规定。

☐说明书的修改不符合专利法第33条的规定。

☐说明书的撰写不符合专利法实施细则第17条的规定。

☐_____

关于权利要求书：

☐权利要求_____不符合专利法第2条第2款的规定。

☐权利要求_____不符合专利法第9条第1款的规定。

中华人民共和国国家知识产权局 专利审查业务章

210403
2010.2

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路6号 国家知识产权局专利局受理处收。电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

05H

☐权利要求_____不具备专利法第 22 条第 2 款规定的新颖性。
☒权利要求 1-18 不具备专利法第 22 条第 3 款规定的创造性。
☐权利要求_____不具备专利法第 22 条第 4 款规定的实用性。
☐权利要求_____属于专利法第 25 条规定的不授予专利权的范围。
☐权利要求_____不符合专利法第 26 条第 4 款的规定。
☐权利要求_____不符合专利法第 31 条第 1 款的规定。
☐权利要求_____的修改不符合专利法第 33 条的规定。
☐权利要求_____不符合专利法实施细则第 19 条的规定。
☐权利要求_____不符合专利法实施细则第 20 条的规定。
☐权利要求_____不符合专利法实施细则第 21 条的规定。
☐权利要求_____不符合专利法实施细则第 22 条的规定。
☐_____

☐申请不符合专利法第 26 条第 5 款或者实施细则第 26 条的规定。
☐申请不符合专利法第 20 条第 1 款的规定。
☐分案申请不符合专利法实施细则第 43 条第 1 款的规定。
上述结论性意见的具体分析见本通知书的正文部分。

6.基于上述结论性意见，审查员认为：

☐申请人应当按照通知书正文部分提出的要求，对申请文件进行修改。
☐申请人应当在意见陈述书中论述其专利申请可以被授予专利权的理由，并对通知书正文部分中指出的不符合规定之处进行修改，否则将不能授予专利权。
☒专利申请中没有可以被授予专利权的实质性内容，如果申请人没有陈述理由或者陈述理由不充分，其申请将被驳回。
☐_____

7. 申请人应注意下列事项：

（1）根据专利法第 37 条的规定，申请人应当在收到本通知书之日起的 2 个月内陈述意见，如果申请人无正当理由逾期不答复，其申请将被视为撤回。

（2）申请人对其申请的修改应当符合专利法第 33 条的规定，不得超出原说明书和权利要求书记载的范围，同时申请人对专利申请文件进行的修改应当符合专利法实施细则第 51 条第 3 款的规定，按照本通知书的要求进行修改。

（3）申请人的意见陈述书和/或修改文本应当邮寄或递交国家知识产权局专利局受理处，凡未邮寄或递交给受理处的文件不具备法律效力。

（4）未经预约，申请人和/或代理人不得前来国家知识产权局与审查员举行会晤。

8. 本通知书正文部分共有 4 页，并附有下列附件：

☐引用的对比文件的复印件共_____份_____页。
☐_____

审查员：卫安乐　　联系电话：62413143　　审查部门：专利审查[illegible]北京中[illegible]发明审查

中华人民共和国国家知识产权局 专利局受理处收文章

第二次审查意见通知书

申请号:2009801488293

申请人于2013年03月15日提交了意见陈述书和经过修改的申请文件，对该申请的权利要求书进行了修改。审查员在阅读了上述文件后，对该申请继续进行审查，针对此次修改的申请文件提出如下审查意见。

1. 权利要求1-18不具备专利法第22条第3款规定的创造性。

1) 权利要求1要求保护一种用于手推童车的座椅附接件，对比文件1（参见说明书第7-11页、附图1-7）公开了一种用于手推童车的座椅附接件，包括两个分离的附接框架部件1，18，19，其中每一附接框架部件包括：连接器部分4，5，6，18，19，其能够以可逆方式连接到邻近于手推童车的前车轮的手推童车框架；及座椅支撑元件16。

权利要求1与对比文件1的区别技术特征在于：每一附接框架部件的座椅支撑元件能够共同将位于座椅支撑元件之间的座椅支撑于前向或后向的位置中。

然而对比文件2（参见说明书第2页、附图4-8）公开了座椅支撑元件410，420能够共同将位于座椅支撑元件410，420之间的座椅支撑于向前或向后的位置中。可见上述区别技术特征已经被对比文件2公开，并且其所起的作用和本发明为解决其技术问题所起的作用，由此本领域技术人员可以从中得到技术启示，将上述区别技术特征应用于对比文件1从而得到权利要求1要求保护的技术方案，这不需要付出创造性劳动，因此权利要求1不具备突出的实质性特点，不具备专利法第22条第3款规定的创造性。

2) 权利要求2对权利要求1做了进一步限定，对比文件1（参见附图6）公开了座椅附接件包括车轮30。可见权利要求2的附加技术特征已经被对比文件1公开，因此在引用的权利要求1不具备创造性的基础上，权利要求2也不具备专利法第22条第3款规定的创造性。

3) 权利要求3对权利要求2做了进一步限定，对比文件1（参见说明书第7-11页、附图1-7）公开了包括将车轮30连接到所述附接框架部件1的车轮支撑框架10，12，12a。可见权利要求3的附加技术特征已经被对比文件1公开，因此在引用的权利要求2不具备创造性的基础上，权利要求3也不具备专利法第22条第3款规定的创造性。

4) 权利要求4对权利要求3做了进一步限定，对比文件1（参见说明书第7-11页、附图1-7）公开了车轮支撑框架10，12，12a以枢转方式连接到附接框架部件1。可见权利要求4的附加技术特征已经被对比文件1公开，因此在引用的权利要求3不具备创造性的基础上，权利要求4也不具备专利法第22条第3款规定的创造性。

5) 权利要求5对权利要求4做了进一步限定，对比文件1（参见说明书第7-11页、附图1-7）公开了车轮支撑框架10，12，12a以枢转方式连接于接近附接框架部件1的中间处。可见权利要求5的附加技术特征

已经被对比文件1公开，因此在引用的权利要求4不具备创造性的基础上，权利要求5也不具备专利法第22条第3款规定的创造性。

6) 权利要求6对权利要求5做了进一步限定，对比文件1（参见附图6-7）公开了进一步包括折叠机构。可见权利要求6的附加技术特征已经被对比文件1公开，因此在引用的权利要求5不具备创造性的基础上，权利要求6也不具备专利法第22条第3款规定的创造性。

7) 权利要求7对权利要求6做了进一步限定，对比文件1（参见说明书第12-14页、附图8-31）公开了折叠机构包括以滑动方式连接到附接框架部件的滑动连接器144，143以及具有连接到滑动部件的第一端及连接到车轮支撑框架的第二端的斜撑142。可见权利要求7的附加技术特征已经被对比文件1公开，由于其是在对比文件1的一个实施例中公开，本领域技术人员可以和对比文件1其它部分公开的技术方案项结合从而得到权利要求7要求保护的技术方案，这不需要付出创造性劳动，因此在引用的权利要求6不具备创造性的基础上，权利要求7也不具备专利法第22条第3款规定的创造性。

8) 权利要求8对权利要求4做了进一步限定，对比文件1（参见说明书第7-11页、附图1-7）公开了车轮支撑框架10，12，12a能够从第一位置枢转到第二位置。可见权利要求8的附加技术特征已经被对比文件1公开，因此在引用的权利要求4不具备创造性的基础上，权利要求8也不具备专利法第22条第3款规定的创造性。

9) 权利要求9对权利要求8做了进一步限定，对比文件1（参见说明书第7-11页、附图1-7）公开了第一位置为锁定及使用中位置且第二位置为解锁及折叠位置。可见权利要求9的附加技术特征已经被对比文件1公开，因此在引用的权利要求8不具备创造性的基础上，权利要求9也不具备专利法第22条第3款规定的创造性。

10) 权利要求10对权利要求1做了进一步限定，对比文件1（参见附图6）公开了座椅为婴儿座椅。可见权利要求10的附加技术特征已经被对比文件1公开，因此在引用的权利要求1不具备创造性的基础上，权利要求10也不具备专利法第22条第3款规定的创造性。

11) 权利要求11对权利要求1做了进一步限定，对比文件1（参见附图2，6）公开了附接框架部件1具有第一端及第二端。可见权利要求11的附加技术特征已经被对比文件1公开，因此在引用的权利要求1不具备创造性的基础上，权利要求11也不具备专利法第22条第3款规定的创造性。

12) 权利要求12对权利要求11做了进一步限定，对比文件1（参见附图6）公开了第一端能够连接到手推童车框架。可见权利要求12的附加技术特征已经被对比文件1公开，因此在引用的权利要求11不具备创造性的基础上，权利要求12也不具备专利法第22条第3款规定的创造性。

中华人民共和国国家知识产权局 专利审查业务章

13) 权利要求 13 对权利要求 12 做了进一步限定，对比文件 1（参见附图 5）公开了第二端连接到座椅附接部件 1。可见权利要求 13 的附加技术特征已经被对比文件 1 公开，因此在引用的权利要求 12 不具备创造性的基础上，权利要求 13 也不具备专利法第 22 条第 3 款规定的创造性。

14) 权利要求 14 对权利要求 1 做了进一步限定，然而其附加技术特征已经在权利要求 1 中被限定过，因此权利要求 14 也不具备专利法第 22 条第 3 款规定的创造性。

15) 权利要求 15 对权利要求 1 做了进一步限定，对比文件 2（参见说明书第 2 页、附图 4-8）公开了进一步包括手推童车座椅 71，72，8，9，其中座椅支撑元件 410，420 能够将手推童车座椅 71，72，8，9 支撑在前向或后向位置中。可见权利要求 15 的附加技术特征已经被对比文件 2 公开，本领域技术人员可以将其应用于对比文件 1 从而得到权利要求 15 要求保护的技术方案，这不需要付出创造性劳动，因此在引用的权利要求 1 不具备新颖性的基础上，权利要求 15 不具备专利法第 22 条第 3 款规定的创造性。

16) 权利要求 16 要求保护一种双人手推童车，对比文件 1（参见说明书第 7-11 页、附图 1-7）公开了一种双人手推童车，包括手推童车框架 2，其包括两个前车轮 3、框架 4、第一座椅 2 及连接到框架 4 的两个附接部分 1，18，19，其中一个附接部分连接到邻近于一个前车轮，座椅附接件 16、两个座椅支撑元件 23，16，第二座椅 20，21，22 及两个连接器部分 4，5，6，18，19，每一连接器部分 4，5，6，18，19 能够以可释放方式连接到附接部分 1，18，19，其中第二座椅 20，21，22 附接至位于两个前车轮 3 之间的第一座椅 2 的前方。

权利要求 16 与对比文件 1 的区别技术特征在于：另一个附接部分连接到邻近于另一前车轮的框架。

然而，对比文件 2（参见说明书第 2 页、附图 4-8）公开了附接件部分 410，420 连接到邻近于两个前车轮 33 的框架。并且其所起的作用和本发明为解决其技术问题所起的作用相同，本领域技术人员可以从中得到技术启示，将上述特征应用于对比文件 1 使得另一个附接部分连接到邻近于另一前车轮的框架。从而得到权利要求 16 要求保护的技术方案，这不需要付出创造性劳动，因此权利要求 16 不具备突出的实质性特点，不具备专利法第 22 条第 3 款规定的创造性。

17) 权利要求 17 对权利要求 16 做了进一步限定，对比文件 2（参见说明书第 2 页、附图 4-8）公开了第二座椅以可释放方式连接到座椅支撑元件 410，420。可见权利要求 17 的附加技术特征已经被对比文件 2 公开，因此在引用的权利要求 16 不具备创造性的基础上，权利要求 17 也不具备专利法第 22 条第 3 款规定的创造性。

18) 权利要求 18 对权利要求 17 做了进一步限定，对比文件 2（参见说明书第 2 页、附图 4-8）公开了座椅支撑元件 410，420 能够共同将位于座椅支撑元件 410，420 之间的座椅支撑于向前或向后的位置中。可见权利要求 18 的附加技术特征已经被对比文件 2 公开，因此在引用的权利要求 17 不具备创造性的基础上，权利要求 18 也不具备专利法第 22 条第 3 款规定的创造性。

专利审查业务章

基于上述理由，本申请的独立权利要求以及从属权利要求都不具备创造性，同时说明书中也没有记载其它任何可以授予专利权的实质性内容，因而即使申请人对权利要求进行重新组合或根据说明书记载的内容作进一步的限定，本申请也不具备被授予专利权的前景。如果申请人不能在本通知书指定的答复期限内提出表明本申请具有创造性的充分理由，本申请将被驳回。

审查员姓名:卫安乐　　审查员代码:19[illegible]214

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路6号　国家知识产权局专利局受理处收。
电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

中华人民共和国国家知识产权局

100005

北京市东城区建国门南大街7号万豪中心A座2202室 北京律盟知识产权代理有限责任公司
曹晓斐

发文日：

2015年09月06日

申请号或专利号：201410187239.4　　发文序号：2015083101436080

申请人或专利权人：戴那米克品牌股份有限公司

发明创造名称：用于手推童车的座椅附接件

第一次审查意见通知书

1. ☒应申请人提出的实质审查请求，根据专利法第35条第1款的规定，国家知识产权局对上述发明专利申请进行实质审查。
   ☐根据专利法第35条第2款的规定，国家知识产权局决定自行对上述发明专利申请进行审查。
2. ☒申请人要求以其在：
   US 专利局的申请日 2008 年 12 月 04 日为优先权日。
   ☒申请人已经提交了经原受理机构证明的第一次提出的在先申请文件的副本。
   ☐申请人尚未提交经原受理机构证明的第一次提出的在先申请文件的副本，根据专利法第30条的规定视为未要求优先权要求。
3. ☐经审查，申请人于_____提交的修改文件，不符合专利法实施细则第51条第1款的规定，不予接受。
4. 审查针对的申请文件：
   ☐原始申请文件。☒分案申请递交日提交的文件。☐下列申请文件：

5. ☐本通知书是在未进行检索的情况下作出的。
   ☒本通知书是在进行了检索的情况下作出的。
   ☐本通知书引用下列对比文件(其编号在今后的审查过程中继续沿用)：

编号	文件号或名称	公开日期（或抵触申请的申请日）

6. 审查的结论性意见：
   关于说明书：
   ☐申请的内容属于专利法第5条规定的不授予专利权的范围。
   ☐说明书不符合专利法第26条第3款的规定。
   ☐说明书不符合专利法第33条的规定。
   ☐说明书的撰写不符合专利法实施细则第17条的规定。
   ☐_____
   关于权利要求书：
   ☐权利要求_____不符合专利法第2条第2款的规定。

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路6号 国家知识产权局专利局受理处收
电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

☐权利要求_____不符合专利法第 9 条第 1 款的规定。
☐权利要求_____不具备专利法第 22 条第 2 款规定的新颖性。
☐权利要求_____不具备专利法第 22 条第 3 款规定的创造性。
☐权利要求_____不具备专利法第 22 条第 4 款规定的实用性。
☐权利要求_____属于专利法第 25 条规定的不授予专利权的范围。
☒权利要求 1 不符合专利法第 26 条第 4 款的规定。
☐权利要求_____不符合专利法第 31 条第 1 款的规定。
☐权利要求_____不符合专利法第 33 条的规定。
☐权利要求_____不符合专利法实施细则第 19 条的规定。
☐权利要求_____不符合专利法实施细则第 20 条的规定。
☐权利要求_____不符合专利法实施细则第 21 条的规定。
☐权利要求_____不符合专利法实施细则第 22 条的规定。
☐_____

☐申请不符合专利法第 26 条第 5 款或者实施细则第 26 条的规定。
☐申请不符合专利法第 20 条第 1 款的规定。
☐分案申请不符合专利法实施细则第 43 条第 1 款的规定。
上述结论性意见的具体分析见本通知书的正文部分。

7. 基于上述结论性意见，审查员认为：
☐申请人应当按照通知书正文部分提出的要求，对申请文件进行修改。
☒申请人应当在意见陈述书中论述其专利申请可以被授予专利权的理由，并对通知书正文部分中指出的不符合规定之处进行修改，否则将不能授予专利权。
☐专利申请中没有可以被授予专利权的实质性内容，如果申请人没有陈述理由或者陈述理由不充分，其申请将被驳回。
☐_____

8. 申请人应注意下列事项：

(1) 根据专利法第 37 条的规定，申请人应在收到本通知之日起的 4 个月内陈述意见，如果申请人无正当理由逾期不答复，其申请将被视为撤回。

(2) 申请人对其申请的修改应当符合专利法第 33 条的规定，不得超出原说明书和权利要求书记载的范围，同时申请人对专利申请文件进行的修改应当符合专利法实施细则第 51 条第 3 款的规定，按照本通知书的要求进行修改。

(3) 申请人的意见陈述书和/或修改文本应邮寄或递交国家知识产权局专利局受理处，凡未邮寄或递交给受理处的文件不具备法律效力。

(4) 未经预约，申请人和/或代理人不得前来国家知识产权局专利局与审查员举行会晤。

9. 本通知书正文部分共有 1 页，并附有下述附件：
☐引用的对比文件的复印件共_____份_____页。
☐_____

审查员：陈引　　联系电话：020-28958324　　审查部门：专利审查协作广东中心机械发明审查部

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路 6 号　国家知识产权局专利局受理处收
电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

第一次审查意见通知书

申请号:201410187239.4

本申请涉及一种用于手推童车的座椅附接件，经审查，现提出如下审查意见：

1、权利要求 1 中记载有“其中所述左侧附接框架部件包括：连接器部分……”、“其中所述右侧附接框架部件包括：连接器部分……”，存在两个“连接器部分”，不清楚两者是否指代同一部件，导致该权利要求存在不清楚之处，不符合专利法第 26 条第 4 款的规定。建议修改为“第一连接器部分”、“第二连接器部分”或“左连接器部分”、“右连接器部分”。

基于上述理由，本申请按照目前的文本还不能被授予专利权。如果申请人按照本通知书提出的审查意见对申请文件进行修改，克服所存在的缺陷，则本申请可望被授予专利权。对申请文件的修改应当符合专利法第三十三条的规定，不得超出原说明书和权利要求书记载的范围。

审查员姓名:陈引

审查员代码:709483

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路 6 号 国家知识产权局专利局受理处收

电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

检索报告

申请号：2014101872394	申请日：20091204	首次检索
申请人：戴那米克品牌股份有限公司	最早的优先权日：20081204	
权利要求项数：7	说明书段数：50+16	
审查员确定的 IPC 分类号：B62B 9/12		
检索记录信息：CNTXT,CNABS,VEN,CNKI;B62B9/+,B62B7/+,B62D63/+;婴儿 OR 幼儿 OR 儿童,推车，双人 OR 两人，可拆卸 OR 可逆，附接 OR 附加 OR 额外，支撑，连接,CHILD+ OR BABY OR INFANT,add or attach+ or extra,double or two,SUPPORT+,FRAME,connect+ or link+,dismountable or knockdown.		

相关专利文献

类型	国别以及代码[11]给出的文献号	代码[43]或[45]给出的日期	IPC 分类号	相关的段落和/或图号	涉及的权利要求
A	WO2005105545A1	20051110	B62B9/00	全文	1-7
A	CN2784272Y	20060531	B62B7/00	全文	1-7
A	US2007085303A1	20070419	B62B7/00	全文	1-7
A	US2007114738A1	20070524	B62D63/00	全文	1-7
A	CN1978264A	20070613	B62B7/14	全文	1-7
A	CN2918181Y	20070704	B62B7/06	全文	1-7

相关非专利文献					
类型	书名（包括版本号和卷号）	出版日期	作者姓名和出版者名称	相关页数	涉及的权利要求
类型	期刊或文摘名称（包括卷号和期号）	发行日期	作者姓名和文章标题	相关页数	涉及的权利要求

表格填写说明事项：

1、审查员实际检索领域的 IPC 分类号应当填写到大组和 / 或小组所在的分类位置。

2、期刊或其它定期出版物的名称可以使用符合一般公认的国际惯例的缩写名称。

3、相关文件的类型说明：

X：一篇文件影响新颖性或创造性；

Y：与本报告中的另外的 Y 类文件组合而影响创造性；

A：背景技术文件；

R：任何单位或个人在申请日向专利局提交的、属于同样的发明创造的专利或专利申请文件。

P：中间文件，其公开日在申请的申请日与所要求的优先权日之间的文件；

E：抵触申请。

审 查 员：陈引　　审查部门：专利审查协作广东中心机械发明审查部

2015 年 08 月 23 日

(TRANSLATION)

FIRST OFFICE ACTION ISSUED BY STATE INTELLECTUAL PROPERTY OFFICE

Date of Issuance: 6 September 2015

Application No.: 201410187239.4

This application relates to a seat attachment for a stroller. After examination, the examiner made the following comments:

1. Claim 1 recites "wherein the left attachment frame member comprises: a connector portion..." and "wherein the right attachment frame member comprises: a connector portion...." Since there are two references to the term "connector portion," it is unclear whether they refer to the same element, which causes Claim 1 to be indefinite in scope and to not comply with Paragraph 4, Article 26 of the Patent Law. It is suggested that the applicant amend them to be "a first connector portion" and "a second connector portion" or to be "a left connector portion" and "a right connector portion."

For the reasons stated above, the present application cannot be granted a patent right based on the present document. If the applicant amends the application document according to the examination comments raised in this office action so as to overcome the existing defects, this application has a strong possibility of being granted a patent right. The amendment to the application documents should comply with Article 33 of the Patent Law, i.e., not exceeding the scope of the original specification and claims.

Examiner: Chen Yin
Code: 709483

SEARCH REPORT
(TRANSLATION)

Application No.: 201410187239.4	**Filing Date:** 4 December 2009	First Retrieval
Applicant: DYNAMIC BRANDS, LLC	**Earliest Priority Date:** 4 December 2008	
Number of claims: 7	**Paragraphs of the specification:** 50+16	
IPC number assigned by the examiner: B62B 9/12		
Search Record Information: CNTXT, CNABS, VEN, CNKI: B62B9/+, B62B7/+, B62D63/+, baby (婴儿) or infant (幼儿) or child (儿童), stroller (推车), double (双人) or two (两人), dismountable (可拆卸) or reversible (可逆), attach (附接) or add (附加) or extra (额外), support (支撑), connect (连接), CHILD+, OR BABY OR INFANT, add or attach + or extra, double or two, SUPPORT+, FRAME, connect+ or link+, dismountable or knockdown.		

PATENT DOCUMENTS

Category	Country and code [11] Document No.	Code [43] or [45] Publication Date	IPC	Relevant paragraphs and/or drawings:	Relevant to Claim No.
A	WO2005105545A1	10 November 2005	B62B9/00	Full text	1-7
A	CN2784272Y	31 May 2006	B62B7/00	Full text	1-7
A	US2007085303A1	19 April 2007	B62B7/00	Full text	1-7
A	US2007114738A1	24 May 2007	B62B63/00	Full text	1-7
A	CN1978264A	13 June 2007	B62B7/14	Full text	1-7
A	CN2918181Y	4 July 2007	B62B9/06	Full text	1-7

NON-PATENT DOCUMENTS

Type	Book Title (including the edition number and volume number)	Publication Date	Author Name and Publisher Name	Relevant Page Number	Relevant to claim No.

Type	Journal or Digest Title (including the volume number and issue number)	Issuance Date	Author Name and Article Title	Relevant Page Number	Relevant to claim No.

Notes for filling in the above form:

1. The IPC number used by the examiner in the search shall be filled in down to the main group and the subgroup of the technical subject-matter.
2. Internationally acceptable journal title abbreviations can be filled in the form.
3. Categories of cited documents:

X: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone;

Y: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents;

A: document defining the general state of the art

R: patent or patent application document belonging to the same invention submitted by any group or individual to the Patent Office on the filing date of this application;

P: intermediate document published prior to the filing date but later than the priority date claimed;

E: conflicting application.

Examiner: Chen Yin

Examination Department:

Mechanics Invention Examination Department, Guangdong Patent Examination Cooperation Center

Date: 23 August 2015

RELEVANT PROVISIONS:

PRC PATENT LAW

Paragraph 4, Article 26

The claims shall be supported by the description and shall clearly and concisely define the scope of protection.

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XQ01569346711

北京市东长安街一号东方广场东方经贸城西一办公楼十层 1008 室 北京律盟知识产权代理有限责任公司
刘国伟

发文日：

2012 年 10 月 31 日

申请号或专利号：200980148829.3　　发文序号：2012102600798410

申请人或专利权人：戴那米克品牌股份有限公司

发明创造名称：用于手推童车的座椅附接件

第一次审查意见通知书

（进入国家阶段的 PCT 申请）

1. ☒应申请人提出的实质审查请求，根据专利法第 35 条第 1 款的规定，国家知识产权局对上述发明专利申请进行实质审查。
   ☐根据专利法第 35 条第 2 款的规定，国家知识产权局决定自行对上述发明专利申请进行实质审查。
2. ☒申请人要求以其在：
   US 专利局的申请日 2008 年 12 月 04 日为优先权日。
3. ☐经审查，申请人于_____提交的修改文件，不符合专利法实施细则第 51 条第 1 款的规定，不予接受。
4. ☒审查是针对原始提交的国际申请的中文文本或中文译文进行的。
   ☐审查是针对下列申请文件进行的：

5. ☒本通知书引用下列对比文献（其编号在今后的审查过程中继续沿用）

编号	文件号或名称	公开日期（或抵触申请的申请日）
1	WO 2005/105546A1	20051110
2	US 2007/0085303A1	20070419
3	US 2007/0114738A1	20070527
4	US 2007/0001429A1	20070104
5	US 5338096A	

6. 审查的结论性意见：
   关于说明书：

中华人民共和国国家知识产权局 专利局受理处收讫章

210402 2010.2　纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路 6 号　国家知识产权局专利局受理处收。
电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

02K

☐申请的内容属于专利法第5条规定的不授予专利权的范围。
☐说明书不符合专利法第26条第3款的规定。
☐说明书不符合专利法第33条的规定。
☐说明书的撰写不符合专利法实施细则第17条的规定。
☐_____

关于权利要求书：
☐权利要求_____不符合专利法第2条第2款的规定。
☐权利要求_____不符合专利法第9条第1款的规定。
☒权利要求 1-6, 8-13, 16 不具备专利法第22条第2款规定的新颖性。
☒权利要求 7, 14, 15 不具备专利法第22条第3款规定的创造性。
☐权利要求_____不具备专利法第22条第4款规定的实用性。
☐权利要求_____属于专利法第25条规定的不授予专利权的范围。
☒权利要求_____不符合专利法第26条第4款的规定。
☒权利要求组(1, 16)与权利要求组（20, 28）不符合专利法第31条第1款的规定。
☐权利要求_____不符合专利法第33条的规定。
☐权利要求_____不符合专利法实施细则第19条的规定。
☐权利要求_____不符合专利法实施细则第20条的规定。
☐权利要求_____不符合专利法实施细则第21条的规定。
☐权利要求_____不符合专利法实施细则第22条的规定。
☐_____

☐申请不符合专利法第26条第5款或者实施细则第26条的规定。
☐申请不符合专利法第20条第1款的规定。
☐分案申请不符合专利法实施细则第43条第1款的规定。

上述结论性意见的具体分析见本通知书的正文部分。

7. 基于上述结论性意见，审查员认为：
☐申请人应当按照通知书正文部分提出的要求，对申请文件进行修改。
☐申请人应当在意见陈述书中论述其专利申请可以被授予专利权的理由，并对通知书正文部分中指出的不符合规定之处进行修改，否则将不能授予专利权。
☒专利申请中没有可以被授予专利权的实质性内容，如果申请人没有陈述理由或者陈述理由不充分，其申请将被驳回。
☐_____

8. 申请人应注意下列事项：
（1）根据专利法第37条的规定，申请人应当在收到本通知书之日起的4个月内陈述意见，如果申请人无正当理由逾期不答复，其申请将被视为撤回。
（2）申请人对其申请的修改应当符合专利法第33条的规定，不得超出原说明书和权利要求书记载的范围，同时申请人对专利申请文件进行的修改应当符合专利法实施细则第51条第3款的规定，按照本通知书的要求进行修改。
（3）申请人的意见陈述书和/或修改文本应当邮寄或递交国家知识产权局专利局受理处，凡未邮寄或递交给受理处的文件不具备法律效力。
（4）未经预约，申请人和/或代理人不得前来国家知识产权局与审查员举行会晤。

9. 本通知书正文部分共有 4 页，并附有下列附件：
☐引用的对比文件的复印件共_____份_____页。
☐_____

审查员：卫安乐　　联系电话：62413143　　审查部门：专利审查协作北京中心发明审查部

中华人民共和国国家知识产权局 专利局专用章

第一次审查意见通知书

（进入国家阶段的PCT申请）

申请号：200980148293

本申请涉及一种用于手推童车的座椅附接件，经审查，提出如下审查意见。

1. 权利要求组（1，16）与权利要求组（20，28）不具有单一性，不符合专利法第31条第1款的规定。

由于手推童车及座椅附接件或座椅附接部分是公知常识的装置，权利要求（1，16）和权利要求（20，28）之间除了这些技术特征外没有其它的相同的或相应的技术特征，因此可以明显看出权利要求组（1，16）与权利要求组（20，28）之间没有相同的或相应的技术特征，因此不具有单一性，不符合专利法第31条第1款规定的单一性。

2. 权利要求1-6，8-13，16不具备专利法第22条第2款规定的新颖性，权利要求7，14，15不具备专利法第22条第3款规定的创造性。

1) 权利要求1要求保护用于手推童车的座椅附接件，对比文件1（WO2005/105546A1）公开了（参见说明书第7-11页、附图1-7）一种用于手推童车2的座椅附接件1，包括：附接框架部件1，其包括连接到手推童车框架的连接器部分4，5，6，18，19；及座椅支撑元件16，其能够支撑座椅20。

由此可见，权利要求1的全部技术特征已经被对比文件1公开，两者属于相同的技术领域，采用相同的技术方案，解决相同的技术问题，并达到了相同的技术效果。因此权利要求1不具备专利法第22条第2款规定的新颖性。

2) 权利要求2对权利要求1做了进一步限定，对比文件1（参见附图6）公开了座椅附接件包括车轮30。可见权利要求2的附加技术特征已经被对比文件1公开，因此在引用的权利要求1不具备新颖性的基础上，权利要求2也不具备专利法第22条第2款规定的新颖性。

3) 权利要求3对权利要求2做了进一步限定，对比文件1（参见说明书第7-11页、附图1-7）公开了包括将车轮30连接到所述附接框架部件1的车轮支撑框架10，12，12a。可见权利要求3的附加技术特征已经被对比文件1公开，因此在引用的权利要求2不具备新颖性的基础上，权利要求3也不具备专利法第22条第2款规定的新颖性。

4) 权利要求4对权利要求3做了进一步限定，对比文件1（参见说明书第7-11页、附图1-7）公开了车轮支撑框架10，12，12a以枢转方式连接到附接框架部件1。可见权利要求4的附加技术特征已经被对比文件1公开，因此在引用的权利要求3不具备新颖性的基础上，权利要求4也不具备专利法第22条第2款规定的新颖性。

5) 权利要求5对权利要求4做了进一步限定，对比文件1（参见说明书第7-11页、附图1-7）公开了车轮支撑框架10，12，12a以枢转方式连接于接近附接框架部件1的中间处。可见权利要求5的附加技术特征

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已经被对比文件 1 公开，因此在引用的权利要求 4 不具备新颖性的基础上，权利要求 5 也不具备专利法第 22 条第 2 款规定的新颖性。

6) 权利要求 6 对权利要求 5 做了进一步限定，对比文件 1（参见附图 6-7）公开了进一步包括折叠机构。可见权利要求 6 的附加技术特征已经被对比文件 1 公开，因此在引用的权利要求 5 不具备新颖性的基础上，权利要求 6 也不具备专利法第 22 条第 2 款规定的新颖性。

7) 权利要求 7 对权利要求 6 做了进一步限定，对比文件 1（参见说明书第 12-14 页、附图 8-31）公开了折叠机构包括以滑动方式连接到附接框架部件的滑动连接器 144，143 以及具有连接到滑动部件的第一端及连接到车轮支撑框架的第二端的斜撑 142。可见权利要求 7 的附加技术特征已经被对比文件 1 公开，由于其是在对比文件 1 的一个实施例中公开，本领域技术人员可以和对比文件 1 其它部分公开的技术方案项结合从而得到权利要求 7 要求保护的技术方案，这不需要付出创造性劳动，因此在引用的权利要求 6 不具备新颖性的基础上，权利要求 7 不具备专利法第 22 条第 3 款规定的创造性。

8) 权利要求 8 对权利要求 4 做了进一步限定，对比文件 1（参见说明书第 7-11 页、附图 1-7）公开了车轮支撑框架 10，12，12a 能够从第一位置枢转到第二位置。可见权利要求 8 的附加技术特征已经被对比文件 1 公开，因此在引用的权利要求 4 不具备新颖性的基础上，权利要求 8 也不具备专利法第 22 条第 2 款规定的新颖性。

9) 权利要求 9 对权利要求 8 做了进一步限定，对比文件 1（参见说明书第 7-11 页、附图 1-7）公开了第一位置为锁定及使用中位置且第二位置为解锁及折叠位置。可见权利要求 9 的附加技术特征已经被对比文件 1 公开，因此在引用的权利要求 8 不具备新颖性的基础上，权利要求 9 也不具备专利法第 22 条第 2 款规定的新颖性。

10) 权利要求 10 对权利要求 1 做了进一步限定，对比文件 1（参见附图 6）公开了座椅为婴儿座椅。可见权利要求 10 的附加技术特征已经被对比文件 1 公开，因此在引用的权利要求 1 不具备新颖性的基础上，权利要求 10 也不具备专利法第 22 条第 2 款规定的新颖性。

11) 权利要求 11 对权利要求 1 做了进一步限定，对比文件 1（参见附图 2，6）公开了附接框架部件 1 具有第一端及第二端。可见权利要求 11 的附加技术特征已经被对比文件 1 公开，因此在引用的权利要求 1 不具备新颖性的基础上，权利要求 11 也不具备专利法第 22 条第 2 款规定的新颖性。

12) 权利要求 12 对权利要求 11 做了进一步限定，对比文件 1（参见附图 6）公开了第一端能够连接到手推童车框架。可见权利要求 12 的附加技术特征已经被对比文件 1 公开，因此在引用的权利要求 11 不具备新颖性的基础上，权利要求 12 也不具备专利法第 22 条第 2 款规定的新颖性。

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13) 权利要求 13 对权利要求 12 做了进一步限定，对比文件 1（参见附图 5）公开了第二端连接到座椅附接部件 1。可见权利要求 13 的附加技术特征已经被对比文件 1 公开，因此在引用的权利要求 12 不具备新颖性的基础上，权利要求 13 也不具备专利法第 22 条第 2 款规定的新颖性。

14) 权利要求 14 对权利要求 1 做了进一步限定，对比文件 2（US2007/0085303A1）公开了（参见说明书第 2 页、附图 4-8）座椅支撑元件 410，420 能够将座椅支撑在前向或后向位置中。可见权利要求 14 的附加技术特征已经被对比文件 2 公开，本领域技术人员可以将其应用于对比文件 1 从而得到权利要求 14 要求保护的技术方案，这不需要付出创造性劳动，因此在引用的权利要求 1 不具备新颖性的基础上，权利要求 14 不具备专利法第 22 条第 3 款规定的创造性。

15) 权利要求 15 对权利要求 1 做了进一步限定，对比文件 2（参见说明书第 2 页、附图 4-8）公开了进一步包括手推童车座椅 71，72，8，9，其中座椅支撑元件 410，420 能够将手推童车座椅 71，72，8，9 支撑在前向或后向位置中。可见权利要求 15 的附加技术特征已经被对比文件 2 公开，本领域技术人员可以将其应用于对比文件 1 从而得到权利要求 15 要求保护的技术方案，这不需要付出创造性劳动，因此在引用的权利要求 1 不具备新颖性的基础上，权利要求 15 不具备专利法第 22 条第 3 款规定的创造性。

16) 权利要求 16 要求保护一种双人手推童车，对比文件 1（参见说明书第 4-8 栏、附图 1-7）公开了一种双人手推童车，包括手推童车框架 2，，其包括车轮 3、框架 4、第一座椅 2 及连接到框架 4 的附接框架部件 1；座椅附接件 16，其包括车轮 30、第二座椅 20 及能够连接到附接框架部件 1 的连接器部分 4，5，6，18，19。

由此可见，权利要求 16 的全部技术特征已经被对比文件 1 公开，两者属于相同的技术领域，采用相同的技术方案，解决相同的技术问题，并达到了相同的技术效果。因此权利要求 16 不具备专利法第 22 条第 2 款规定的新颖性。

申请人可能笔误将权利要求 17，18 引用权利要求 16 写成了引用权利要求 12，以下基于假设权利要求 17，18 引用权利要求 16 进行评述。

17) 权利要求 17 对权利要求 16 做了进一步限定，对比文件 1（参见说明书第 7-11 页、附图 1-7）公开了连接器部分 4，5，6，18，19 能够以可释放方式连接到附接框架部件 1。可见权利要求 17 的附加技术特征已经被对比文件 1 公开，因此在引用的权利要求 16 不具备新颖性的基础上，权利要求 17 也不具备专利法第 22 条第 2 款规定的新颖性。

18) 权利要求 18 对权利要求 16 做了进一步限定，对比文件 2（参见说明书第 2 页、附图 4-8）公开了第二座椅以可释放方式连接到座椅支撑元件 410，420。可见权利要求 18 的附加技术特征已经被对比文件 2 公开，本领域技术人员可以将其应用于对比文件 1 从而得到权利要求 18 要求保护的技术方案，这不需要付出创造性劳动，因此在引用的权利要求 16 不具备新颖性的基础上，权利要求 18 不具备专利法第 22 条第 3 款规定的创造性。

专利审查业务章

19) 权利要求 19 对权利要求 18 做了进一步限定，对比文件 2（参见说明书第 2 页、附图 4-8）公开了座椅支撑元件 410，420 能够将座椅支撑在前向或后向位置中。可见权利要求 19 的附加技术特征已经被对比文件 2 公开，因此在引用的权利要求 18 不具备创造性的基础上，权利要求 19 也不具备专利法第 22 条第 3 款规定的创造性。

另外，对比文件 3（US 2007/0114738A1）公开的内容（参见说明书第 2-3 页、附图 1-13），对比文件 4（US 2007/0001429A1）公开的内容（参见说明书第 2-3 页、附图 1-11）以及对比文件（US 5338096A）公开的内容（参见说明书第 1-2 栏、附图 1-6）或其结合也与本申请密切相关。

审查员已对权利要求 1 及其从属权利要求进行了检索和审查，申请人应当删除与之不具有单一性且未经检索的权利要求 20-34，以使本申请符合专利法第 31 条第 1 款的规定。需要提醒申请人注意的是，对申请文件的修改如果只是删除已经检索过和评述过的权利要求，而保留与该权利要求 1 不具有单一性的权利要求 20，28 及其从属权利要求，这种修改是不符合专利法实施细则第 51 条第 3 款规定的，审查员将基于目前审查的申请文本，以本申请不符合专利法第 31 条第 1 款的规定为由做出驳回决定。

基于上述理由，本申请的独立权利要求以及从属权利要求都不具备新颖性/创造性，同时说明书中也没有记载其它任何可以授予专利权的实质性内容，因而即使申请人对权利要求进行重新组合或根据说明书记载的内容作进一步的限定，本申请也不具备被授予专利权的前景。如果申请人不能在本通知书指定的答复期限内提出表明本申请具有新颖性和创造性的充分理由，本申请将被驳回。

中华人民共和国国家知识产权局
专利审查业务章
审查[illegible]名：[illegible]
审查员代码：[illegible]

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路 6 号 国家知识产权局专利局受理处收。
电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

检索报告

申请号：2009801488293	申请日：20091204	首次检索
申请人：戴那米克品牌股份有限公司	最早的优先权日：20081204	
权利要求项数：34	说明书段数：49	
审查员确定的 IPC 分类号：B62B 7/00		
检索记录信息：IPC:B62B 7/00,B62B 9/00,B62D 63/00,B62B 9/10 CNKI CNPAT WPI EPODOC 手推车,婴儿,幼儿,儿童,座椅,支撑 stroller,infant,child,seat?,support		

相关专利文献

类型	国别以及代码[11]给出的文献号	代码[43]或[45]给出的日期	IPC 分类号	相关的段落和/或图号	涉及的权利要求
X	WO2005/105546A1	20051110	B62B 9/00	参见说明书第 7-14 页、附图 1-31	1-13,16
Y	WO2005/105546A1	20051110	B62B 9/00	参见说明书第 7-14 页、附图 1-31	14,15
Y	US2007/0085303A1	20070419	B62B 7/00	说明书第 2 页、附图 4-8	14,15
	WO2005/105546A1	20051110	B62B 9/00	参见说明书第 7-14 页、附图 1-31	17-19
	US2007/0085303A1	20070419	B62B 7/00	说明书第 2 页、附图 4-8	17-19
X	US2007/0114738A1	20070527	B62D 63/00	说明书第 2-3 页、附图 1-13	1-5,8,11-14
Y	US2007/0114738A1	20070527	B62D 63/00	说明书第 2-3 页、附图 1-13	6,7,9,10,15,16
Y	US2007/0001429A1	20070104	B62B 7/00	说明书第 2-3 页、附图 1-11	6,7,9,10,15
Y	US5338096A	19940816	B62B 9/10	说明书第 1-2 栏、附图 1-6	16
	US2007/0114738A1	20070527	B62D 63/00	说明书第 2-3 页、附图 1-13	17-19
	US5338096A	19940816	B62B 9/10	说明书第 1-2 栏、附图 1-6	17-19

中华人民共和国国家知识产权局

A	CN2194313Y	19950412	B62B 7/00	全文	1-19

08K

19K

相关非专利文献					
类型	书名（包括版本号和卷号）	出版日期	作者姓名和出版者名称	相关页数	涉及的权利要求
类型	期刊或文摘名称（包括卷号和期号）	发行日期	作者姓名和文章标题	相关页数	涉及的权利要求

表格填写说明事项：

1. 审查员实际检索领域的 IPC 分类号应当填写到大组和/或小组所在的分类位置。
2. 期刊或其它定期出版物的名称可以使用符合一般公认的国际惯例的缩写名称。
3. 相关文件的类型说明：

X：一篇文件影响新颖性或创造性；

Y：与本报告中的另外的 Y 类文件组合而影响创造性；

A：背景技术文件；

R：任何单位或个人在申请日向专利局提交的、属于同样的发明创造的专利或专利申请文件。

P：中间文件，其公开日在申请的申请日与所要求的优先权日之间的文件；

E：抵触申请。

审 查 员：卫安乐　　审查部门：专利审查协作北京中心机械发明审查部

2012 年 10 月 23 日

(TRANSLATION)

FIRST OFFICE ACTION OF CHINA STATE INTELLECTUAL PROPERTY OFFICE

(PCT Application Entering into China National Phase)

Date of Issuance: 26 November 2012

Application No.: 200980148829.3

The present invention relates to a seat attachment for a stroller. After examination, the examiner had the following comments:

I. The group of Claims 1 and 16 and the group of Claims 20 and 28 lack unity, which violates Paragraph 1, Article 31 of the Patent Law.

The stroller, seat attachment, and seat attachment portion are common devices in the art, and Claims 1 and 16 and Claims 20 and 28 have no other same or corresponding technical features except for the above. Given this, obviously there are no identical or corresponding technical features between Claims 1 and 16 and Claims 20 and 28, and thus they lack unity of invention, which violates the provision of unity provided in Paragraph 1, Article 31 of the Patent Law.

II. Claims 1-6, 8-13, and 16 lack novelty as stipulated in Paragraph 2, Article 22 of the Patent Law, and Claims 7, 14, and 15 lack inventive step as stipulated by Paragraph 3, Article 22 of the Patent Law.

1. Claim 1 seeks to protect a seat attachment for a stroller. Citation 1 (WO2005/105546A1) discloses a seat attachment 1 for a stroller 2, which comprises: an attachment frame member 1 comprising a connector portion 4, 5, 6, 18, and 19 capable of connecting to a stroller frame; and a seat support element 16 capable of supporting a seat 20 (*see* pages 7-11 of the specification and Figs. 1-7).

   In view of the above, Citation 1 discloses all technical features of Claim 1. Citation 1 and (the invention claimed in) Claim 1 belong to the same technical field, adopt the same technical solution to solve the same technical problem, and can produce the same technical effects. Thus, Claim 1 lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

2. Claim 2 depends upon Claim 1. Citation 1 (*see* Fig.6) discloses that the seat attachment comprises a wheel 30. Given this, the dependent technical feature of Claim 2 is disclosed in Citation 1. Since Claim 1 upon which Claim 2 depends lacks novelty, Claim 2 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

3. Claim 3 depends upon Claim 2. Citation 1 (*see* pages 7-11 on the specification and Figs. 1-7) discloses (the seat attachment) comprising a wheel support frame 10, 12, and 12a connecting the wheel 30 to the attachment frame member 1. Given this, the dependent technical feature of Claim 3 is disclosed in Citation 1. Since Claim 2 upon which Claim 3 depends lacks novelty, Claim 3 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

4. Claim 4 depends upon Claim 3. Citation 1 (*see* pages 7-11 on the specification and Figs. 1-7) discloses that the wheel support frame 10, 12, and 12a is pivotally connected to the attachment frame member 1. Given this, the dependent technical feature of Claim 4 is disclosed in Citation 1. Since Claim 3 upon which Claim 4 depends lacks novelty, Claim 4 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

5. Claim 5 depends upon Claim 4. Citation 1 (*see* pages 7-11 on the specification and Figs. 1-7) discloses that the wheel support frame 10, 12, and 12a is pivotally connected near the middle of the attachment frame member 1. Given this, the dependent technical feature of Claim 5 is disclosed in Citation 1. Since Claim 4 upon which Claim 5 depends lacks novelty, Claim 5 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

6. Claim 6 depends upon Claim 5. Citation 1 (*see* Figs. 6 and 7) discloses (the seat attachment) further comprising a folding mechanism. Given this, the dependent technical feature of Claim 6 is disclosed in Citation 1. Since Claim 5 upon which Claim 6 depends lacks novelty, Claim 6 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

7. Claim 7 depends upon Claim 6. Citation 1 (*see* pages 12-14 on the specification and Figs. 8-31) discloses that the folding mechanism comprises a sliding connector 143, 144 slidingly connected to the attachment frame member and a strut 142 having a first end connected to the sliding member and a second end connected to the wheel support frame. Given this, the dependent technical feature of Claim 7 is disclosed in Citation 1. Since the above features are disclosed in an embodiment of Citation 1, persons skilled in the art may combine these features with the technical solution disclosed in other part of Citation 1 so as to arrive at the technical solution claimed in Claim 7, which needs no creative effort. Therefore, since Claim 6 upon which Claim 7 depends lacks novelty, Claim 7 lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

8. Claim 8 depends upon Claim 4. Citation 1 (*see* pages 7-11 on the specification and Figs. 1-7) discloses that the wheel support frame 10, 12, and 12a is capable of pivoting from a first position to a second position. Given this, the dependent technical feature of Claim 8 is disclosed in Citation 1. Since Claim 4 upon which Claim 8 depends lacks novelty, Claim 8 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

9. Claim 9 depends upon Claim 8. Citation 1 (*see* pages 7-11 on the specification and Figs. 1-7) discloses that the first position is a locked and in-use position and the second position is an unlocked and folded position. Given this, the dependent technical feature of Claim 9 is disclosed in Citation 1. Since Claim 8 upon which Claim 9 depends lacks novelty, Claim 9 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

10. Claim 10 depends upon Claim 1. Citation 1 (*see* Fig. 6) discloses that the seat is a baby seat. Given this, the dependent technical feature of Claim 10 is disclosed in Citation 1. Since Claim 1 upon which Claim 10 depends lacks novelty, Claim 10 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

11. Claim 11 depends upon Claim 1. Citation 1 (*see* Figs. 2 and 6) discloses that the attachment frame member 1 has a first end and a second end. Given this, the dependent technical feature of Claim 11 is disclosed in Citation 1. Since Claim 1 upon which Claim 11 depends lacks novelty, Claim 11 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

12. Claim 12 depends upon Claim 11. Citation 1 (*see* Fig. 6) discloses that the first end is capable of connecting to a stroller frame. Given this, the dependent technical feature of Claim 12 is disclosed in Citation 1. Since Claim 11 upon which Claim 12 depends lacks novelty, Claim 12 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

13. Claim 13 depends upon Claim 12. Citation 1 (*see* Fig. 5) discloses that the second end is connected to the seat attachment member 1. Given this, the dependent technical feature of Claim 13 is disclosed in Citation 1. Since Claim 1 upon which Claim 13 depends lacks novelty, Claim 13 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

14. Claim 14 depends upon Claim 1. Citation 2 (US2007/0085303A1) discloses that (*see* page 2 of the specification and Figs. 4-8) the seat support element 410, 420 is capable of supporting a seat in either a forward or backward position. Given this, the dependent technical feature of Claim 14 is disclosed in Citation 2, and persons skilled in the art can incorporate this feature into Citation 1 so as to arrive at the technical solution claimed in Claim 14, which needs no creative effort. Therefore, since Claim 1 upon which Claim 14 depends lacks novelty, Claim 14 lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

15. Claim 15 depends upon Claim 1. Citation 2 (*see* page 2 of the specification and Figs. 4-8) discloses that (the seat attachment) further comprises a stroller seat 71, 72, 8, and 9, wherein the seat support element 410, 420 is capable of supporting the stroller seat 71, 72, 8, and 9 in either a forward or backward position. Given this, the dependent technical feature of Claim 15 is disclosed in Citation 2, and persons skilled in the art can incorporate this feature into Citation 1 so as to obtain the technical solution claimed in Claim 15, which needs no creative effort. Therefore,

since Claim 1 upon which Claim 15 depends lacks novelty, Claim 15 lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

16. Claim 16 claims a double stroller. Citation 1 (*see* col. 4-8 on the specification and Figs. 1-7) discloses a double stroller, which comprises: a stroller frame 2 comprising wheels 3, a frame 4, a first seat 2 and an attachment frame member 1 connected to the frame 4; a seat attachment 16 comprising a wheel 30, a second seat 20, and a connector portion 4, 5, 6, 18, and 19 capable of connecting to the attachment frame member 1.

    In view of the above, all technical features of Claim 16 are disclosed in Citation 1. Citation 1 and (the invention claimed in) Claim 16 belong to the same technical field, adopt the same technical solution to solve the same technical problem, and can produce the same technical effects. Thus, Claim 16 lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

[Translator's note: Claims 17 and 18 depend upon Claim 12, which may be an error; they should depend upon Claim 16. Given this, the examiner provides the following comments based on the presumption that Claims 17 and 18 depend upon Claim 16.]

17. Claim 17 depends upon Claim 16. Citation 1 (*see* pages 7-11 on the specification and Figs. 1-7) discloses that the connector portion 4, 5, 6, 18, and 19 is capable of being releasably connected to the attachment frame member 1. Given this, the dependent technical feature of Claim 17 is disclosed in Citation 1. Since Claim 16 upon which Claim 17 depends lacks novelty, Claim 17 also lacks novelty as stipulated in Paragraph 2, Article 22 of the Patent Law.

18. Claim 18 depends upon Claim 16. Citation 2 (*see* page 2 of the specification and Figs. 4-8) discloses that the second seat is releasably connected to the seat support element 410, 420. Given this, the dependent technical feature of Claim 18 is disclosed in Citation 2, and persons skilled in the art can incorporate this feature into Citation 1 so as to obtain the technical solution claimed in Claim 18, which needs no creative effort. Therefore, since Claim 16 upon which Claim 18 depends lacks novelty, Claim 18 lacks inventiveness as stipulated in Paragraph 3, Article 22 of the Patent Law.

19. Claim 19 depends upon Claim 18. Citation 2 (*see* page 2 of the specification and Figs. 4-8) discloses that the seat support element 410, 420 is capable of supporting the second seat in either a forward or backward position. Given this, the dependent technical feature of Claim 19 is disclosed in Citation 2. Therefore, since Claim 18 upon which Claim 19 depends lacks inventiveness, Claim 19 also lacks an inventive step stipulated in Paragraph 3, Article 22 of the Patent Law.

In addition, the contents disclosed in Citation 3 (US2007/0114738A1, *see* pages 2 and 3 of the specification and Figs. 1-13), in Citation 4 (US2007/0001429A1, *see* pages 2 and 3

of the specification and Figs. 1-11), and in Citation 5 (US5338096A, *see* col. 1-2 of the specification and Figs. 1-6) as well as their combination are also very close to this application.

The examiner has conducted a search on and examined Claim 1 and its dependent claims. The applicant should cancel Claims 20-34 which do not have unity with Claim 1 and on which a search has not been conducted, so as to make this application comply with Paragraph 1, Article 31 of the Patent Law. The applicant should note that if he amends application documents by cancelling the claims on which the search has been conducted and which have been commented on, while retaining Claims 20 and 28 and their dependent claims, which do not have unity with Claim 1 and on which no search has been conducted, the amendment will violate Paragraph 3, Rule 51 of the Implementing Regulations of the Patent Law. In that case, the examiner will reject this application based on the present application documents and on the ground that it does not comply with Paragraph 1, Article 31 of the Patent Law.

In view of the above, all of the independent and dependent claims of this application lack novelty/an inventive step. Moreover, no substantial contents which can be granted a patent right were recited in the specification. Thus, even if the applicant rearranges the claims and/or further defines the claims based on the description in the specification, the present application still cannot be granted a patent right. If the applicant cannot provide convincing reasons why the present application possesses novelty and inventiveness, this application will be rejected.

Examiner: Anle Wei
Code: 193214

SEARCH REPORT
(TRANSLATION)

Application No.: 200980148829.3	Filing Date: 4 December 2009	First Retrieval
Applicant: DYNAMIC BRANDS, LLC	Earliest Priority Date: 4 December 2008	
Number of claims: 34	Paragraphs of the specification: 49	
IPC number assigned by the examiner: B62B 7/00		
Search Record Information: IPC: B62B 7/00, B62B 9/00, B62D 63/00, B62B 9/10 CNKI, CNPAT, WPI, EPODC, stroller (手推车), infant (婴儿), child (儿童), seat (座椅), support (支撑), stroller, infant, child, seat?, support		

Patent Documents

Category	Country and code [11] Document No.	Code [43] or [45] Publication Date	IPC	Relevant paragraphs and/or drawings:	Relevant to claim No.
X	WO2005/105546A1	10 November 2005	B62B 9/00	pages 7-14 on the specification and Figs. 1-31	1-13, 16
Y	WO2005/105546A1	10 November 2005	B62B 9/00	pages 7-14 on the specification and Figs. 1-31	14, 15
Y	US2007/0085303A1	19 April 2007	B62B 7/00	page 2 of the specification and Figs. 4-8	14, 15
	WO2005/105546A1	10 November 2005	B62B 9/00	pages 7-14 on the specification and Figs. 1-31	17-19
	US2007/0085303A1	19 April 2007	B62B 7/00	page 2 of the specification and Figs. 4-8	17-19
X	US2007/0114738A1	27 May 2007	B62D 63/00	pages 2 and 3 of the specification and Figs. 1-13	1-5, 8, 11-14
Y	US2007/0114738A1	27 May 2007	B62D 63/00	pages 2 and 3 of the specification and Figs. 1-13	6, 7, 9, 10, 15, 16
Y	US2007/0001429A1	4 January 2007	B62B 7/00	pages 2 and 3 of the specification and Figs. 1-11	6, 7, 9, 10, 15
Y	US5338096A	16 August 1994	B62B 9/10	pages 1 and 2 of the specification and Figs. 1-6	16
	US2007/0114738A1	27 May 2007	B62D 63/00	pages 2 and 3 of the specification and Figs. 1-13	17-19
	US5338096A	16 August 1994	B62B 9/10	pages 1 and 2 of the specification and Figs. 1-6	17-19
	CN2194313Y	12 April 1995	B62B 7/00	Full texts	1-19

Non-Patent Documents					
Type	Book Title (including the edition number and volume number)	Publication Date	Author Name and Publisher Name	Relevant Page Number	Relevant to claim No.
Type	Journal or Digest Title (including the volume number and issue number)	Issuance Date	Author Name and Article Title	Relevant Page Number	Relevant to claim No.

Notes for filling in the form:

1. The IPC number used by the examiner in search shall be filled in down to the main group and the subgroup of the technical subject-matter.

2. Internationally acceptable journal title abbreviations can be filled in the form.

3. Categories of cited documents:

   X: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone;

   Y: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents;

   A: document defining the general state of the art

   R: patent or patent application document belonging to the same invention submitted by any group or individual to the Patent Office on the filing date of this application;

   P: intermediate document published prior to the filing date but later than the priority date claimed;

   E: conflicting application.

Examiner: Anle Wei

Examination Department: Mechanics Department, Beijing Patent Examination Cooperation Center

Date: 23 October 2012

THE RELEVANT PROVISIONS

THE PRC PATENT LAW

Article 22

Any invention or utility model for which patent right may be granted must possess novelty, inventiveness and practical applicability.

Novelty means that an invention or utility model is not an existing technology, and before the date of filing, no identical invention or utility model has been filed by any entity or individual with the Patent Administration Department under the State Council and will be disclosed in the patent application documents or patent documents published after the said date of filing.

Inventiveness means that, in comparison with the existing technology, the invention has prominent substantive features and represents notable progress and that the utility model has substantive features and represents progress.

Practical applicability means that the invention or utility model can be made or used and can produce effective results.

The term "existing technology" used in this Law refers to any technology known to the public in China and abroad before the date of filing.

Paragraph 1, Article 31

An application for a patent for invention or utility model shall be limited to one invention or utility model. Two or more inventions or utility models belonging to a single general inventive concept may be filed as one application.

100738

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刘国伟

发文日：

2013年11月18日

申请号或专利号：200980148829.3　　发文序号：20131113011115310

申请人或专利权人：戴那米克品牌股份有限公司

发明创造名称：用于手推童车的座椅附接件

第三次审查意见通知书

1. ☒审查员已经收到申请人于2013年08月23日提交的意见陈述书，在此基础上审查员对上述专利申请继续进行实质审查。

☐根据国家知识产权局专利复审委员会于_____年_____月_____日作出的复审决定，审查员对上述专利申请继续进行实质审查。

☐_____

2. ☐经审查，申请人于_____提交的修改文件，不符合专利法实施细则第51条第3款的规定，不予接受。

3. 继续审查是针对下列申请文件进行的：

☐上述意见陈述书中所附的经修改的申请文件。

☒前次审查意见通知书所针对的申请文件以及上述意见陈述书中所附的经修改的申请文件替换文件。

☐前次审查意见通知书所针对的申请文件。

☐上述复审决定所确定的申请文件。

☐_____

4. ☒本通知书未引用新的对比文件。

☐本通知书引用下列对比文件(其编号续前，并在今后的审查过程中继续沿用)：

编号	文件号或名称	公开日期（或抵触申请的申请日）

5. 审查的结论性意见：

关于说明书：

☐申请的内容属于专利法第5条规定的不授予专利权的范围。

☐说明书不符合专利法第26条第3款的规定。

☐说明书的修改不符合专利法第33条的规定。

☐说明书的撰写不符合专利法实施细则第17条的规定。

☐_____

关于权利要求书：

☐权利要求_____不符合专利法第2条第2款的规定。

☐权利要求_____不符合专利法第9条第1款的规定。

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路6号 国家知识产权局专利局受理处收
电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

☐权利要求_____不具备专利法第 22 条第 2 款规定的新颖性。
☐权利要求_____不具备专利法第 22 条第 3 款规定的创造性。
☐权利要求_____不具备专利法第 22 条第 4 款规定的实用性。
☐权利要求_____属于专利法第 25 条规定的不授予专利权的范围。
☒权利要求 1-3, 7, 11 不符合专利法第 26 条第 4 款的规定。
☐权利要求_____不符合专利法第 31 条第 1 款的规定。
☐权利要求_____的修改不符合专利法第 33 条的规定。
☐权利要求_____不符合专利法实施细则第 19 条的规定。
☐权利要求_____不符合专利法实施细则第 20 条的规定。
☐权利要求_____不符合专利法实施细则第 21 条的规定。
☐权利要求_____不符合专利法实施细则第 22 条的规定。
☐_____

☐申请不符合专利法第 26 条第 5 款或者实施细则第 26 条的规定。
☐申请不符合专利法第 20 条第 1 款的规定。
☐分案申请不符合专利法实施细则第 43 条第 1 款的规定。
上述结论性意见的具体分析见本通知书的正文部分。

6.基于上述结论性意见，审查员认为：
☐申请人应当按照通知书正文部分提出的要求，对申请文件进行修改。
☒申请人应当在意见陈述书中论述其专利申请可以被授予专利权的理由，并对通知书正文部分中指出的不符合规定之处进行修改，否则将不能授予专利权。
☐专利申请中没有可以被授予专利权的实质性内容，如果申请人没有陈述理由或者陈述理由不充分，其申请将被驳回。
☐_____

7. 申请人应注意下列事项：

（1）根据专利法第 37 条的规定，申请人应当在收到本通知书之日起的 2 个月内陈述意见，如果申请人无正当理由逾期不答复，其申请将被视为撤回。

（2）申请人对其申请的修改应当符合专利法第 33 条的规定，不得超出原说明书和权利要求书记载的范围，同时申请人对专利申请文件进行的修改应当符合专利法实施细则第 51 条第 3 款的规定，按照本通知书的要求进行修改。

（3）申请人的意见陈述书和/或修改文本应当邮寄或递交国家知识产权局专利局受理处，凡未邮寄或递交给受理处的文件不具备法律效力。

（4）未经预约，申请人和/或代理人不得前来国家知识产权局与审查员举行会晤。

8. 本通知书正文部分共有 1 页，并附有下列附件：
☐引用的对比文件的复印件共_____份_____页。
☐_____

审查员：卫安乐　　联系电话：62412851　　审查部门：专利审查协作北京中心机械发明审查部

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路 6 号　国家知识产权局专利局受理处收
电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

UPPABABY ET AL. EX. 1019

第三次审查意见通知书

申请号:2009801488293

申请人于 2013 年 08 月 23 日提交了意见陈述书和经过修改的申请文件，对该申请的权利要求书进行了修改。审查员在阅读了上述文件后，对该申请继续进行审查，针对此次修改的申请文件提出如下审查意见。

1. 权利要求 1-3，7，11 不符合专利法第 26 条第 4 款的规定。

1) 权利要求 1 中出现了“其中每一所述左侧附接框架部件”，而之前出现的是“一个分离的左侧附接框架部件”，可见出现了矛盾，由此造成权利要求不清楚。

2) 权利要求 1 中出现了“所述座位”，而“座位”并未出现在之前，因此缺乏引用的基础，造成权利要求不清楚。

3) 权利要求 3-5，7，11 中出现的“所述附接框架部件”是指引用的权利要求中出现的“左侧附接框架部件”还是“右侧附接框架部件”不能为本领域技术人员所知，造成权利要求不清楚。

4) 权利要求 16 中出现了“每一连接器部分能够以可释放方式连接到所述附接部分”，其中“所述附接部分”是指之前出现的“一个附接部分”、“另一个附接部分”还是“两个附接部分”不能为本领域技术人员所知，造成权利要求不清楚。

基于上述理由，本申请目前不能被授予专利权。

请提交修改部分的替换页和标注的修改参考页，以方便审查的进行。

审查员姓名:卫安乐　　审查员代码:193214

纸件申请，回函请寄：100088 北京市海淀区蓟门桥西土城路 6 号　国家知识产权局专利局受理处收
电子申请，应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外，以纸件等其他形式提交的文件视为未提交。

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(TRANSLATION)

THIRD OFFICE ACTION ISSUED BY STATE INTELLECTUAL PROPERTY OFFICE

Date of Issuance: 18 November 2013

Application No.: 200980148829.3

The applicant filed a response and amended application documents on 23 August 2013. After reviewing the above documents, the examiner continued examination of the subject application and had the following comments:

1. Claims 1-3, 7, and 11 violate Paragraph 4, Article 26 of the Patent Law

1) Claim 1 mentions "wherein ***each*** *the left attachment frame member*" and "***a separate*** *left attachment frame member*." which contradict each other. Thus, Claim 1 is indefinite.

2) [Omitted in translation - concerns a translation defect in Chinese Claim 1; we will correct it free of charge.]

3) Persons skilled in the art do not know whether "the attachment frame member" in Claims 3-5, 7, and 11 refers to the "left attachment frame member" or "right attachment frame member" in the claim upon which they depend, which causes the above claims indefinite.

4) Claim 16 recites "each connector portion capable of releasably connecting to the attachment portion," in which it is unclear to persons skilled in the art whether "the attachment portion" refers to the "one attachment portion," "other attachment portion," or the "two attachment portions" mentioned previously, which causes Claim 16 to be indefinite.

Based on the reasons as mentioned above, the present application cannot be granted a patent right at the present.

Please submit replacement sheets and marked-up sheets for the amended parts so as to facilitate the examination.

Examiner: Anle Wang
Code: 193214

RELEVANT PROVISIONS:

PRC PATENT LAW

Paragraph 4, Article 26

The claims shall be supported by the description and shall clearly and concisely define the scope of protection.

Espacenet

Bibliographic data: CN1978264 (A) — 2007-06-13

Children's bicycle

Inventor(s): SONG ZHENGHUAN WANG [CN] ± (ZHENGHUAN,WANG SONG, ; SONG ZHENGHUAN, ; WANG JUNMA)

Applicant(s): HAOHAIZI CHILDREN S ARTICLES C [CN] ± (HAOHAIZI CHILDREN'S ARTICLES CO., LTD, ; GOODBABY CHILD PRODUCTS CO., LTD)

Classification: **- international:** ***B62B7/14; B62B9/18***
- cooperative:

Application number: CN20061107155 20060719

Priority number(s): CN2005275842U 20050922 ; CN20061107155 20060719

Also published as: CN100463826 (C)

Abstract of CN1978264 (A)

A baby carrier includes a primary carriage frame containing a master front wheel bracket, a master back wheel bracket, a master seat unit and a master seat set in the primary seat unit, and the carrier also includes a sub-frame containing a sub-wheel bracket, a sub-seat unit and a sub-seat on the unit, in which, the bottom of the sub-wheel bracket is set with a sub-wheel component, the primary frame and the sub-one can be connected and knocked down, so that they have a first working state of separation and a second working state of connection, the master frame forms an independent single carriage under the first state and they are connected to form an independent two carrier. When needing to carry two babies, one can connect the primary and the sub-carriers to form a two-carrier, and when carrying one baby, one can separate them to use the primary one to form a single-carrier.

[19] 中华人民共和国国家知识产权局

[51] Int. Cl.
B62B 7/14 (2006.01)
B62B 9/18 (2006.01)

[12] 发明专利申请公布说明书

[21] 申请号 200610107155.0

[43] 公开日 2007 年 6 月 13 日

[11] 公开号 CN 1978264A

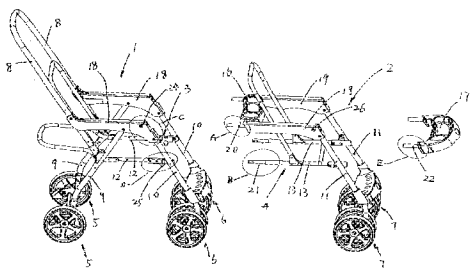
[22] 申请日 2006.7.19
[21] 申请号 200610107155.0
[30] 优先权
[32] 2005.9.22 [33] CN [31] 200520075842.X
[71] 申请人 好孩子儿童用品有限公司
地址 215331 江苏省昆山市陆家镇录溪东路 20 号
[72] 发明人 宋郑还 王俊马
[74] 专利代理机构 苏州创元专利商标事务所有限公司
代理人 孙仿卫
权利要求书 4 页 说明书 8 页 附图 8 页

[54] 发明名称

童车

[57] 摘要

一种童车，包括主推车架，主推车架包括主前轮支架、主后轮支架、主座位机构、设置于主座位机构上的主座位，童车还包括附推车架，附推车架包括附轮支架、附座位机构、设置于附座位机构上的附座位，附轮支架的下端部设置有附轮组件，主推车架与附推车架相可拆卸地连接，使得附推车架与主推车架具有相分离的第一工作状态，以及相连接的第二工作状态，在第一工作状态下，主推车架构成独立的单人推车；在第二工作状态下，主推车架与附推车架构成独立的双人推车。由于当需要把两个小孩推行时，将主推车架与附推车架相连接组装成双人童车，当只需要把一个小孩推行时，将主推车架与附推车架相分离，从而使主推车架组装成单人童车，因而使用范围较广。



1、一种童车，包括主推车架（1），所述的主推车架（1）包括主前轮支架（10）、主后轮支架（9）、主座位机构（3）、设置于所述的主座位机构（3）上的供婴儿乘坐用的主座位，其特征在于：所述的童车还包括附推车架（2），所述的附推车架（2）包括附轮支架（11）、附座位机构（4）、设置于所述的附座位机构（4）上的供婴儿乘坐用的附座位，所述的附轮支架（11）的下端部设置有附轮组件（7），所述的主推车架（1）与所述的附推车架（2）相可拆卸地连接，使得所述的附推车架（2）与所述的主推车架（1）具有相分离的第一工作状态，以及所述的附推车架（2）与所述的主推车架（1）具有相连接的第二工作状态，在所述的附推车架（2）与所述的主推车架（1）处于第一工作状态下，所述的主前轮支架（10）的下端部设置有主前轮组件（6），所述的主后轮支架（9）的下端部设置有主后轮组件（5），所述的主推车架（1）上设置有推把杆（8），所述的主推车架（1）构成独立的单人推车；在所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的主前轮支架（10）的下端部、所述的主后轮支架（9）的下端部中的至少一个部件上设置有轮组件，所述的主推车架（1）或所述的附推车架（2）上设置有推把杆（8），所述的附座位位于所述的主座位的前方或者位于所述的主座位的后方，所述的主推车架（1）与所述的附推车架（2）构成独立的双人推车。

2、根据权利要求 1 所述的童车，其特征在于：当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的主前轮支架（10）的下端部设置有主前轮组件(6)，所述的主后轮支架(9)的下端部设置有主后轮组件(5)。

3、根据权利要求 1 所述的童车，其特征在于：当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的附座位位于所述的主座位的前方，所述的附推车架（2）的后部与所述的主推车架（1）的前部相可拆卸地连接，所述的主推车架（1）上设置有推把杆（8），所述的主后轮支架（9）的下端部设置有主后轮组件（5）。

4、根据权利要求 3 所述的童车，其特征在于：当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的附推车架（2）的前部可拆卸地连接有附餐盘（17）或附前扶手，当所述的附推车架（2）与所述的主推车架（1）处于第一工作状态下，所述的附餐盘（17）或附前扶手与所述的主推车架（1）的前部相可拆卸地连接。

5、根据权利要求 3 所述的童车，其特征在于：所述的附推车架（2）的后

部连接有主餐盘（16）或主前扶手，当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的主餐盘（16）或主前扶手位于所述的主座位的前上方。

6、根据权利要求 3 所述的童车，其特征在于：所述的附推车架（2）还包括前端部与所述的附轮支架（11）的上端部相连接的附侧扶手（19），所述的附座位机构（4）包括附座连杆（13），所述的附座连杆（13）的前端部与所述的附轮支架（11）相连接，当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的附侧扶手（19）的后部与所述的主推车架（1）相连接，并且两者之间具有第一锁定机构（27），当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的附座连杆（13）的后部与所述的主推车架（1）相连接，并且两者之间具有第二锁定机构（28）。

7、根据权利要求 6 所述的童车，其特征在于：所述的主推车架（1）还包括前端部与所述的主前轮支架（10）的上端部相连接的主侧扶手（18）、与所述的主侧扶手（18）的后端部相连接的推把杆（8），所述的主后轮支架（9）的上端部与所述的主侧扶手（18）相连接，所述的主座位机构（3）包括位于所述的主前轮支架（10）与所述的主后轮支架（9）之间的主座连杆（12），当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下时，所述的附侧扶手（19）的后部与所述的主侧扶手（18）的前部相连接，所述的附座连杆（13）的后部与所述的主座连杆（12）的前部相连接。

8、根据权利要求 7 所述的童车，其特征在于：当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的附侧扶手（19）的前部可拆卸地连接有附餐盘（17）或附前扶手，当所述的附推车架（2）与所述的主推车架（1）处于第一工作状态下，所述的附餐盘（17）或附前扶手与所述的主侧扶手（18）的前部相可拆卸地连接。

9、根据权利要求 1 所述的童车，其特征在于：当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的附座位位于所述的主座位的后方，所述的附推车架（2）的前部与所述的主推车架（1）的后部相可拆卸地连接，所述的附推车架（2）上设置有推把杆（8），所述的主前轮支架（10）的下端部设置有主前轮组件（6）。

10、根据权利要求 9 所述的童车，其特征在于：当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的推把杆（8）可拆卸地连接

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在所述的附推车架（2）的后部，当所述的附推车架（2）与所述的主推车架（1）处于第一工作状态下，所述的推把杆（8）与所述的主推车架（1）的后部相可拆卸地连接。

11、根据权利要求 9 所述的童车，其特征在于：所述的主推车架（1）的前部连接有主餐盘（16）或主前扶手。

12、根据权利要求 9 所述的童车，其特征在于：所述的主推车架（1）的后部连接有附餐盘或附前扶手。

13、根据权利要求 9 所述的童车，其特征在于：所述的附推车架（2）还包括前部与所述的附轮支架（11）的上端部相连接的附侧扶手（19）、上端部与所述的附侧扶手（19）的后端部相连接的附推把杆连杆（32），所述的附座位机构（4）包括附座连杆（13），所述的附座连杆（13）的后端部与所述的附轮支架（11）相连接，当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的附侧扶手（19）的前部与所述的主推车架（1）的后部相连接，并且两者之间具有第一锁定机构（27），当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的附座连杆（13）的前部与所述的主推车架（1）的后部相连接，并且两者之间具有第二锁定机构（28）。

14、根据权利要求 13 所述的童车，其特征在于：所述的主推车架（1）还包括前端部与所述的主前轮支架（10）的上端部相连接的主侧扶手（18）、上端部与所述的主侧扶手（18）的后端部相连接的主推杆连杆（31），所述的主后轮支架（9）的上端部与所述的主侧扶手（18）相连接，所述的主座位机构（3）包括位于所述的主前轮支架(10)与所述的主后轮支架(9)之间的主座连杆(12)，当所述的附推车架（2）与所述的主推车架（1）处于第二工作状态下，所述的附侧扶手（19）的前部与所述的主侧扶手（18）的后部相连接，所述的附座连杆（13）的前部与所述的主座连杆（12）的后部相连接。

15、根据权利要求 14 所述的童车，其特征在于：当所述的主推车架（1）与所述的附推车架（2）处于第二工作状态下，所述的推把杆（8）可拆卸地连接在所述的附推把杆连杆（32）上，当所述的主推车架（1）与所述的附推车架（2）处于第一工作状态下，所述的推把杆（8）与所述的主推杆连杆（31）相可拆卸地连接。

16、根据权利要求 14 所述的童车，其特征在于：所述的主餐盘（16）或主前扶手连接在所述的主侧扶手（18）的前部，所述的主侧扶手（18）的后部连

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接有附餐盘或附前扶手。

童车

技术领域

本发明涉及一种童车。

背景技术

现有技术中，童车，有的是单人童车，这种单人童车通常包括推车架，所述的推车架包括前轮支架、后轮支架、一个座位机构、设置于所述的座位机构上的一个座位，这种单人童车只可供一个小孩坐，需将两个小孩推行时，这种单人童车则无法使用；还有的是双人童车，这种双人童车通常包括推车架，所述的推车架包括前轮支架、后轮支架、设置于前轮支架与所述的后轮支架之间的两个座位机构、分别设置于两个座位机构上的两个座位，这种双人童车可供两个小孩坐，但是当只需将一个小孩推行时，操作者通常会选择单人童车，原因是双人童车体积较大，较单人童车难推行。可见，以单人童车及双人童车两种单一的形式出现的童车在使用范围上都有局限性。

发明内容

本发明目的是提供一种童车，其使用范围较广，童车操作者可根据需要将童车组装成单人童车或双人童车。

本发明的技术方案是：一种童车，包括主推车架，所述的主推车架包括主前轮支架、主后轮支架、主座位机构、设置于所述的主座位机构上的供婴儿乘坐用的主座位，所述的童车还包括附推车架，所述的附推车架包括附轮支架、附座位机构、设置于所述的附座位机构上的供婴儿乘坐用的附座位，所述的附轮支架的下端部设置有附轮组件，所述的主推车架与所述的附推车架相可拆卸地连接，使得所述的附推车架与所述的主推车架具有相分离的第一工作状态，以及所述的附推车架与所述的主推车架具有相连接的第二工作状态，在所述的附推车架与所述的主推车架处于第一工作状态下，所述的主前轮支架的下端部设置有主前轮组件，所述的主后轮支架的下端部设置有主后轮组件，所述的主推车架上设置有推把杆，所述的主推车架构成独立的单人推车；在所述的附推车架与所述的主推车架处于第二工作状态下，所述的主前轮支架的下端部、所述的主后轮支架的下端部中的至少一个部件上设置有轮组件，所述的主推车架或所述的附推车架上设置有推把杆，所述的附座位位于所述的主座位的前方或者位于所述的主座位的后方，所述的主推车架与所述的附推车架构成独立的双人推车。

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当所述的附推车架与所述的主推车架处于第二工作状态下，所述的主前轮支架的下端部设置有主前轮组件，所述的主后轮支架的下端部设置有主后轮组件。

当所述的附推车架与所述的主推车架处于第二工作状态下，所述的附座位位于所述的主座位的前方，所述的附推车架的后部与所述的主推车架的前部相可拆卸地连接，所述的主推车架上设置有推把杆，所述的主后轮支架的下端部设置有主后轮组件。

当所述的附推车架与所述的主推车架处于第二工作状态下，所述的附推车架的前部可拆卸地连接有附餐盘或附前扶手，当所述的附推车架与所述的主推车架处于第一工作状态下，所述的附餐盘或附前扶手与所述的主推车架的前部相可拆卸地连接。

所述的附推车架的后部连接有主餐盘或主前扶手，当所述的附推车架与所述的主推车架处于第二工作状态下，所述的主餐盘或主前扶手位于所述的主座位的前上方。

所述的附推车架还包括前端部与所述的附轮支架的上端部相连接的附侧扶手，所述的附座位机构包括附座连杆，所述的附座连杆的前端部与所述的附轮支架相连接，当所述的附推车架与所述的主推车架处于第二工作状态下，所述的附侧扶手的后部与所述的主推车架相连接，并且两者之间具有第一锁定机构，当所述的附推车架与所述的主推车架处于第二工作状态下，所述的附座连杆的后部与所述的主推车架相连接，并且两者之间具有第二锁定机构。

所述的主推车架还包括前端部与所述的主前轮支架的上端部相连接的主侧扶手、与所述的主侧扶手的后端部相连接的推把杆，所述的主后轮支架的上端部与所述的主侧扶手相连接，所述的主座位机构包括位于所述的主前轮支架与所述的主后轮支架之间的主座连杆，当所述的附推车架与所述的主推车架处于第二工作状态下时，所述的附侧扶手的后部与所述的主侧扶手的前部相连接，所述的附座连杆的后部与所述的主座连杆的前部相连接。

当所述的附推车架与所述的主推车架处于第二工作状态下，所述的附侧扶手的前部可拆卸地连接有附餐盘或附前扶手，当所述的附推车架与所述的主推车架处于第一工作状态下，所述的附餐盘或附前扶手与所述的主侧扶手的前部相可拆卸地连接。

当所述的附推车架与所述的主推车架处于第二工作状态下，所述的附座位

位于所述的主座位的后方，所述的附推车架的前部与所述的主推车架的后部相可拆卸地连接，所述的附推车架上设置有推把杆，所述的主前轮支架的下端部设置有主前轮组件。

当所述的附推车架与所述的主推车架处于第二工作状态下，所述的推把杆可拆卸地连接在所述的附推车架的后部，当所述的附推车架与所述的主推车架处于第一工作状态下，所述的推把杆与所述的主推车架的后部相可拆卸地连接。

所述的主推车架的前部连接有主餐盘或主前扶手。

所述的主推车架的后部连接有附餐盘或附前扶手。

所述的附推车架还包括前部与所述的附轮支架的上端部相连接的附侧扶手、上端部与所述的附侧扶手的后端部相连接的附推把杆连杆，所述的附座位机构包括附座连杆，所述的附座连杆的后端部与所述的附轮支架相连接，当所述的附推车架与所述的主推车架处于第二工作状态下，所述的附侧扶手的前部与所述的主推车架的后部相连接，并且两者之间具有第一锁定机构，当所述的附推车架与所述的主推车架处于第二工作状态下，所述的附座连杆的前部与所述的主推车架的后部相连接，并且两者之间具有第二锁定机构。

所述的主推车架还包括前端部与所述的主前轮支架的上端部相连接的主侧扶手、上端部与所述的主侧扶手的后端部相连接的主推杆连杆，所述的主后轮支架的上端部与所述的主侧扶手相连接，所述的主座位机构包括位于所述的主前轮支架与所述的主后轮支架之间的主座连杆，当所述的附推车架与所述的主推车架处于第二工作状态下，所述的附侧扶手的前部与所述的主侧扶手的后部相连接，所述的附座连杆的前部与所述的主座连杆的后部相连接。

当所述的主推车架与所述的附推车架处于第二工作状态下，所述的推把杆可拆卸地连接在所述的附推把杆连杆上，当所述的主推车架与所述的附推车架处于第一工作状态下，所述的推把杆与所述的主推杆连杆相可拆卸地连接。

所述的主餐盘或主前扶手连接在所述的主侧扶手的前部，所述的主侧扶手的后部连接有附餐盘或附前扶手。

本发明与现有技术相比，具有下列优点：由于所述的童车包括具有主座位的主推车架、具有附座位的附推车架，所述的主推车架与所述的附推车架之间可拆卸地连接，当需要把两个小孩推行时，将所述的主推车架与所述的附推车架相连接组装成双人童车，当只需要把一个小孩推行时，将主推车架与所述的附推车架相分离，从而使主推车架组装成单人童车，因而使用范围较广。

附图说明

附图 1 为本发明的立体图（第一实施例处于第二工作状态下）；

附图 2 为主推车架构成独立的单人推车的立体图（第一实施例）；

附图 3 为本发明的分解图（第一实施例）；

附图 4 为附图 3 的 A 处放大图；

附图 5 为附图 3 的 B 处放大图；

附图 6 为附图 3 的 C 处放大图；

附图 7 为附图 3 的 D 处放大图；

附图 8 为附图 3 的 E 处放大图；

附图 9 为本发明的示意图（第一实施例处于第二工作状态下）；

附图 10 为附图 9 的 N-N 处剖视图；

附图 11 为附图 9 的 M 处放大图；

附图 12 为本发明的示意图（第二实施例处于第二工作状态下）；

附图 13 为双人童车转换成单人推车的示意图（第二实施例）；

其中：1、主推车架；2、附推车架；3、主座位机构；4、附座位机构；5、主后轮组件；6、主前轮组件；7、附轮组件；8、推把杆；9、主后轮支架；10、主前轮支架；11、附轮支架；12、主座连杆；13、附座连杆；16、主餐盘；17、附餐盘；18、主侧扶手；19、附侧扶手；20、第一弹销；21、第二弹销；22、第三弹销；24、第一按钮；25、第二按钮；26、第三按钮；27、第一锁定机构；28、第二锁定机构；29、第一锁孔；30、第二锁孔；31、主推杆连杆；32、附推把杆连杆；

具体实施方式

一种童车，包括主推车架 1，所述的主推车架 1 包括主前轮支架 10、主后轮支架 9、主座位机构 3、设置于所述的主座位机构 3 上的供婴儿乘坐用的主座位，所述的童车还包括附推车架 2，所述的附推车架 2 包括附轮支架 11、附座位机构 4、设置于所述的附座位机构 4 上的供婴儿乘坐用的附座位，所述的附轮支架 11 的下端部设置有附轮组件 7，所述的主推车架 1 与所述的附推车架 2 相可拆卸地连接，使得所述的附推车架 2 与所述的主推车架 1 具有相分离的第一工作状态，以及所述的附推车架 2 与所述的主推车架 1 具有相连接的第二工作状态，在所述的附推车架 2 与所述的主推车架 1 处于第一工作状态下，所述的主前轮支架 10 的下端部设置有主前轮组件 6，所述的主后轮支架 9 的下端部

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设置有主后轮组件 5，所述的主推车架 1 上设置有推把杆 8，所述的主推车架 1 构成独立的单人推车；在所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的主前轮支架 10 的下端部、所述的主后轮支架 9 的下端部中的至少一个部件上设置有轮组件，所述的主推车架 1 或所述的附推车架 2 上设置有推把杆 8，所述的附座位位于所述的主座位的前方或者位于所述的主座位的后方，所述的主推车架 1 与所述的附推车架 2 构成独立的双人推车。

第一实施例，如附图 1-附图 11 所示，一种童车，包括主推车架 1，所述的主推车架 1 包括主前轮支架 10、主后轮支架 9、主座位机构 3、设置于所述的主座位机构 3 上的供婴儿乘坐用的主座位，所述的童车还包括附推车架 2，所述的附推车架 2 包括附轮支架 11、附座位机构 4、设置于所述的附座位机构 4 上的供婴儿乘坐用的附座位，所述的附轮支架 11 的下端部设置有附轮组件 7，所述的主推车架 1 与所述的附推车架 2 相可拆卸地连接，使得所述的附推车架 2 与所述的主推车架 1 具有相分离的第一工作状态，以及所述的附推车架 2 与所述的主推车架 1 具有相连接的第二工作状态，在所述的附推车架 2 与所述的主推车架 1 处于第一工作状态下，所述的主前轮支架 10 的下端部设置有主前轮组件 6，所述的主后轮支架 9 的下端部设置有主后轮组件 5，所述的主推车架 1 上设置有推把杆 8，所述的主推车架 1 构成独立的单人推车；在所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的主前轮支架 10 的下端部、所述的主后轮支架 9 的下端部中至少所述的主后轮支架 9 的下端部上设置有主后轮组件 5，所述的主推车架 1 上设置有推把杆 8，所述的附座位位于所述的主座位的前方，所述的主推车架 1 与所述的附推车架 2 构成独立的双人推车。

当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，从附图 1-附图 11 所示，所述的附座位位于所述的主座位的前方，所述的附推车架 2 的后部与所述的主推车架 1 的前部相可拆卸地连接，所述的主推车架 1 上设置有推把杆 8，所述的主后轮支架 9 的下端部设置有主后轮组件 5。

如附图 1、附图 9 所示，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的主前轮支架 10 的下端部设置有主前轮组件 6，所述的主后轮支架 9 的下端部设置有主后轮组件 5。

当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的附推车架 2 的前部可拆卸地连接有附餐盘 17 或附前扶手，并且在附餐盘 17 与所述的附推车架 2 的前部之间设置有锁定机构，如附图 3、附图 8、附图 9 所示，

所述的锁定机构可以是在所述的附餐盘 17 上设置有第三弹销 22，在所述的附推车架 2 上开有第三锁孔，锁定时，所述的第三弹销 22 插在所述的第三锁孔内，并且在附推车架 2 上设置有第三按钮 26，通过所述的第三按钮 26 可将所述的锁定机构解锁。当所述的附推车架 2 与所述的主推车架 1 处于第一工作状态下，所述的附餐盘 17 或附前扶手与所述的主推车架 1 的前部相可拆卸地连接；

所述的附推车架 2 的后部连接有主餐盘 16 或主前扶手，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的主餐盘 16 或主前扶手位于所述的主座位的前上方。

所述的附推车架 2 还包括前端部与所述的附轮支架 11 的上端部相连接的附侧扶手 19，所述的附座位机构 4 包括附座连杆 13，所述的附座连杆 13 的前端部与所述的附轮支架 11 相连接，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的附侧扶手 19 的后部与所述的主推车架 1 相连接，并且两者之间具有第一锁定机构 27，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的附座连杆 13 的后部与所述的主推车架 1 相连接，并且两者之间具有第二锁定机构 28。如附图 3-附图 8、附图 10、附图 11 所示，所述的第一锁定机构 27 可以是在所述的附侧扶手 19 上设置有第一弹销 20，在所述的主推车架 1 上开有第一锁孔 29，锁定时，所述的第一弹销 20 插在所述的第一锁孔 29 内，并且在主推车架 1 上设置有第一按钮 24，通过所述的第一按钮 24 可将所述的第一锁定机构 27 解锁。所述的第二锁定机构 28 可以是在所述的附座连杆 13 上设置有第二弹销 21，在所述的主推车架 1 上开有第二锁孔 30，锁定时，所述的第二弹销 21 插在所述的第二锁孔 30 内，并且在主推车架 1 上设置有第二按钮 25，通过所述的第二按钮 25 可将所述的第二锁定机构 28 解锁。如附图 2 所示，当所述的附推车架 2 与所述的主推车架 1 处于第一工作状态下，所述的附餐盘 17 或附前扶手与所述的主推车架 1 的前部相可拆卸地连接，并且所述的附餐盘 17 或所述的附前扶手与所述的主推车架 1 之间相锁定，此时，所述的附餐盘 17 上的第三弹销 22 可插在所述的主推车架 1 上的第一锁孔 29 内，按动第一按钮 24 可将所述的附餐盘 17 或附前扶手与所述的主推车架 1 的前部之间解锁。

所述的主推车架 1 还包括前端部与所述的主前轮支架 10 的上端部相连接的主侧扶手 18、与所述的主侧扶手 18 的后端部相连接的推把杆 8，所述的主后轮支架 9 的上端部与所述的主侧扶手 18 相连接，所述的主座位机构 3 包括位于所

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述的主前轮支架 10 与所述的主后轮支架 9 之间的主座连杆 12，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下时，所述的附侧扶手 19 的后部与所述的主侧扶手 18 的前部相连接，所述的附座连杆 13 的后部与所述的主座连杆 12 的前部相连接。当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的附侧扶手 19 的前部可拆卸地连接有附餐盘 17 或附前扶手，当所述的附推车架 2 与所述的主推车架 1 处于第一工作状态下，所述的附餐盘 17 或附前扶手与所述的主侧扶手 18 的前部相可拆卸地连接。所述的附侧扶手 19 的后部连接有主餐盘 16 或主前扶手。

第二实施例，从附图 12、附图 13 所示，一种童车，包括主推车架 1，所述的主推车架 1 包括主前轮支架 10、主后轮支架 9、主座位机构 3、设置于所述的主座位机构 3 上的供婴儿乘坐用的主座位，所述的童车还包括附推车架 2，所述的附推车架 2 包括附轮支架 11、附座位机构 4、设置于所述的附座位机构 4 上的供婴儿乘坐用的附座位，所述的附轮支架 11 的下端部设置有附轮组件 7，所述的主推车架 1 与所述的附推车架 2 相可拆卸地连接，使得所述的附推车架 2 与所述的主推车架 1 具有相分离的第一工作状态，以及所述的附推车架 2 与所述的主推车架 1 具有相连接的第二工作状态，在所述的附推车架 2 与所述的主推车架 1 处于第一工作状态下，所述的主前轮支架 10 的下端部设置有主前轮组件 6，所述的主后轮支架 9 的下端部设置有主后轮组件 5，所述的主推车架 1 上设置有推把杆 8，所述的主推车架 1 构成独立的单人推车；在所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的主前轮支架 10 的下端部、所述的主后轮支架 9 的下端部中至少所述的主前轮支架 10 的下端部上设置有主前轮组件 6，所述的附推车架 2 上设置有推把杆 8，所述的附座位位于所述的主座位后方，所述的主推车架 1 与所述的附推车架 2 构成独立的双人推车。

当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的附座位位于所述的主座位的后方，所述的附推车架 2 的前部与所述的主推车架 1 的后部相可拆卸地连接，并且连接后相锁定，所述的附推车架 2 上设置有推把杆 8，所述的主前轮支架 10 的下端部设置有主前轮组件 6。

如附图 12 所示，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的主前轮支架 10 的下端部设置有主前轮组件 6，所述的主后轮支架 9 的下端部设置有主后轮组件 5。

当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的推

把杆 8 可拆卸地连接在所述的附推车架 2 的后部，当所述的附推车架 2 与所述的主推车架 1 处于第一工作状态下，所述的推把杆 8 与所述的主推车架 1 的后部相可拆卸地连接。

所述的主推车架 1 的前部连接有主餐盘 16 或主前扶手。

所述的主推车架 1 的后部连接有附餐盘或附前扶手，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的附餐盘或附前扶手位于所述的附座位的前上方。

所述的附推车架 2 还包括前部与所述的附轮支架 11 的上端部相连接的附侧扶手 19、上端部与所述的附侧扶手 19 的后端部相连接的附推把杆连杆 32，所述的附座位机构 4 包括附座连杆 13，所述的附座连杆 13 的后端部与所述的附轮支架 11 相连接，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的附侧扶手 19 的前部与所述的主推车架 1 的后部相连接，并且两者之间具有第一锁定机构 27，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的附座连杆 13 的前部与所述的主推车架 1 的后部相连接，并且两者之间具有第二锁定机构 28。

所述的主推车架 1 还包括前端部与所述的主前轮支架 10 的上端部相连接的主侧扶手 18、上端部与所述的主侧扶手 18 的后端部相连接的主推杆连杆 31，所述的主后轮支架 9 的上端部与所述的主侧扶手 18 相连接，所述的主座位机构 3 包括位于所述的主前轮支架 10 与所述的主后轮支架 9 之间的主座连杆 12，当所述的附推车架 2 与所述的主推车架 1 处于第二工作状态下，所述的附侧扶手 19 的前部与所述的主侧扶手 18 的后部相连接，所述的附座连杆 13 的前部与所述的主座连杆 12 的后部相连接。当所述的主推车架 1 与所述的附推车架 2 处于第二工作状态下，所述的推把杆 8 可拆卸地连接在所述的附推把杆连杆 32 上，当所述的主推车架 1 与所述的附推车架 2 处于第一工作状态下，所述的推把杆 8 与所述的主推杆连杆 31 相可拆卸地连接。所述的主餐盘 16 或主前扶手连接在所述的主侧扶手 18 的前部，所述的主侧扶手 18 的后部连接有附餐盘或附前扶手。

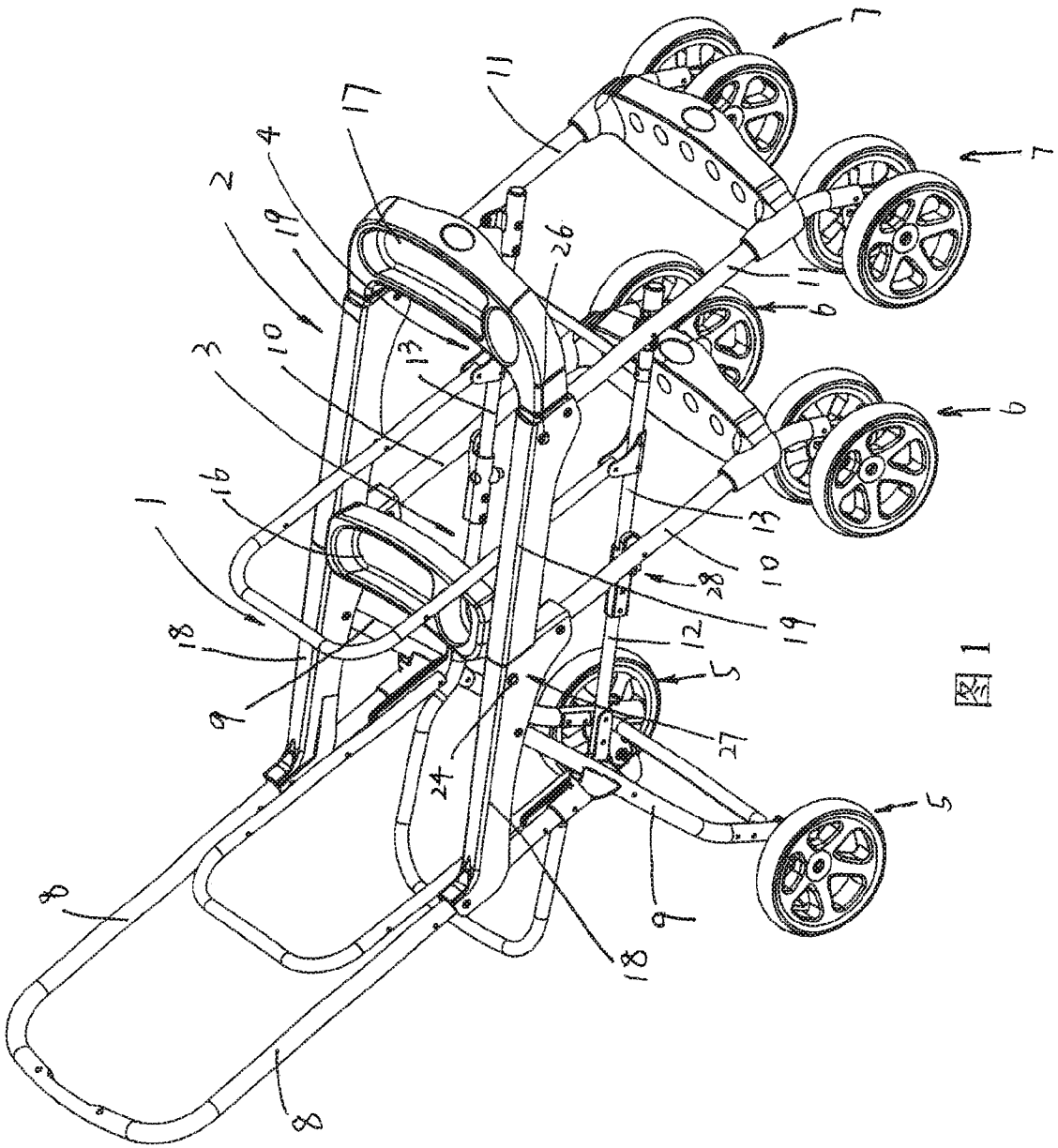

图 1

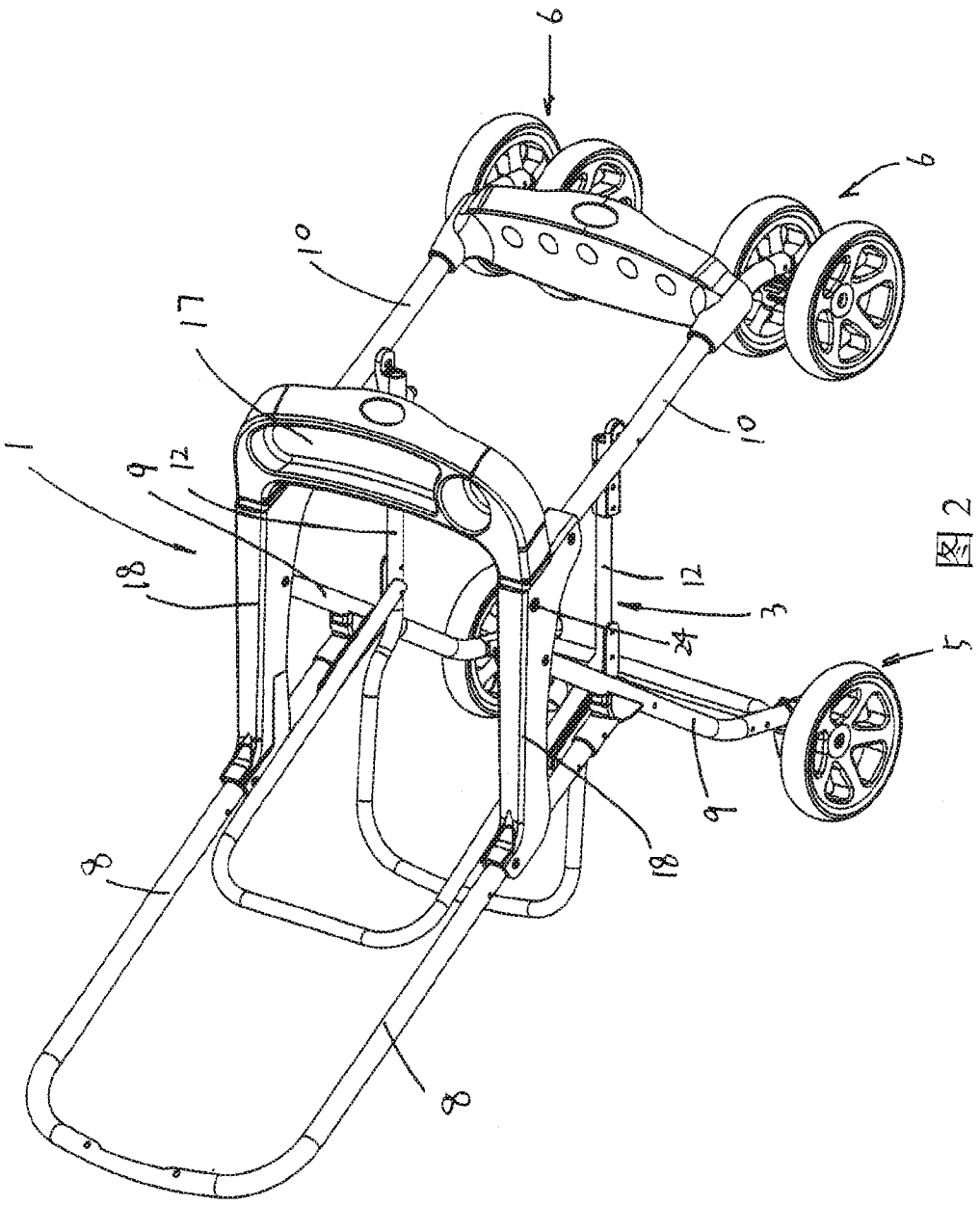

图 2

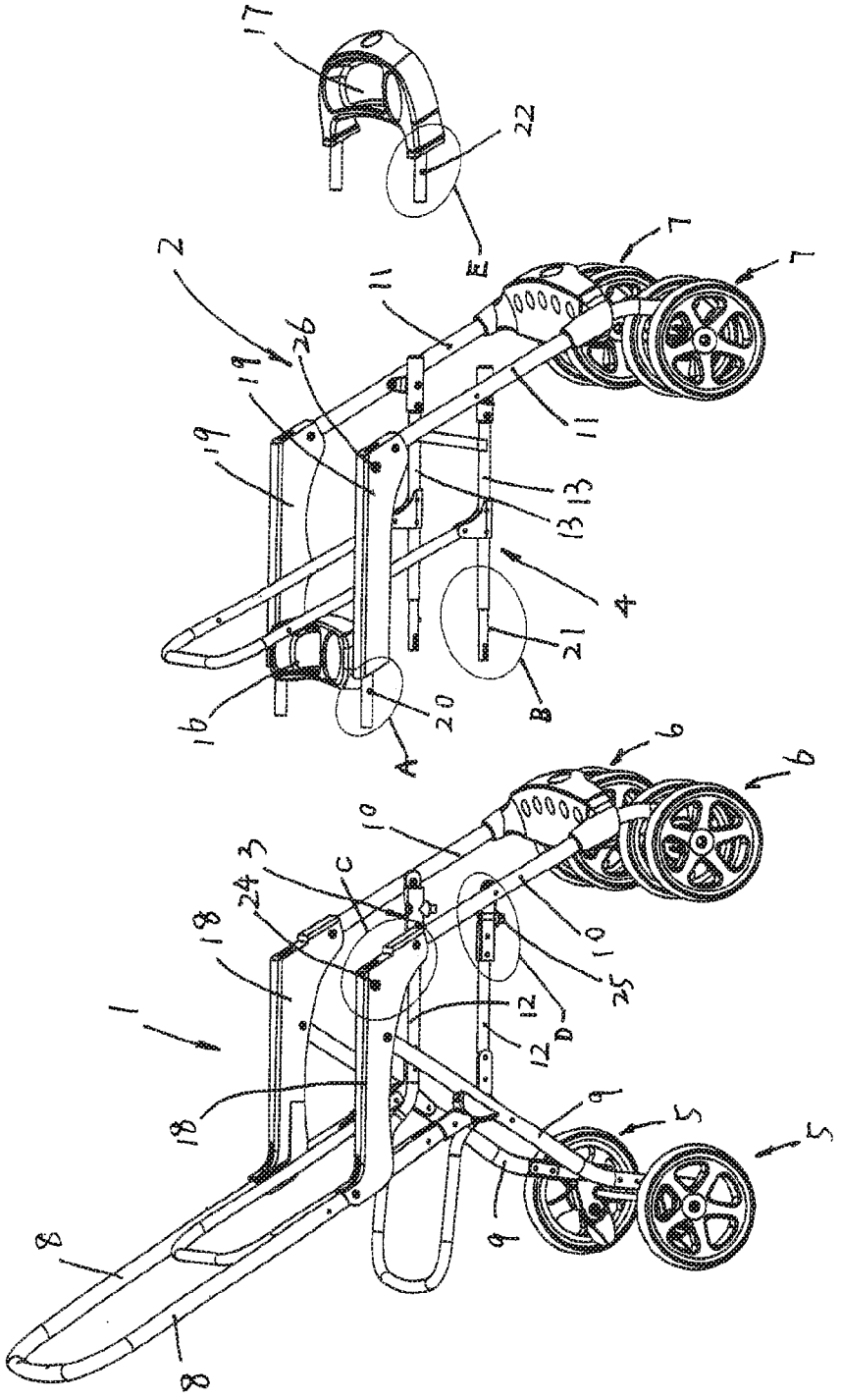
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图 3

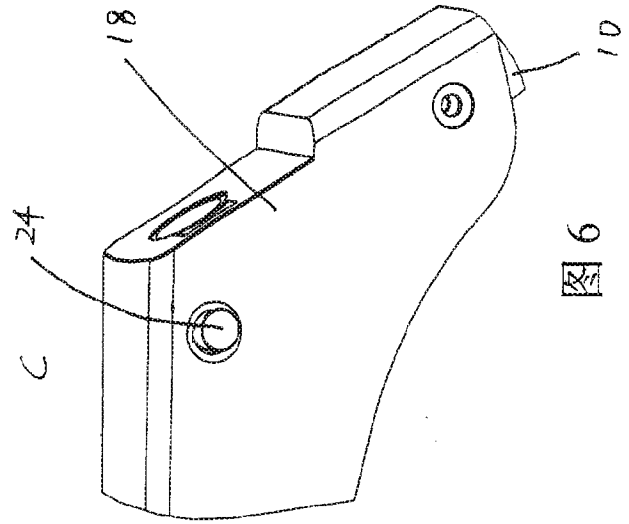

图6

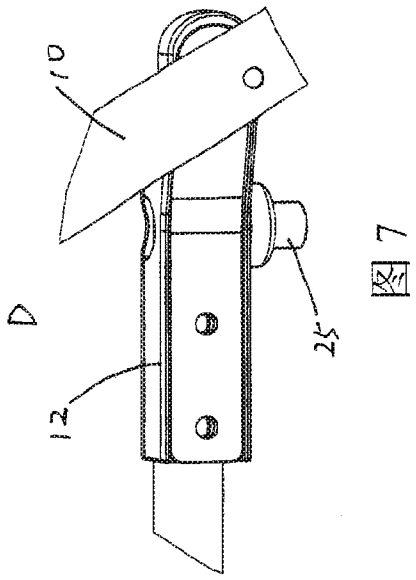

图7

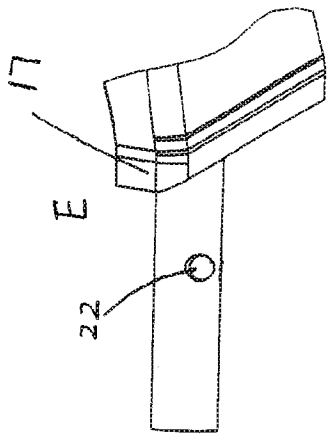

图8

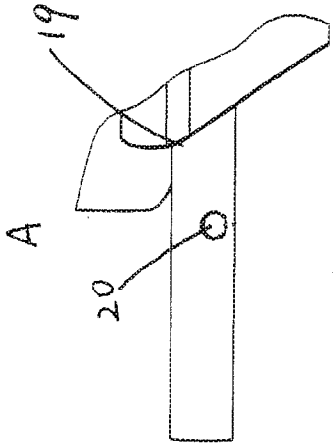

图4

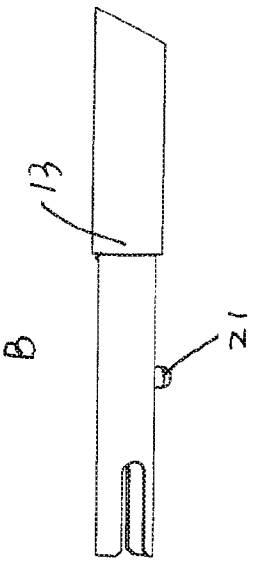

图5

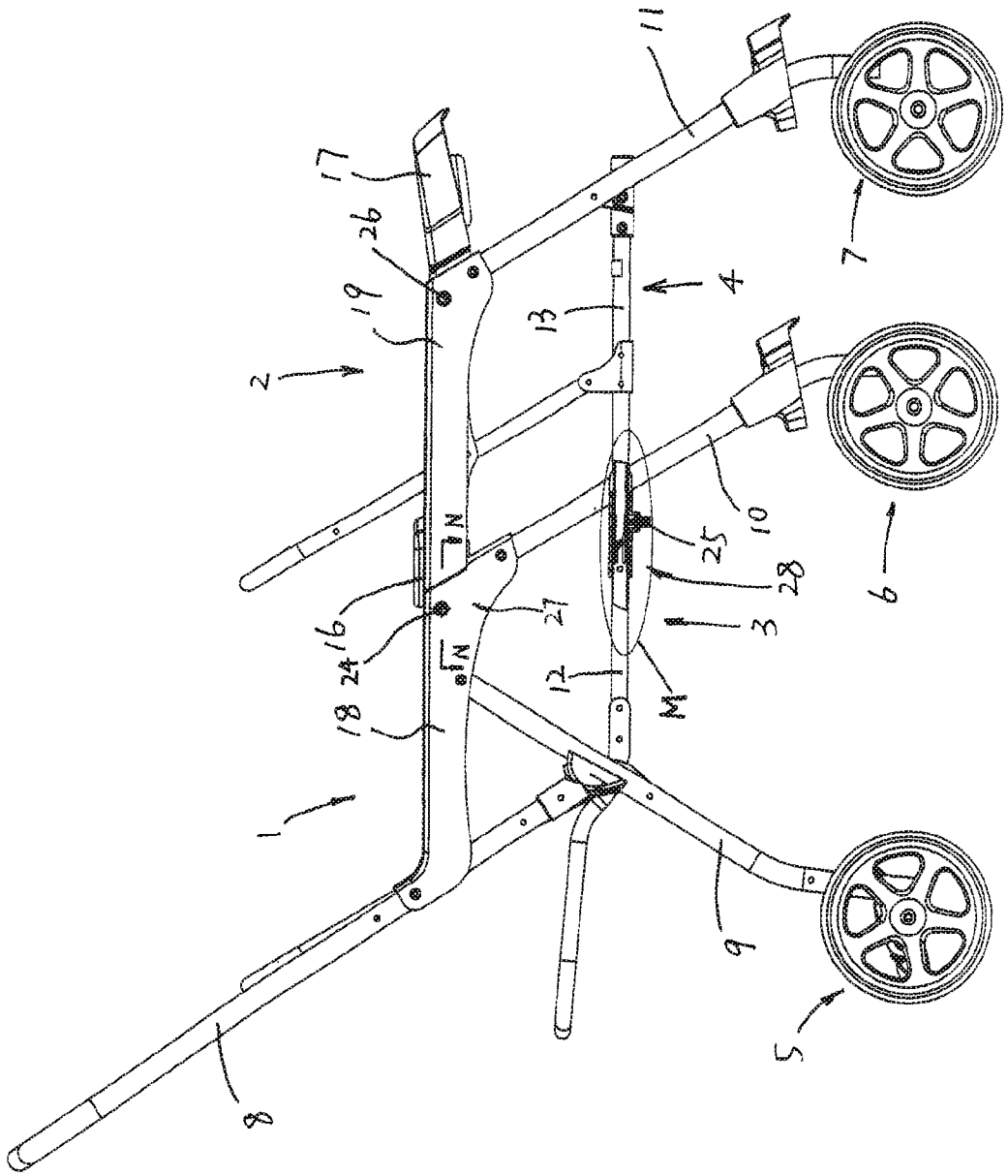

图 9

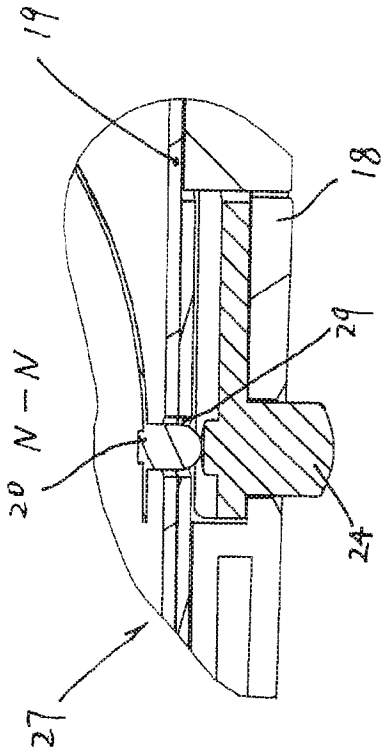

图 10

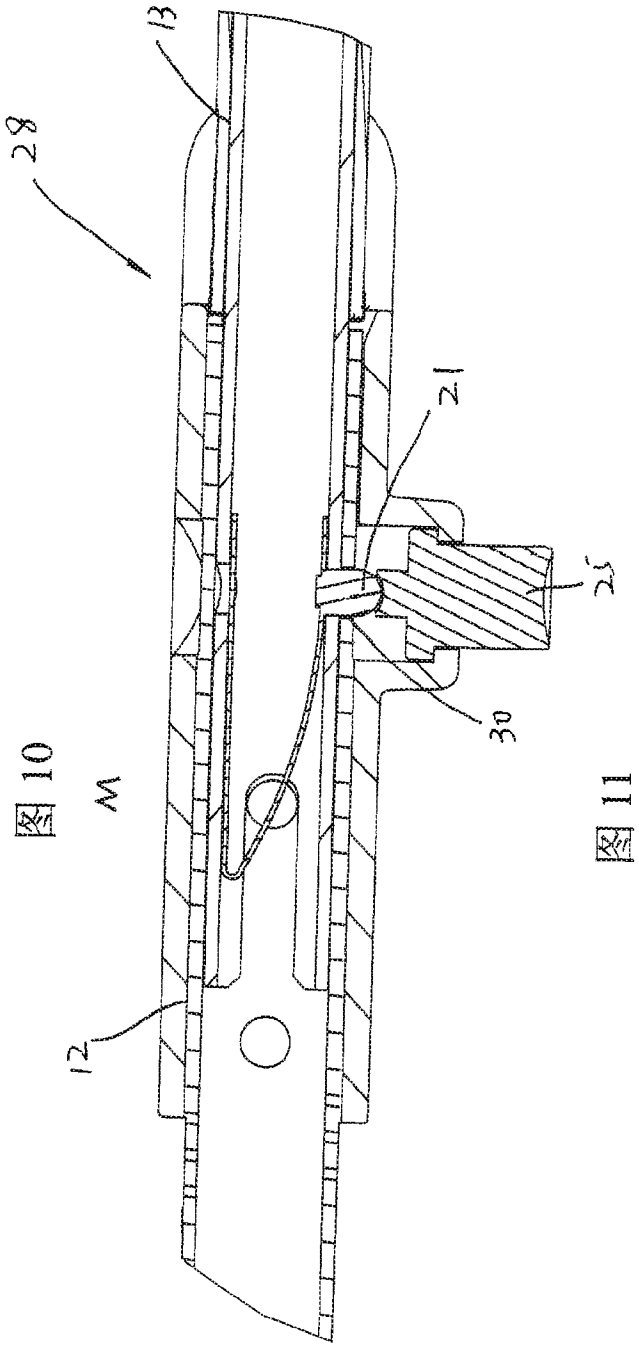

图 11

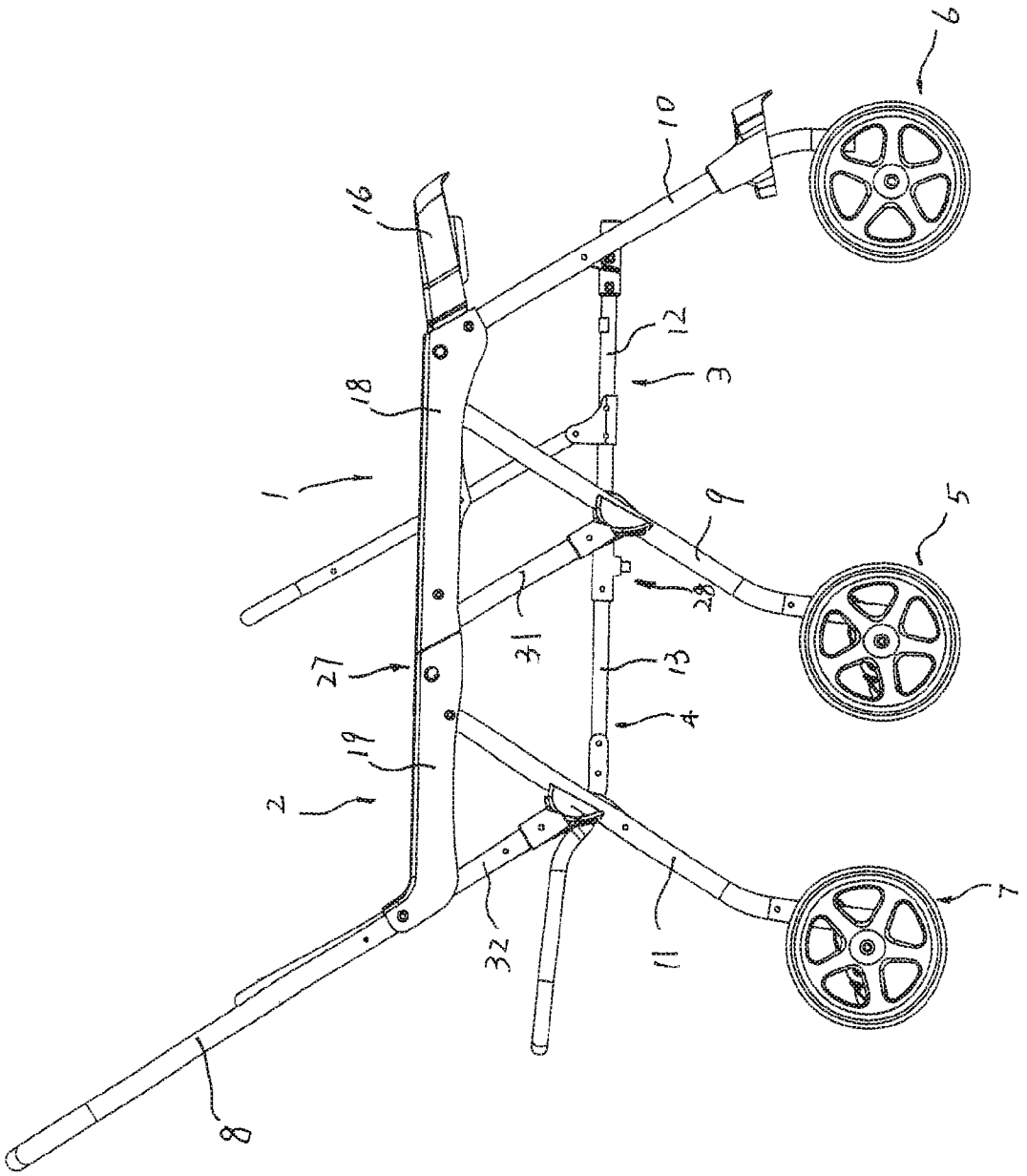

图 12

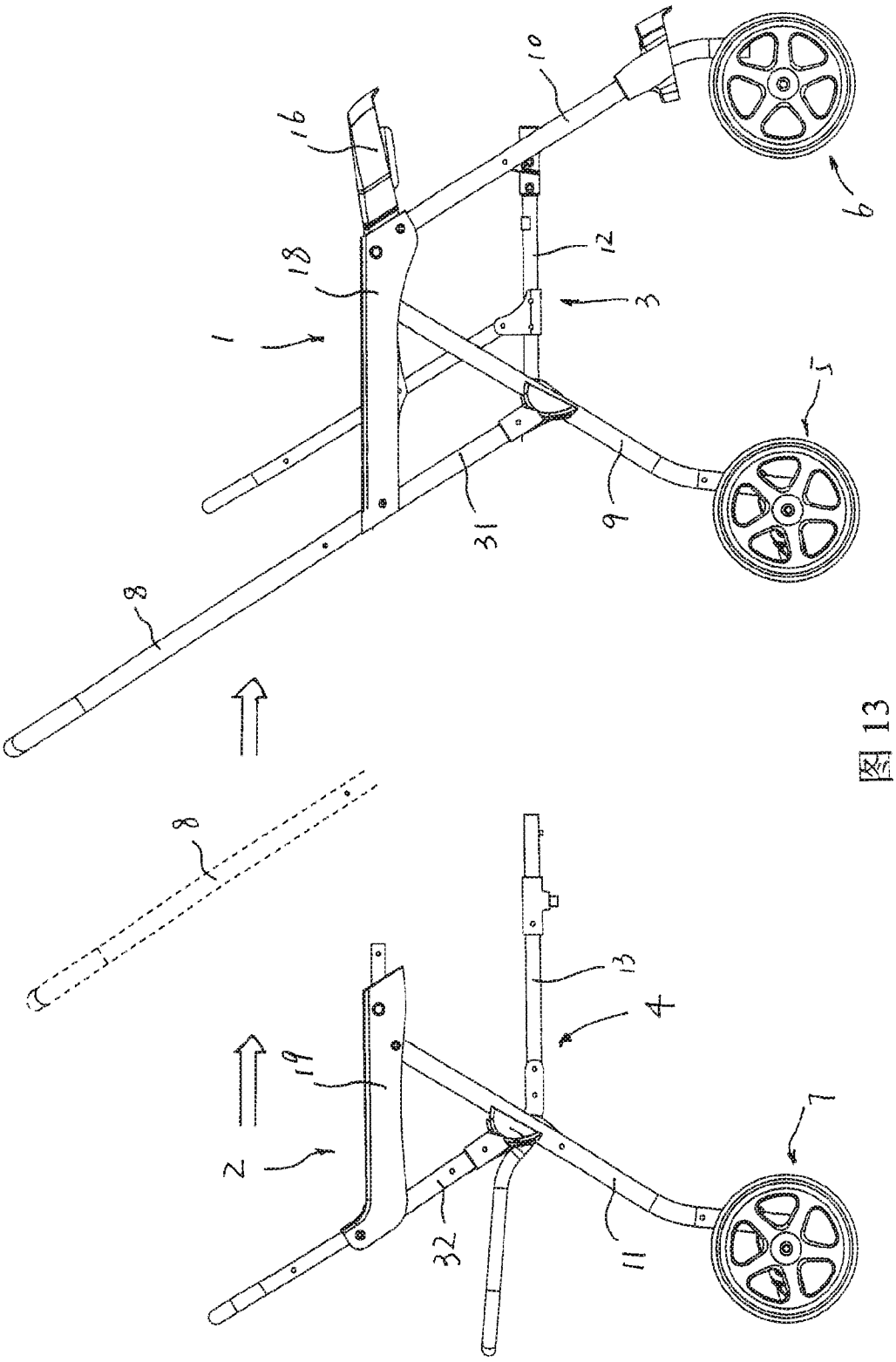

图 13

Espacenet

Bibliographic data: CN2784272 (Y) — 2006-05-31

Go-cart for children

Inventor(s): SHEN HAIDONG [CN] ± (HAIDONG SHEN)

Applicant(s): GOODBABY CHILD PRODUCTS CO LTD [CN] ± (GOODBABY CHILD PRODUCTS CO., LTD)

Classification: **- international:** ***B62B7/00; B62B9/00***
- cooperative:

Application number: CN2005269647U 20050104

Priority number(s): CN2005269647U 20050104

Abstract of CN2784272 (Y)

The utility model relates to a go-cart for children, which comprises a frame of the go-cart, front wheels arranged at the bottom-front part of the frame of the go-cart, rear wheels arranged at the bottom-rear part of the frame of the go-cart, and a first seat arranged on the frame of the go-cart, wherein the first seat is rotationally connected with the frame of the go-cart; in addition, rotary axis is almost vertical to the horizontal surface; a locking device for position is arranged between the first seat and the frame of the go-cart. When the direction of the first seat is needed to change, the locking device for position is unlocked and the first seat is rotated so that the direction of the first seat corresponding the frame of the go-cart is changed; then the first seat and the frame of the go-cart are locked again, and the direction of the first seat can be changed.

[19] 中华人民共和国国家知识产权局

[51] Int. Cl.
B62B 7/00 (2006.01)
B62B 9/00 (2006.01)

[12] 实用新型专利说明书

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[11] 授权公告号 CN 2784272Y

[22] 申请日 2005.1.4

[21] 申请号 200520069647.6

[73] 专利权人 好孩子儿童用品有限公司

地址 215331 江苏省昆山市陆家镇录溪东路 20 号

[72] 设计人 沈海东

[74] 专利代理机构 苏州创元专利商标事务所有限公司

代理人 孙仿卫

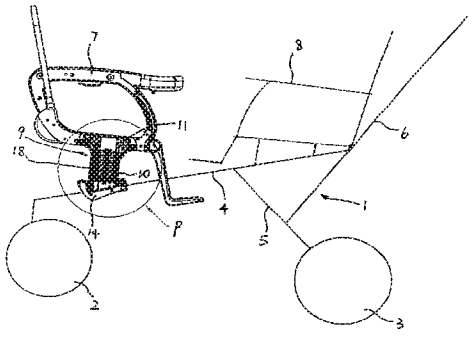
权利要求书 1 页 说明书 3 页 附图 5 页

[54] 实用新型名称

儿童推车

[57] 摘要

一种儿童推车，包括推车车架、设置在推车车架的底前部的前轮、设置在推车车架的底后部的后轮、设置在推车车架上的第一座位，第一座位与推车车架相转动连接，并且转动的轴心线与水平面大致上相垂直，第一座位与推车车架之间具有位置锁定装置。当第一座位需要换向时，只需将位置锁定装置解锁，转动第一座位，使得第一座位相对推车车架换向，再重新将第一座位与推车车架锁定，便实现第一座位的换向。



1、一种儿童推车，包括推车车架[1]、设置在所述的推车车架[1]的底前部的前轮[2]、设置在所述的推车车架[1]的底后部的后轮[3]、设置在所述的推车车架[1]上的第一座位[7]，其特征在于：所述的第一座位[7]与所述的推车车架[1]相转动连接，并且转动的轴心线与水平面大致上相垂直，所述的第一座位[7]与所述的推车车架[1]之间具有位置锁定装置[9]。

2、根据权利要求 1 所述的儿童推车，其特征在于：所述的推车车架[1]上固定设置有固定座[10]，所述的第一座位[7]上设有底盘[11]，所述的固定座[10]与所述的底盘[11]之间相转动连接。

3、根据权利要求 2 所述的儿童推车，其特征在于：所述的位置锁定装置[9]包括滑动地设置在所述的底盘[11]或所述的固定座[10]的一个上的插销[13]、开设在所述的底盘[11]或所述的固定座[10]的另一个上的至少两个插孔[12]，所述的插销[13]具有两个工作位置，第一工作位置是锁定工作位置，所述的插销[13]插在所述的插孔[12]中，第二工作位置是解锁工作位置，所述的插销[13]脱离所述的插孔[12]。

4、根据权利要求 3 所述的儿童推车，其特征在于：所述的位置锁定装置[9]还包括操作件[14]，所述的操作件[14]与所述的插销[13]相连接。

5、根据权利要求 3 所述的儿童推车，其特征在于：所述的固定座[10]上开有导向槽[15]，所述的插销[13]滑动地插在所述的导向槽[15]内。

6、根据权利要求 5 所述的儿童推车，其特征在于：所述的插销[13]与所述的固定座[10]之间设置有弹簧[15]。

7、根据权利要求 2 所述的儿童推车，其特征在于：所述的第一座位[7]的座基架与所述的底盘[11]可拆卸地连接。

8、根据权利要求 2 所述的儿童推车，其特征在于：所述的推车车架[1]包括前轮支架[4]、与所述的前轮支架[4]的后端部相转动连接的推把[6]、与所述的推把[6]的下端部相转动连接的后轮支架[5]，所述的后轮支架[5]的前端部与所述的前轮支架[4]相转动连接。

9、根据权利要求 8 所述的儿童推车，其特征在于：所述的固定座[10]固定设置在所述的前轮支架[4]上。

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儿童推车

技术领域

本实用新型涉及一种儿童推车。

背景技术

现有技术中，为了实现儿童推车上的座位相对推车车架换向（换向是指座位上的儿童相对于推车的大人呈面对面的位置或背对面的位置），儿童推车上的座位可拆卸的设置在所述的推车车架上，需要换向时，须先将座位从推车车架上拆卸下来，将所述的座位换个方向后再安装到所述的推车车架上，假如所述的座位上坐着小孩，还有必要将小孩抱下，再将座位换向，使得操作很不方便。

发明内容

本实用新型目的是提供一种儿童推车，其座位的换向可以较方便的实现。

为达到上述目的，本实用新型采用的技术方案是：一种儿童推车，包括推车车架、设置在所述的推车车架的底前部的前轮、设置在所述的推车车架的底后部的后轮、设置在所述的推车车架上的第一座位，所述的第一座位与所述的推车车架相转动连接，并且转动的轴心线与水平面大致上相垂直，所述的第一座位与所述的推车车架之间具有位置锁定装置，在位置锁定装置处于解锁状态下，所述的第一座位可以相对于推车车架转动，可以调整座位，使得座位上的儿童相对于推车的大人呈面对面的状态，或呈背对面的状态。在位置锁定装置处于锁定状态下，所述的第一座位相对于推车车架呈位置相对固定的状态，第一座位不能相对于推车车架转动。

由于上述技术方案运用，本实用新型与现有技术相比具有下列优点：由于所述的第一座位与所述的推车车架之间相转动连接，并且所述的第一座位与所述的推车车架之间具有位置锁定装置，因此当第一座位需要换向时，只需将所述的位置锁定装置解锁，转动所述的第一座位，使得第一座位相对所述的推车车架换向，再重新将所述的第一座位与所述的推车车架锁定，便实现所述的第一座位的换向。

附图说明

附图 1 为本实用新型的座位正常使用时的主视图；

附图 2 为本实用新型的座位换向过程中的主视图；

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附图 3 为本实用新型的座位换向后的主视图；

附图 4 为附图 1 的 I 处放大图；

附图 5 为附图 2 的 K 处放大图；

附图 6 为附图 3 的 P 处放大图；

其中：1、推车车架；2、前轮；3、后轮；4、前轮支架；5、后轮支架；6、推把；7、第一座位；8、第二座位；9、位置锁定装置；10、固定座；11、底盘；12、插孔；13、插销；14、操作件；15、弹簧；16、导向槽；17、第二转动轴；18、第一转动轴；

具体实施方式

参见附图 1-附图 3，一种可以双人坐的儿童推车，包括推车车架 1、设置在所述的推车车架 1 的底前部的前轮 2、设置在所述的推车车架 1 的底后部的后轮 3、设置在所述的推车车架 1 上的第一座位 7、设置在所述的推车车架 1 上的第二座位 8。所述的推车车架 1 包括前轮支架 4、与所述的前轮支架 4 的后端部相转动连接的推把 6、与所述的推把 6 的下端部相转动连接的后轮支架 5，所述的后轮支架 5 的前端部与所述的前轮支架 4 相转动连接，所述的第一座位 7 与所述的推车车架 1 相转动连接，并且转动的轴心线与水平面大致上相垂直。所述的推车车架 1 上固定设置有固定座 10，所述的固定座 10 固定设置在所述的前轮支架 4 上，所述的第一座位 7 上设有底盘 11，所述的第一座位 7 的座基架与所述的底盘 11 可拆卸地连接，所述的固定座 10 与所述的底盘 11 之间通过第一转动轴 18 相转动连接，所述的第一座位 7 与所述的推车车架 1 之间具有位置锁定装置 9。

所述的位置锁定装置 9 包括滑动地设置在所述的底盘 11 或所述的固定座 10 的一个上的插销 13、开设在所述的底盘 11 或所述的固定座 10 的另一个上的至少两个插孔 12。

如附图 4-附图 6 所示，所述的固定座 10 上开有导向槽 15，所述的插销 13 滑动地插在所述的导向槽 15 内，在所述的底盘 11 上开有两个插孔 12，该两个插孔 12 分别用于把第一座位 7 锁定于座位朝前或座位朝后的位置。所述的插销 13 具有两个工作位置，第一工作位置是锁定工作位置，所述的插销 13 插在所述的插孔 12 中，第二工作位置是解锁工作位置，所述的插销 13 脱离所述的插孔 12。所述的位置锁定装置 9 还包括操作件 14，所述的操作件 14 的一端部与所述的固定座 10 通过第二转动轴 17 相转动连接，所述的操作件 14 与

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所述的插销 13 相连接，按动所述的操作件 14，使得所述的插销 13 处于第二工作位置，所述的插销 13 脱离所述的插孔 12。

所述的插销 13 与所述的固定座 10 之间设置有弹簧 15，当所述的插销 13 处于第一工作位置时，弹簧 15 的作用力使得所述的插销 13 稳定地插在所述的插孔 12 中。

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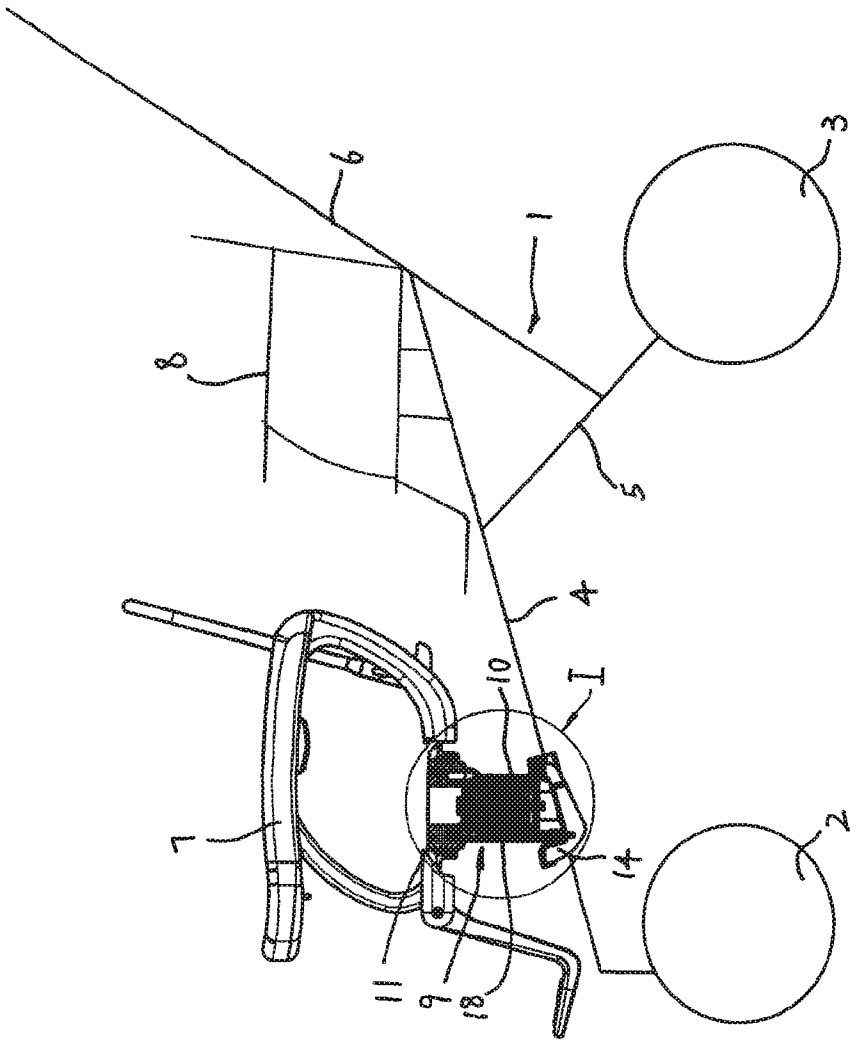

图 1

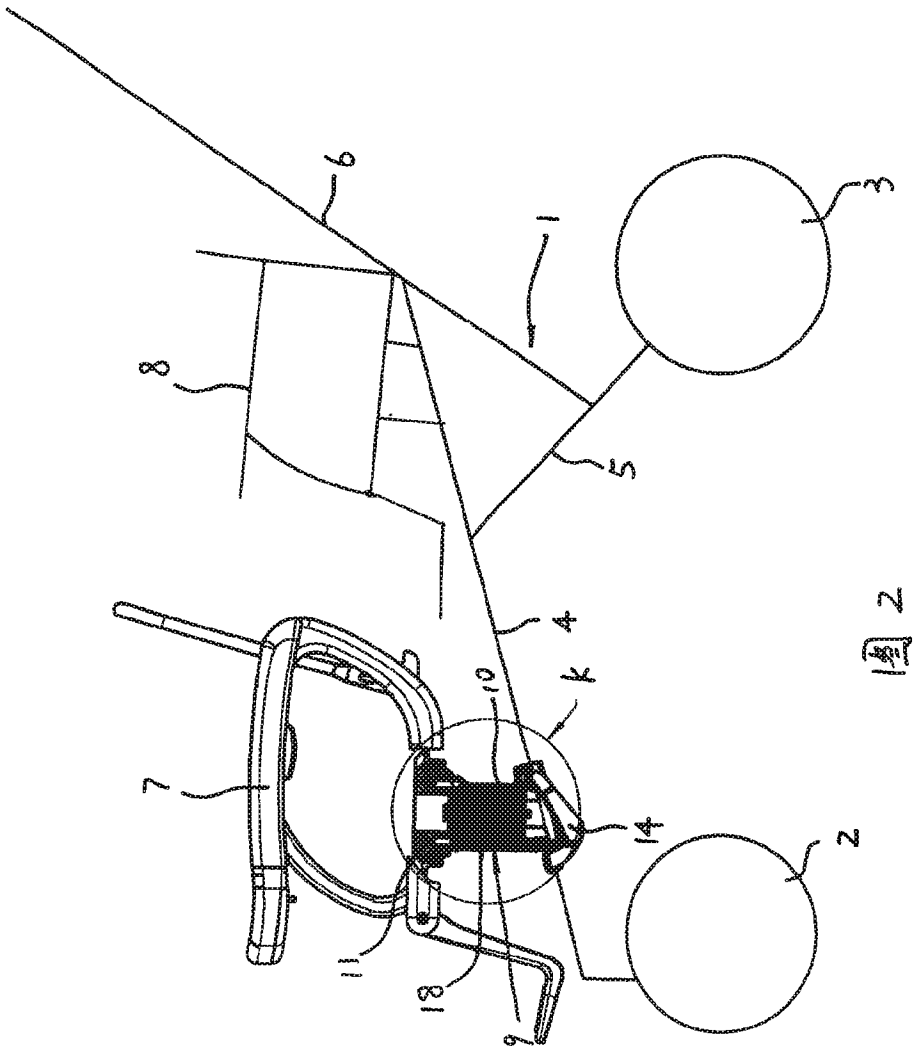

图 2

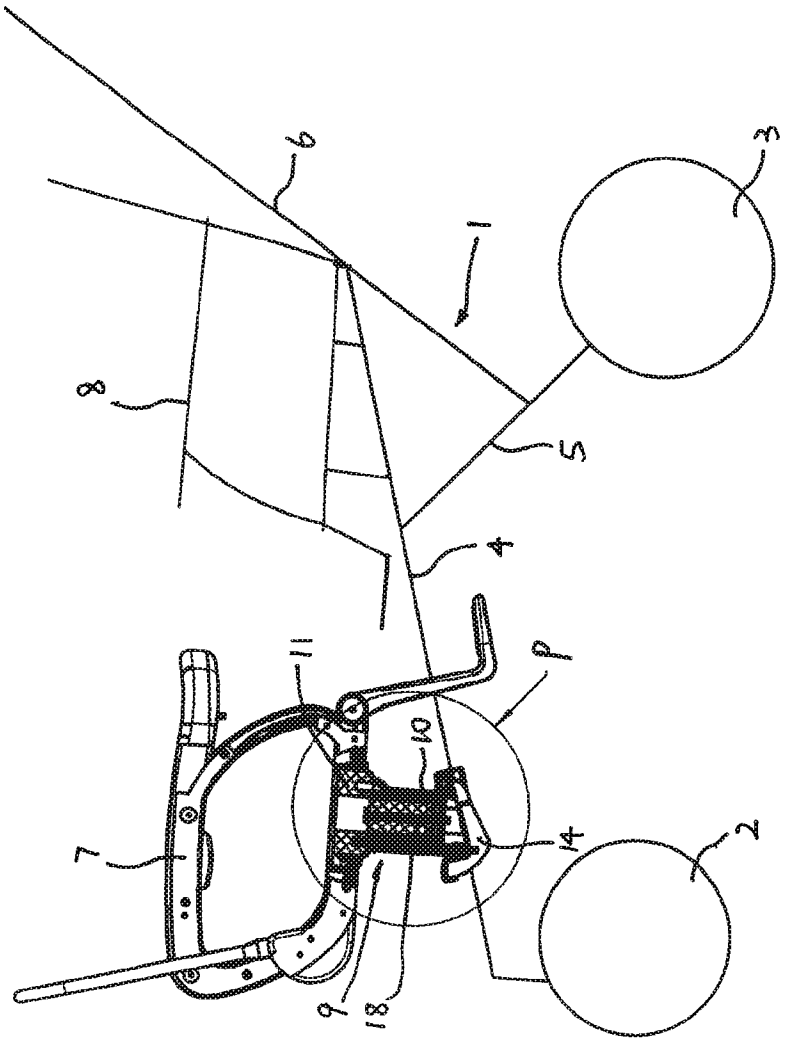

图 3

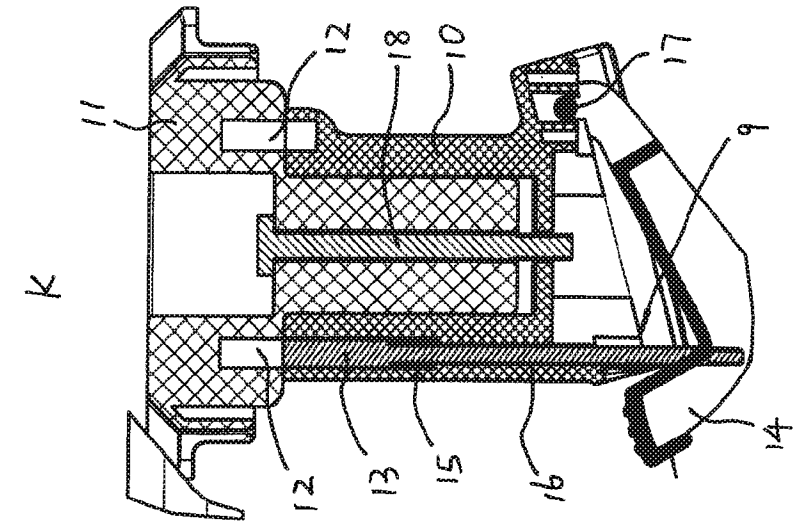

图 5

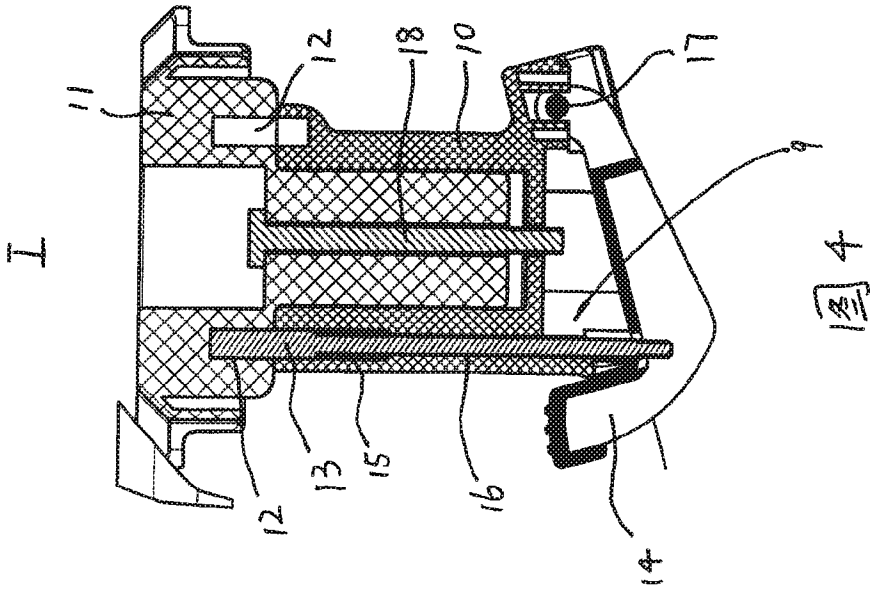

图 4

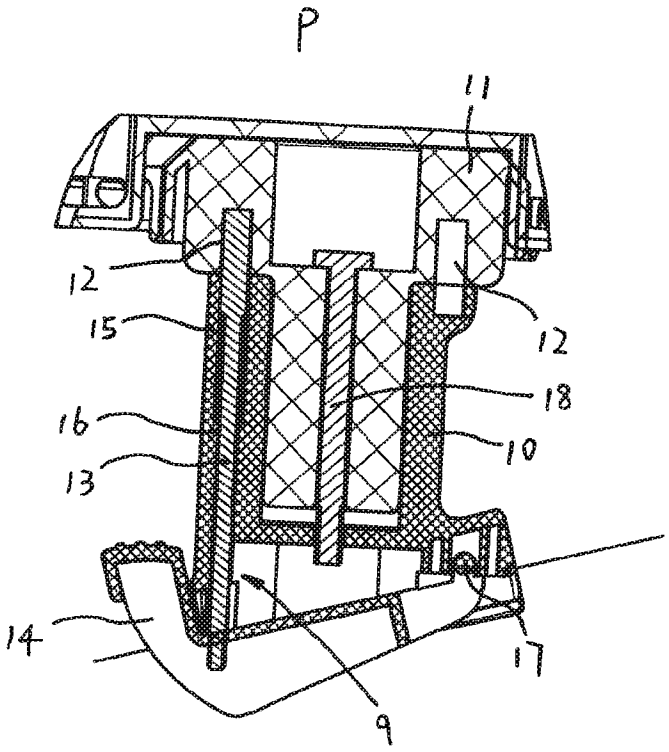

图 6

Espacenet

Bibliographic data: CN2918181 (Y) — 2007-07-04

Carriage for children with front and rear seats

Inventor(s): CHEN ERRUI [CN] ± (ERRUI CHEN)

Applicant(s): DONGGUAN LIAOBUQI DAILY PRODUC [CN] ± (DONGGUAN LIAOBUQI DAILY PRODUCTS DESIGN SERVICE DEPARTMENT)

Classification: **- international:** ***B62B7/06***
- cooperative:

Application number: CN2006253300U 20060105

Priority number(s): CN2006253300U 20060105

Abstract of CN2918181 (Y)

The utility model discloses a double-child perambulator with a front seat and a rear seat, which comprises a frame of the perambulator, a front wheel assembly, a rear wheel assembly and a seat assembly. The frame comprises two side brackets, which are arranged at the two sides and connected with each other by a plurality of connecting rods; the side bracket comprises a supporting rod of the front wheel, a supporting rod of the rear wheel, a front arm lever and a rear arm lever respectively; the supporting rod of the front wheel is connected with a front wheel axle, while the supporting rod of the rear wheel is connected with a rear wheel axle; the rear end of the supporting rod of the front wheel is hinged with the front end of the supporting rod of the rear wheel mutually, and an arc with an upward opening is formed; the front end of the front arm lever is hinged in the middle of the supporting rod of the front wheel; the rear end of the front arm lever is hinged with the front end of the rear arm lever mutually, and an arc with an downward opening is formed; the middle part of the supporting rod of the rear wheel is hinged with the middle part of the rear arm lever; a kink four-bar linkage mechanism is formed by the side brackets by the supporting rod of the front wheel, the supporting rod of the rear wheel, the front arm lever and the rear arm lever hinged with each other; a transverse supporting rod is arranged between the two supporting rods of the rear wheel of the two side brackets, and a buckle mechanism is provided in the middle of the transverse supporting rod.

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[22] 申请日 2006.1.5

[21] 申请号 200620053300.7

[73] 专利权人 东莞市寮步齐家日用品设计服务部

地址 523013 广东省东莞市寮步镇横坑村 3 号

[72] 设计人 陈而瑞

[74] 专利代理机构 深圳市顺天达专利商标代理有限公司

代理人 蒋海燕

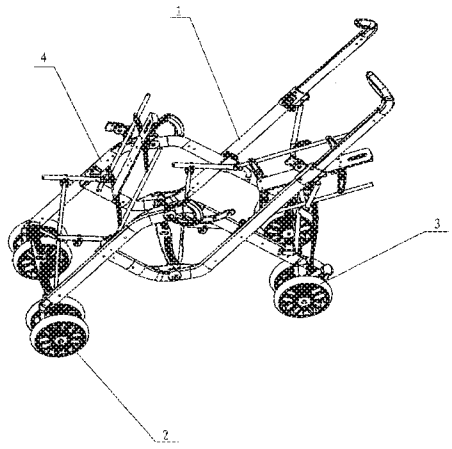
权利要求书 3 页 说明书 8 页 附图 7 页

[54] 实用新型名称

一种前后座双人儿童推车

[57] 摘要

本实用新型公开了一种前后座双人儿童推车，包括一推车车架、前轮组件、后轮组件及座椅组件；车架包括对称设置在两侧、并通过若干连接杆相连接的两侧支架；该侧支架，分别包括一前轮支杆、一后轮支杆、一前臂杆、一后臂杆；前轮支杆与前轮轴相连接，后轮支杆与后轮轴相连接；前轮支杆的后端部与后轮支杆的前端部相互铰接，形成一开口向上的拱起；前臂杆的前端部，铰接在前轮支杆的中部；前臂杆后端部与后臂杆的前端部相互铰接，形成一开口向下的拱起；后轮支杆的中部与后臂杆的中部相铰接；相互铰接的前轮支杆、后轮支杆、前臂杆、后臂杆，使侧支架形成铰链四连杆机构；侧支架的两后轮支杆之间，还设有一横向支撑杆，该支撑杆中部设有一卡扣机构。



1、一种前后座双人儿童推车，包括一推车车架、设置在所述推车车架底前部的前轮组件，设置在所述的推车车架的底后部的后轮组件，及设置在所述车架上的两座椅组件，其特征在于：所述的推车车架包括对称设置在两侧、并通过若干连接杆相连接的两侧支架；所述的侧支架，分别包括一前轮支杆、一后轮支杆、一前臂杆、一后臂杆；所述的前轮支杆的前端部与前轮轴相连接，所述后轮支杆的后端部与后轮轴相连接；所述的前轮支杆的后端部与后轮支杆的前端部相互铰接，铰接后形成一开口向上的拱起；所述前臂杆的前端部，铰接在前轮支杆的中部；所述前臂杆后端部与后臂杆的前端部相互铰接，铰接后形成一开口向下的拱起；所述后轮支杆的中部与所述后臂杆的中部相铰接；所述相互铰接的前轮支杆、后轮支杆、前臂杆、后臂杆，共同使侧支架形成一铰链四连杆机构；所述侧支架的两后轮支杆之间，还设有一横向支撑杆，该支撑杆的两端分别铰接在两后轮支杆上，其中部设有一用来使该支撑杆保持平直或弯折状态的卡扣机构。

2、根据权利要求 1 所述的儿童推车，其特征在于：所述的侧支架的后臂杆后段，还连接有一手把杆；所述的手把杆的下段可以从所述的后臂杆后段中插进或拉出；所述后臂杆的上端部，还设有一控制手把杆进出的伸缩卡位机构；所述手把杆的上端，还设有一把手；所述的手把杆，还铰接有一对呈弯折形、中部相互交叉的连接杆；所述弯折形连接杆的一端，铰接在所述的手把杆上，其另一端铰接在另一侧支架的后轮支架上；所述的两个弯折形连接杆的中段交叉部相互铰接。

3、根据权利要求 1 或 2 所述的儿童推车，其特征在于：所述的前轮支杆、后轮支杆、前臂杆、后臂杆、手把杆，均是管状构件，其各自的两端部，均设有一连接件，并通过该连接件与其他构件相互连接。

4、根据权利要求 1 或 2 或 3 所述的儿童推车，其特征在于：所述的两侧支架的前轮支杆之间，还设有一中部可折叠的前脚踏板；所述的两侧支架的前臂杆之间，也设有一中部可折叠的后脚踏板。

5、根据权利要求 1 或 2 或 3 所述的儿童推车，其特征在于：所述侧支架前轮支杆的中段，还铰接有一前座水平连杆，该连杆的后端通过一连接板铰接在所述的前臂杆上；所述后臂杆与后轮支杆的铰接轴上，还铰接有一后座水平连杆，该连杆的后段相下弯折，其端部铰接在后轮支杆上；所述两侧支架之间，其前部及后部还分别设有一对呈 X 形交叉、且其交叉部相铰接的斜向交叉连杆；所述设在前部的两斜向交叉连杆，其上端部分别与所述前座水平连杆相铰接，其下端部分别与所述前轮支杆相铰接；所述设在后部的两斜向交叉连杆，其上端部分别与所述后座水平连杆相铰接，其下端部分别铰接在所述前臂杆与后臂杆的铰接轴上。

6、根据权利要求 5 所述的儿童推车，其特征在于：所述前座水平连杆的后段，分别铰接有一向上的前座背靠立杆；所述后座水平连杆的后段，分别铰接有一向上的后座背靠立杆；所述两前座背靠立杆之间，以及两后座背靠立杆之间，还分别设有一座位无级调节装置，该装置通过水平对称设置的若干背靠连接板，对称地铰接在所述的背靠立杆上。

7、根据权利要求 6 所述的儿童推车，其特征在于：所述座位无级调节装置，包括一长形本体、设在所述本体上并可上下滑动的卡位机构及若干条钢丝；所述的钢丝一端固定在所述本体的上端，中部穿过卡位机

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构，下端固定在所述的车架上；所述的卡位机构，通过拉紧或松弛所述的钢丝，可以不间断地无级调节或改变本体相对于所述车架的位置。

8、根据权利要求 1 或 2 或 3 所述的儿童推车，其特征在于：所述的前轮支架，其上端部连接件的内侧边，与所述后轮支架的外侧边相互铰接，两前轮支架之间距离，大于两后轮支架之间的距离，使前后轮组件的位置错开。

9、根据权利要求 1 或 2 或 3 所述的儿童推车，其特征在于：所述前轮支杆、后轮支杆的铰接轴上，还设有一环形拉手，该拉手的一侧还开有一弧形槽，所述槽开口的一端铰接有一卡钩；所述后轮支架与后臂杆的铰接轴上，设有一与所述卡钩配合使用、设有一卡钩连接开口的定位构件；当车架处于使用状态时，该卡钩与该定位构件脱开；当车架处于折叠收拢状态时，该卡钩与该定位构件结合。

10、根据权利要求 1 或 2 或 3 所述的儿童推车，其特征在于：所述的前座水平连杆、前座背靠立杆，及铰接在所述前座背靠立杆上的无级调节装置上，还设有一前座椅；所述的后座水平连杆、后座背靠立杆，及铰接在所述后座背靠立杆上的无级调节装置上，设有一后座椅；所述的座椅可以是普通座椅或汽车座椅之一。

一种前后座双人儿童推车

技术领域

本实用新型涉及儿童推车，特别涉及一种可实现三维伸缩折叠、且折叠后仍然可以推行的前后座双人儿童推车。

背景技术

现有技术中的儿童推车，一般包括推车车架、设置在所述的推车车架的底前部的前轮、设置在所述的推车车架的底后部的后轮，所述的推车车架包括位于两侧的侧支架，所述的侧支架包括前轮支架、下端部与所述的前轮支架的上端部相转动连接的推把、上端部与所述的推把相转动连接的后轮支架，通常推车车架包括座连杆等，所述的座连杆的前端部与所述的前轮支架相转动连接，所述的座连杆的后端部与所述的后轮支架相转动连接，当所述的儿童推车折叠时，前轮支架相对后轮支架折叠，而座连杆限制了前轮支架相对后轮支架折叠的位置从而不能使前轮支架相对后轮支架在折叠后收缩的较小，且车架结构复杂，组装繁琐；现有的儿童推车，在车宽及车高方向也无法进行收缩折叠，且折叠后推车无法直立推行。因而现有技术的儿童推车结构复杂，折叠后的体积依然较大，制造及运输成本较高，使用亦部方便。

实用新型内容

本实用新型目的是提供一种可以实现三维折叠、结构简单、使用方便、折叠后体积更小、且折叠后推车仍可以直立推行的前后座双人儿童推车。

本实用新型实现上述目的所采用的技术方案是：一种前后座双人儿童推车，包括一推车车架、设置在所述推车车架底前部的前轮组件，设置在所述的推车车架的底后部的后轮组件，及设置在所述车架上的两座椅组件，其特征在于：所述的推车车架包括对称设置在两侧、并通过若干连接杆相连接的两侧支架；所述的侧支架，分别包括一前轮支杆、一后轮支杆、一前臂杆、一后臂杆；所述的前轮支杆的前端部与前轮轴相连接，所述后轮支杆的后端部与后轮轴相连接；所述的前轮支杆的后端部与后轮支杆的前端部相互铰接，铰接后形成一开口向上的拱起；所述前臂杆的前端部，铰接在前轮支杆的中部；所述前臂杆后端部与后臂杆的前端部相互铰接，铰接后形成一开口向下的拱起；所述后轮支杆的中部与所述后臂杆的中部相铰接；所述相互铰接的前轮支杆、后轮支杆、前臂杆、后臂杆，共同使侧支架形成一铰链四连杆机构；所述侧支架的两后轮支杆之间，还设有一横向支撑杆，该支撑杆的两端分别铰接在两后轮支杆上，其中部设有一用来使该支撑杆保持平直或弯折状态的卡扣机构；所述的支撑杆是由中部相互铰接的两段杆体组成，所述的卡扣机构是设置在该支撑杆中部的铰接处，包括一舌杆及复位弹簧。

所述的侧支架的后臂杆后段，还连接有一手把杆；所述的手把杆的下段可以从所述的后臂杆后段中插进或拉出；所述后臂杆的上端部，还设有一控制手把杆进出的伸缩卡位机构；所述手把杆的上端，还设有一把手；所述的手把杆，还铰接有一对呈弯折形、中部相互交叉的连接杆；所述弯折形连接杆的一端，铰接在所述的手把杆上，其另一端铰接在另一侧支架的后轮支架上；所述的两个形连接杆的中段交叉部相互铰接。

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所述的前轮支杆、后轮支杆、前臂杆、后臂杆、手把杆，均是管状构件，其各自的两端部，均设有一连接件，并通过该连接件与其他构件相互连接。具体地，设置在前轮支杆与后轮支杆之间的连接件是一轴节；设置在前臂杆与后臂杆之间的连接件是一轴节；设置在后臂杆与手把杆之间的连接件是一伸缩卡扣机构。根据具体需求，上述构件可以采用铝合金材料制成，也可以选用其他材料，如不锈钢材料等。

所述的两侧支架的前轮支杆之间，还设有一中部可折叠的前脚踏板；所述的两侧支架的前臂杆之间，也设有一中部可折叠的后脚踏板。

所述侧支架前轮支杆的中段，还铰接有一前座水平连杆，该连杆的后端通过一连接板铰接在所述的前臂杆上；所述后臂杆与后轮支杆的铰接轴上，还铰接有一后座水平连杆，该连杆的后段相下弯折，其端部铰接在后轮支杆上；所述两侧支架之间，其前部及后部还分别设有一对呈X形交叉、且其交叉部相铰接的斜向交叉连杆；所述设在前部的两斜向交叉连杆，其上端部分别与所述前座水平连杆相铰接，其下端部分别与所述前轮支杆相铰接；所述设在后部的两斜向交叉连杆，其上端部分别与所述后座水平连杆相铰接，其下端部分别铰接在所述前臂杆与后臂杆的铰接轴上。

所述前座水平连杆的后段，分别铰接有一向上的前座背靠立杆；所述后座水平连杆的后段，分别铰接有一向上的后座背靠立杆；所述两前座背靠立杆之间，以及两后座背靠立杆之间，还分别设有一座位无级调节装置，该装置通过水平对称设置的若干背靠连接板，对称地铰接在所述的背靠立杆上。

所述的座位无级调节装置，包括一长形本体、设在所述本体上并可

上下滑动的卡位机构及若干条钢丝；所述的钢丝一端固定在所述本体的上端，中部穿过卡位机构，下端固定在所述的车架上；所述的卡位机构，通过拉紧或松驰所述的钢丝，可以不间断地无级调节或改变本体相对于所述车架的位置。

所述的前轮支架，其上端部连接件的内侧边，与所述后轮支架的外侧边相互铰接，两前轮支架之间距离，大于两后轮支架之间的距离，使前后轮组件的位置错开。

所述前轮支杆、后轮支杆的铰接轴上，还设有一环形拉手，该拉手的一侧还开有一弧形槽，所述槽开口的一端铰接有一卡钩；所述后轮支架与后臂杆的铰接轴上，设有一与所述卡钩配合使用、设有一卡钩连接开口的定位构件；当车架处于使用状态时，该卡钩与该定位构件脱开；当车架处于折叠收拢状态时，该卡钩与该定位构件结合。

所述的前座水平连杆、前座背靠立杆，及铰接在所述前座背靠立杆上的无级调节装置上，还设有一前座椅；所述的后座水平连杆、后座背靠立杆，及铰接在所述后座背靠立杆上的无级调节装置上，设有一后座椅；所述的座椅可以是普通座椅或汽车座椅之一。

本实用新型还可以根据实际需要，在各连接杆等适当的部件上，或相关部件之间，设置若干帘布，及其他辅助或装饰性部件、物品。

本实用新型与现有技术相比，具有下列优点：由于在所述的前轮支杆、后轮支杆、前臂杆、后臂杆使侧支架形成一铰链四连杆结构，可以使车架实现车长方向的折叠伸缩；由于把手杆可以伸缩进出后臂杆内，车架折叠后可将其缩进后臂杆内，降低折叠后的车架高度；由于两侧支架之间的各构件均可以其中心铰接轴或中点进行横向折叠，故车架可

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以实现车身的车宽方向的伸缩折叠；由于前后轮组件的位置相互错开，车架折叠后前后轮组仍然可以继续工作，因而使车身可以继续直立推动行走。如上所述，本实用新型实现了对推车的三维伸缩折叠，不仅减小了儿童推车折叠后的体积，降低了运输成本，而且结构简单，折叠、伸展等较为便捷，折叠后仍然可以推行，使用非常方便。

附图说明

图 1 为本实用新型实施例车架的展开使用状态立体结构示意图；

图 2 为图 1 的主视图；

图 3 为图 1 的左视图；

图 4 为图 1 的右视图；

图 5 为图 1 的俯视图；

图 6 为图 1 中背靠的立体结构示意图；

图 7 为本实用新型实施例车架的折叠状态立体结构示意图；

下面结合附图及实施例对本实用新型进一步说明。

具体实施方式

实施例： 采用本实用新型技术方案，构造一款铝合金管状构件为车架主体的一种前后座双人儿童推车。

参见图 1～图 7，一种前后座双人儿童推车，包括一推车车架 1、设置在所述推车车架 1 底前部的前轮组件 2，该组件包括前车轮 2a 及前车轮轴 2b；设置在所述的推车车架 1 的底后部的后轮组件 3，该组件包括后车轮 3a 及后车轮轴 3b，及设置在所述车架 1 上的两座椅组件，包括

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前座椅组件及后座椅组件；所述的推车车架 1 包括对称设置在两侧、并通过若干连接杆相连接的两侧支架 4，分别是左侧支架与右侧支架；所述的侧支架 4，分别包括一前轮支杆 5、一后轮支杆 6、一前臂杆 7、一后臂杆 8；所述的前轮支杆 5 的前端部与前轮轴 2b 相连接，所述后轮支杆 6 的后端部与后轮轴 3b 相连接；所述的前轮支杆 5 的后端部与后轮支杆 6 的前端部相互铰接，铰接后形成一开口向上的拱起；所述前臂杆 7 的前端部，铰接在前轮支杆 5 的中部；所述前臂杆 7 后端部与后臂杆 7 的前端部相互铰接，铰接后形成一开口向下的拱起；所述后轮支杆 6 的中部与所述后臂杆 8 的中部相铰接；所述相互铰接的前轮支杆 5、后轮支杆 6、前臂杆 7、后臂杆 8，共同使侧支架 4 形成一铰链四连杆机构；所述侧支架 4 的两后轮支杆 6 之间，还设有一横向支撑杆 9，该支撑杆的两端分别铰接在两后轮支杆 6 上，其中部设有一用来使该支撑杆 9 保持平直或弯折状态的卡扣机构 9a；所述的支撑杆 9a 是由中部相互铰接的两段杆体组成，所述的卡扣机构是设置在该支撑杆中部的铰接处，包括一舌杆及复位弹簧。

所述的侧支架 4 的后臂杆 8 后段，还连接有一手把杆 10；所述的手把杆 10 的下段可以从所述的后臂杆 8 后段中插进或拉出；所述后臂杆 8 的上端部，还设有一控制手把杆 10 进出的伸缩卡位机构 11；所述手把杆 10 的上端，还设有一把手 12；所述的手把杆 10，还铰接有一对呈弯折形、中部相互交叉的连接杆 13；所述弯折形连接杆 13 的一端，铰接在所述的手把杆 10 上，其另一端铰接在另一侧支架 4 的后轮支杆 6 上；所述的两个弯折形连接杆 13 的中段交叉部相互铰接。

所述的前轮支杆 5、后轮支杆 6、前臂杆 7、后臂杆 8、手把杆 10，

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均是铝合金管状构件，其各自的两端部，均设有一连接件，并通过该连接件与其他构件相互连接；具体地，设置在前轮支杆 5 与后轮支杆 6 之间的连接件是轴节 14；设置在前臂杆 7 与后臂杆 8 之间的连接件是轴节 15；设置在后臂杆 8 与手把杆 10 之间的连接件是伸缩卡扣机构 11。根据具体需求，也可以选用其他材料，如不锈钢材料来制造前轮支杆 5、后轮支杆 6、前臂杆 7、后臂杆 8、手把杆 10 等构件及其连接件。

所述的两侧支架 4 的前轮支杆 5 之间，还设有一中部可折叠的前脚踏板 16；所述的两侧支架 4 的前臂杆 7 之间，也设有一中部可折叠的后脚踏板 17。

所述侧支架前轮支杆 5 的中段，还铰接有一前座水平连杆 18，该连杆 18 的后端通过一连接板 19 铰接在所述的前臂杆 7 上；所述后臂杆 8 与后轮支杆 6 的铰接轴上，还铰接有一后座水平连杆 20，该连杆 20 的后段相下弯折，其端部铰接在后轮支杆 6 上；所述两侧支架 4 之间，其前部设有一对呈 X 形交叉、且其交叉部相铰接的斜向交叉连杆 21，其后部设有一对呈 X 形交叉、且其交叉部相铰接的斜向交叉连杆 22；所述设在前部的两斜向交叉连杆 21，其上端部分别与所述前座水平连杆 18 相铰接，其下端部分别与所述前轮支杆 5 相铰接；所述设在后部的两斜向交叉连杆 22，其上端部分别与所述后座水平连杆 20 相铰接，其下端部分别铰接在所述前臂杆 7 与后臂杆 8 的铰接轴上。

所述前座水平连杆 18 的后段，分别铰接有一向上的前座背靠立杆 23；所述后座水平连杆 20 的后段，分别铰接有一向上的后座背靠立杆 24；所述两前座背靠立杆 23 之间，以及两后座背靠立杆 24 之间，还分别设有一座位无级调节装置 25，该装置通过水平对称设置的两对背靠连

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接板 26，对称地铰接在所述的背靠立杆 23 及 24 上。

所述的座位无级调节装置 25，包括一长形本体 27、设在所述本体上 26 并可上下滑动的卡位机构 28 及若干条钢丝；所述的钢丝一端固定在所述本体 27 的上端，中部穿过卡位机构 28，下端固定在所述的车架 1 上；所述的卡位机构 28，通过拉紧或松弛所述的钢丝，可以不间断地无级调节或改变本体 27 相对于所述车架 1 的位置。

所述的前轮支架 5，其上端部连接件轴节 14 的内侧边，与所述后轮支架 6 的外侧边相互铰接，两前轮支架 5 之间距离，大于两后轮支架 6 之间的距离，使前轮组件 2 与后轮组件 3 的位置错开。

所述前轮支杆 5、后轮支杆 6 的铰接轴 14 上，还设有一环形拉手 29，该拉手的一侧还开有一弧形槽 30，所述槽开口的一端铰接有一卡钩 31；所述后轮支架 6 与后臂杆 8 的铰接轴上，设有一与所述卡钩 31 配合使用、设有一卡钩连接开口的定位构件 32；当车架 1 处于使用状态时，该卡钩 31 与该定位构件 32 脱开；当车架 1 处于折叠收拢状态时，该卡钩 31 与该定位构件 32 结合。

所述的前座水平连杆 18、前座背靠立杆 23，及铰接在所述前座背靠立杆 23 上的无级调节装置 25 上，还设有一前座椅；所述的后座水平连杆 20、后座背靠立杆 24，及铰接在所述后座背靠立杆 24 上的无级调节装置 25 上，设有一后座椅；所述的座椅可以是普通座椅或汽车座椅之一。本实用新型还可以根据实际需要，在各连接杆等适当的部件上，或相关部件之间，设置若干帘布，及其他辅助或装饰性部件、物品。

采用本实用新型上述实施例所述相同或相似的结构，所得到的其他前后座双人儿童推车，均在本实用新型保护范围之内。

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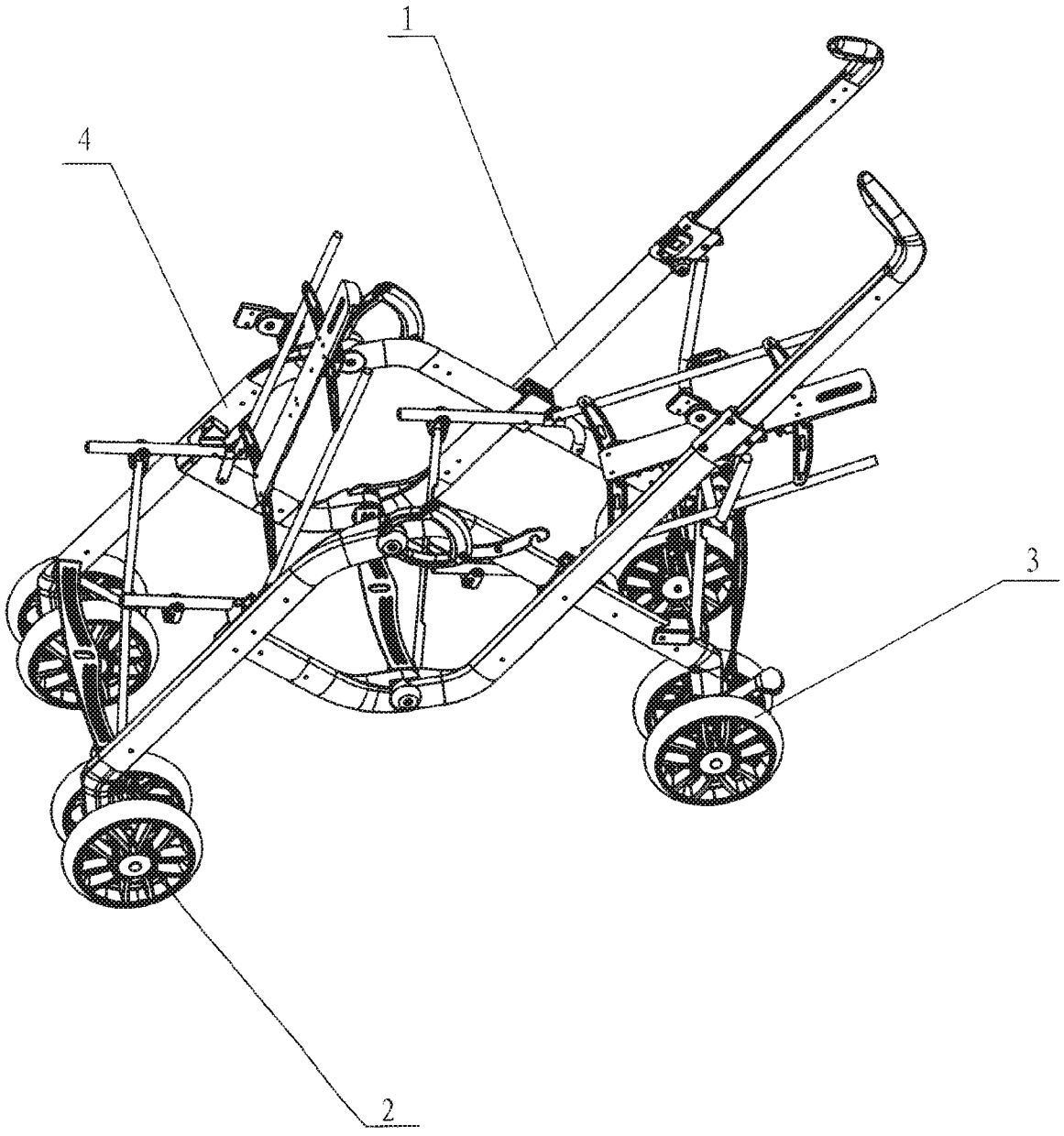


图 1

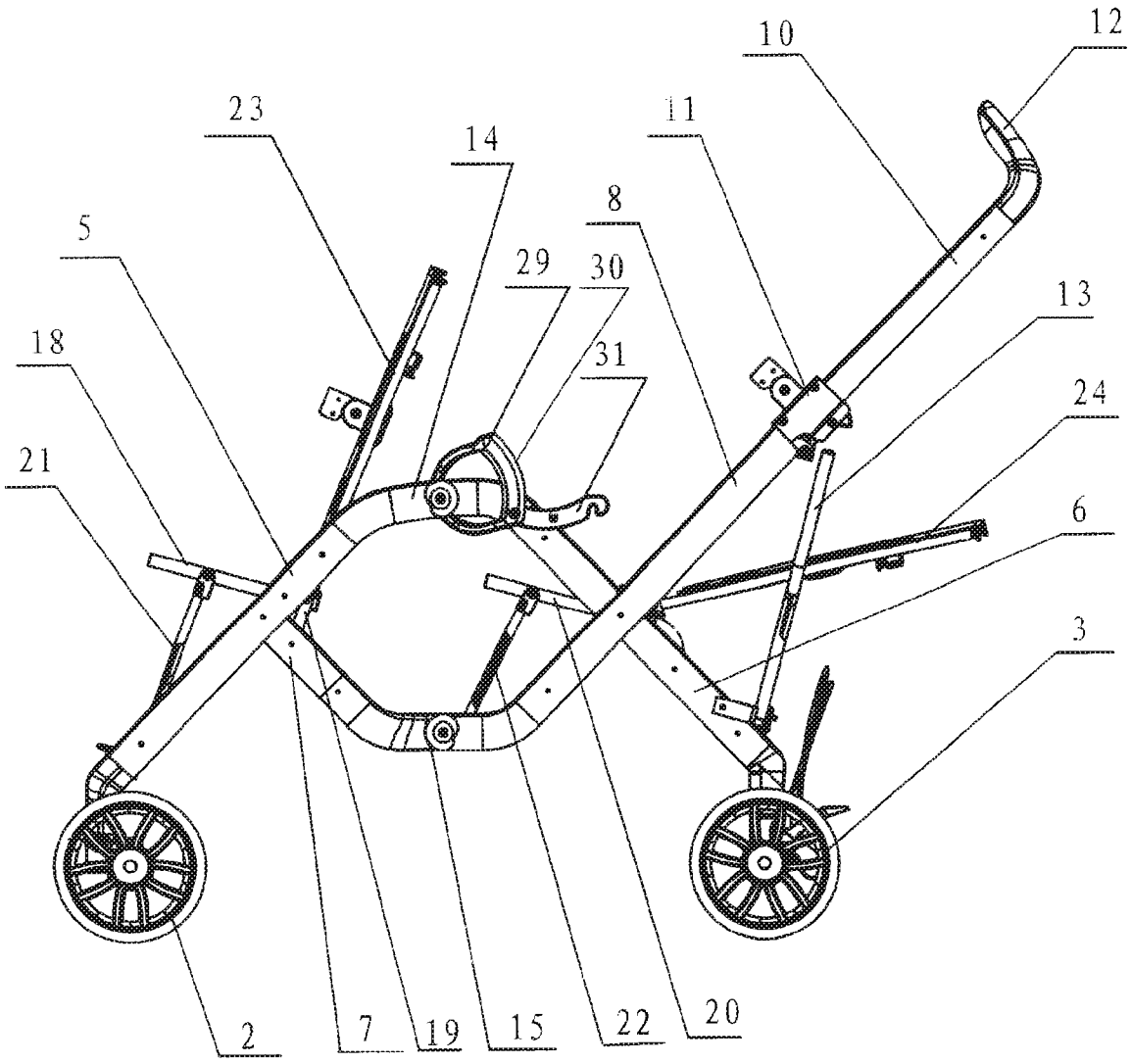
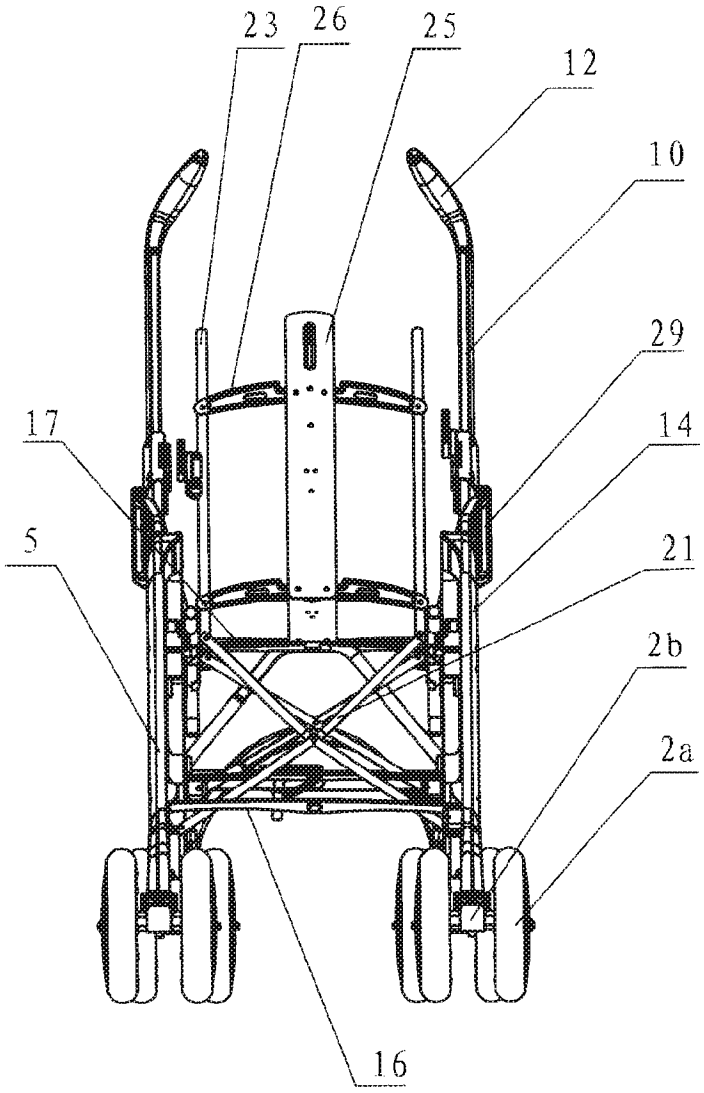


图 2



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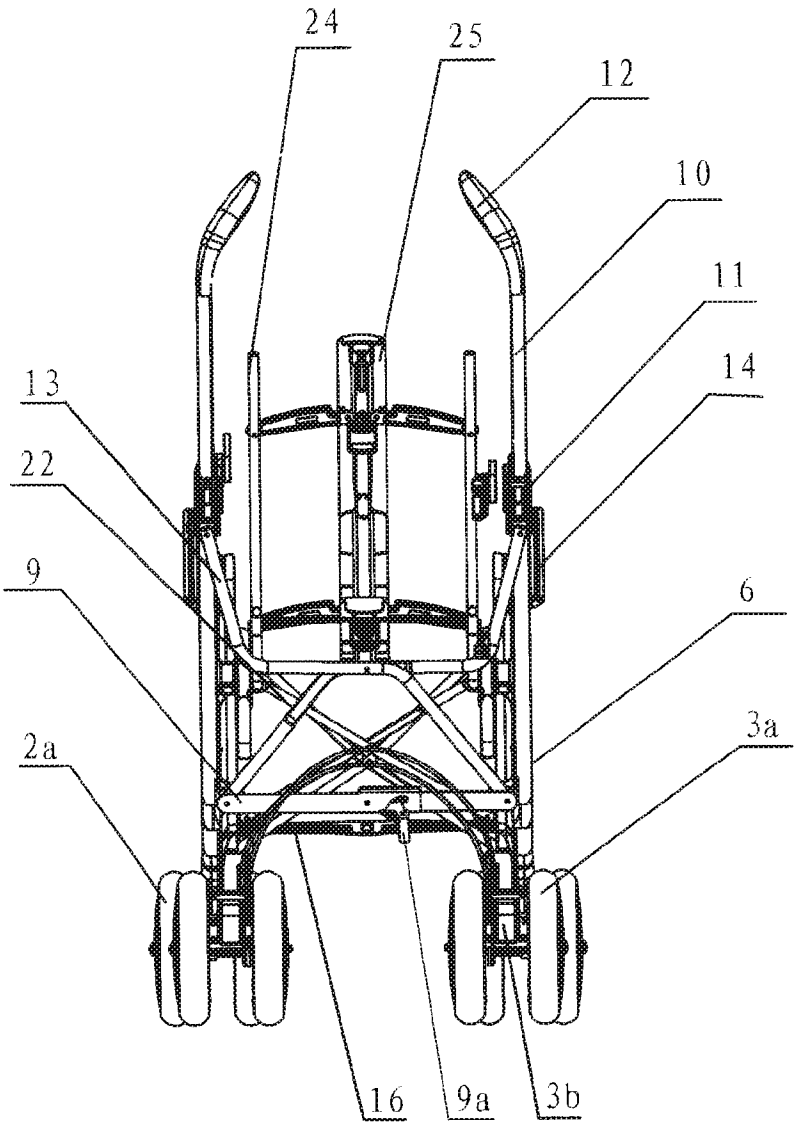

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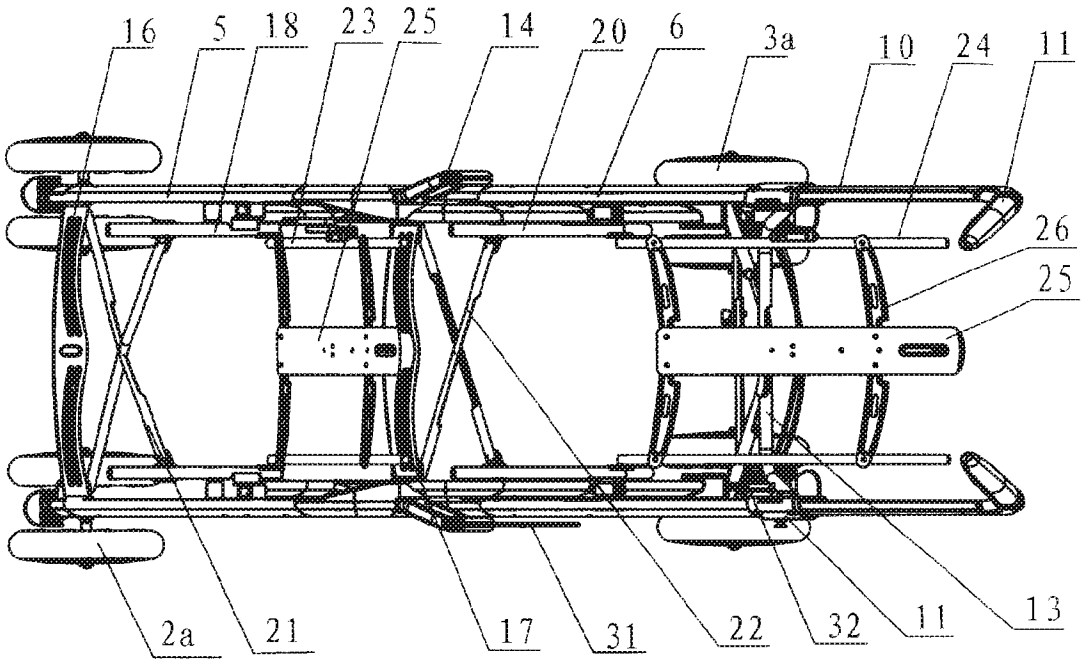

图 5

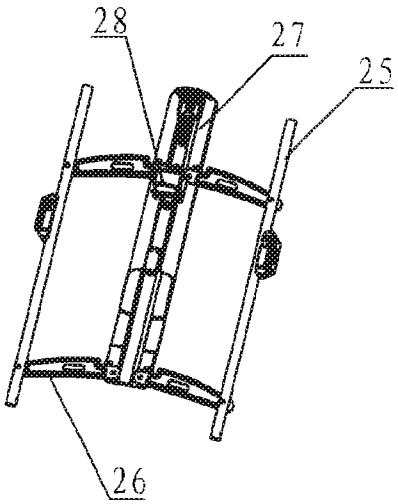

图 6

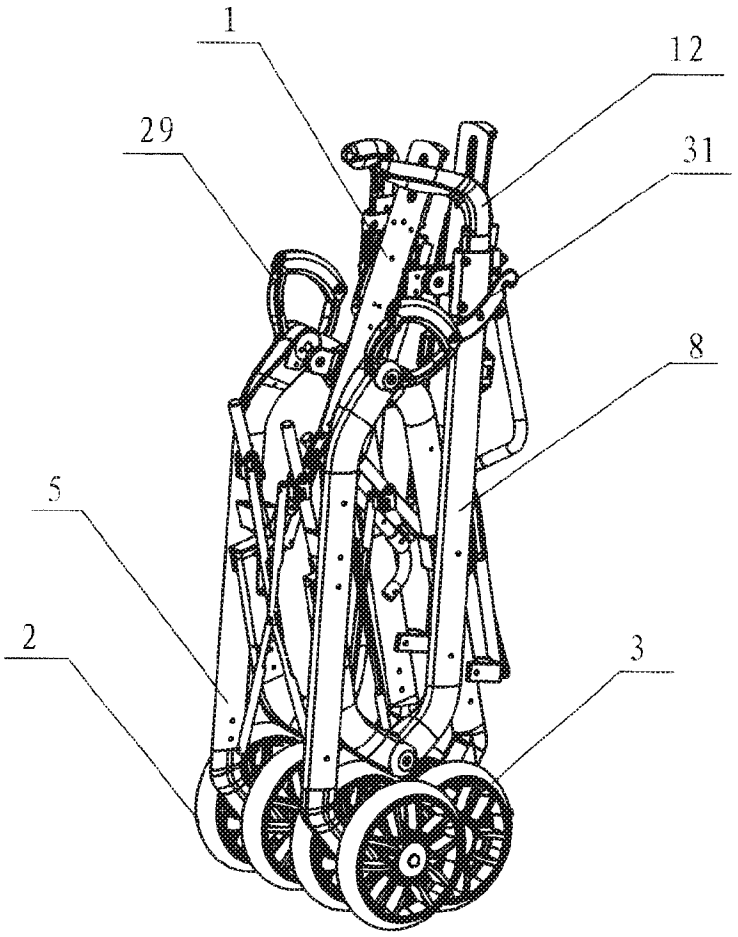

图 7

Espacenet

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Seat attachment for a stroller

Inventor(s): MARK ZEHFUSS ± (ZEHFUSS MARK)

Applicant(s): DYNAMIC BRANDS LLC ± (DYNAMIC BRANDS LLC)

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- cooperative: **B62B7/006**; **B62B7/008**; **B62B7/14**; **B62B9/28**; B62B3/008; B62B7/145; B62K13/00

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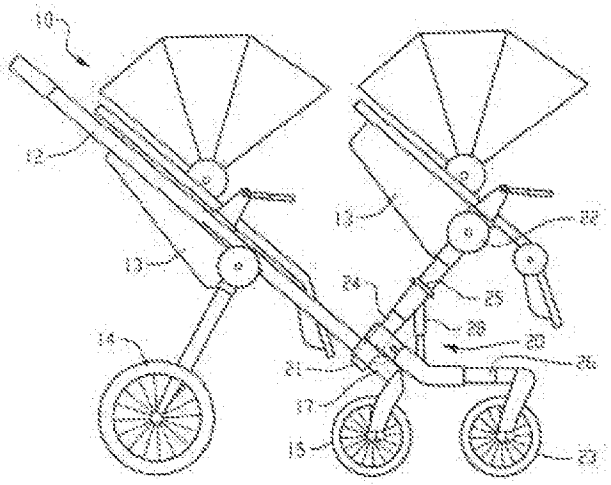
Abstract of CN102256856 (A)

The invention relates to a seat attachment for a stroller, single stroller and double strollers. Such a seat attachment may be used to reversibly convert a single stroller into a double stroller. More specifically, versions of the seat attachment relate to a seat attachment for a stroller capable of supporting a seat such as, but not limited to, a stroller seat, a baby seat, bassinet, a pram, a car seat, or a baby carrier, for example. The seat may be supported in front of a permanent seat of the stroller.



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(71)申请人 戴那米克品牌股份有限公司
地址 美国弗吉尼亚州

(72)发明人 马克·策富斯

(74)专利代理机构 北京律盟知识产权代理有限责任公司 11287
代理人 刘国伟

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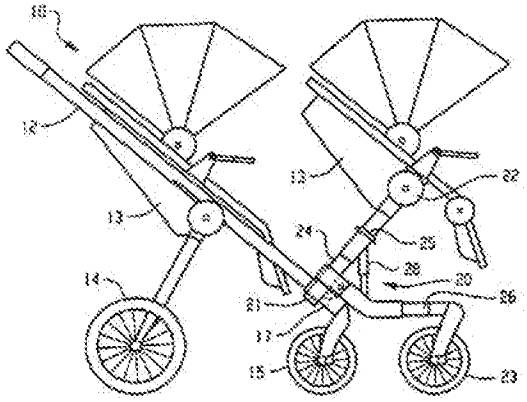
(54)发明名称

用于手推童车的座椅附接件

(57)摘要

本发明涉及一种用于手推童车、单人手推童车及双人手推童车的座椅附接件。此座椅附接件可用来将单人手推童车以可逆方式转换成双人手推童车。更具体来说，所述座椅附接件的版本涉及一种用于手推童车的座椅附接件，其能够支撑例如但不限于手推童车座椅，婴儿座椅、摇篮，婴儿车、汽车座椅或婴儿吊篮等的座椅。可将所述座椅支撑在所述手推童车的永久座椅前部。



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1. 一种用于手推童车的座椅附接件，其包括：

附接框架部件，其包括能够连接到手推童车框架的连接器部分；及

座椅支撑元件，其能够支撑座椅。

2. 根据权利要求 1 所述的座椅附接件，其包括：

车轮。

3. 根据权利要求 2 所述的用于手推童车的座椅附接件，其进一步包括将所述车轮连接到所述附接框架部件的车轮支撑框架。

4. 根据权利要求 3 所述的用于手推童车的座椅附接件，其中所述车轮支撑框架以枢转方式连接到所述附接框架部件。

5. 根据权利要求 4 所述的用于手推童车的座椅附接件，其中所述车轮支撑框架以枢转方式连接于接近所述附接框架部件的中间处。

6. 根据权利要求 5 所述的用于手推童车的座椅附接件，其进一步包括折叠机构。

7. 根据权利要求 6 所述的用于手推童车的座椅附接件，其中所述折叠机构包括以滑动方式连接到所述附接框架部件的滑动连接器以及具有连接到滑动部件的第一端及连接到所述车轮支撑框架的第二端的斜撑。

8. 根据权利要求 4 所述的用于手推童车的座椅附接件，其中所述车轮支撑框架能够从第一位置枢转到第二位置。

9. 根据权利要求 8 所述的用于手推童车的座椅附接件，其中所述第一位置为锁定及使用中位置且所述第二位置为解锁及折叠位置。

10. 根据权利要求 1 所述的用于手推童车的座椅附接件，其中所述座椅为婴儿座椅、汽车座椅、手推童车座椅、摇篮或婴儿车。

11. 根据权利要求 1 所述的用于手推童车的座椅附接件，其中所述附接框架部件具有第一端及第二端。

12. 根据权利要求 11 所述的用于手推童车的座椅附接件，其中所述第一端能够连接到手推童车框架。

13. 根据权利要求 12 所述的用于手推童车的座椅附接件，其中所述第二端连接到座椅附接部件。

14. 根据权利要求 1 所述的用于手推童车的座椅附接件，其中所述座椅支撑元件能够将座椅支撑在前向或后向位置中。

15. 根据权利要求 1 所述的用于手推童车的座椅附接件，其进一步包括手推童车座椅，其中所述座椅支撑元件能够将所述手推童车座椅支撑在前向或后向位置中。

16. 一种双人手推童车，其包括：

手推童车框架，其包括车轮、框架、第一座椅及连接到所述框架的附接框架部件；

座椅附接件，其包括车轮、第二座椅及能够连接到所述附接框架部件的连接器部分。

17. 根据权利要求 12 所述的双人手推童车，其中所述连接器部分能够以可释放方式连接到所述附接框架部件。

18. 根据权利要求 12 所述的双人手推童车，其中所述第二座椅以可释放方式连接到座椅支撑元件。

19. 根据权利要求 18 所述的双人手推童车，其中所述座椅支撑元件能够将所述第二座

椅支撑在前向或后向位置中。

20. 一种双人手推童车，其包括：

第一座椅附接件，其能够以可拆卸方式支撑儿童座椅；及

第二座椅附接件，其能够支撑儿童座椅。

21. 根据权利要求 20 所述的双人手推童车，其中每一座椅附接件包括两个座椅连接器部分。

22. 根据权利要求 20 所述的双人手推童车，其中所述儿童座椅为手推童车座椅、婴儿吊篮、摇篮、婴儿车或汽车座椅中的一者。

23. 根据权利要求 20 所述的双人手推童车，其包括框架，其中所述框架包括把手部分、前车轮支撑部分及后车轮支撑部分。

24. 根据权利要求 23 所述的双人手推童车，其中第一座椅附接件邻近于所述前车轮支撑部分。

25. 根据权利要求 24 所述的双人手推童车，其中所述第一座椅附接件位于连接到所述车轮支撑部分的至少一个前车轮上面。

26. 根据权利要求 25 所述的双人手推童车，其中所述第二座椅附接件邻近于所述把手部分。

27. 根据权利要求 23 所述的双人手推童车，其进一步包括连接所述把手部分、所述前车轮支撑部分及所述后车轮支撑部分的折叠机构。

28. 一种手推童车，其包括：

框架；

至少一个前车轮；

至少一个后车轮；

手推童车座椅；及

座椅附接部分，其能够将第二座椅支撑在所述手推童车座椅的前部。

29. 根据权利要求 28 所述的手推童车，其中所述座椅附接部分包括两个座椅连接器。

30. 根据权利要求 29 所述的手推童车，其中所述座椅附接部分以可拆卸方式连接到所述框架。

31. 根据权利要求 30 所述的手推童车，其中所述座椅附接部分包括两个部分，每一部分包括一个座椅连接器。

32. 根据权利要求 30 所述的手推童车，其中所述框架包括用于将所述座椅附接部分以可拆卸方式连接到所述框架的套筒。

33. 根据权利要求 28 所述的手推童车，其中所述第二座椅为选自手推童车座椅、幼儿吊篮、摇篮、婴儿车或汽车座椅的一个座椅。

34. 根据权利要求 33 所述的手推童车，其中所述第二座椅与所述座椅附接部分成整体。

用于手推童车的座椅附接件

技术领域

[0001] 本发明针对一种用于手推童车、单人手推童车及双人手推童车的座椅附接件。此座椅附接件可用来将单人手推童车转换成双人手推童车。更具体来说，本发明的实施例针对一种用于手推童车的座椅附接件，其能够支撑例如但不限于手推童车座椅、婴儿座椅、摇篮、婴儿车、汽车座椅或婴儿吊篮等的座椅。所述座椅附接件的实施例能够将单人手推童车以可逆方式转换成双人手推童车。

背景技术

[0002] 具有多个幼儿的父母可能很难在不同地方之间运输其孩子。儿童走路慢而容易分心，且因此可能在其父母正试图在有限量的时间内完成购物任务或运动一下时落后父母。作为响应，许多父母已购买双人手推童车，其允许父母或监护者同时推着两名儿童且因此允许其更高效地办杂事、散步或慢跑。如此，双人手推童车允许父母或监护者具有比其在仅单人手推童车的情况下将具有的更大的自由，尤其是在试图照管两个睡着的儿童时。

[0003] 虽然双人手推童车具有某些优点，但双人手推童车也具有缺点。双人手推童车大致大于单人手推童车，且因此较难以操纵通过门口及沿着商店的走道行进。通常，能够容纳两名儿童的益处大大地抵消了这些缺点。然而，当父母或监护者仅随身带一个孩子时，双人手推童车的益处便不能实现而缺点仍存在。

[0004] 因此，父母通常买两个或两个以上手推童车以在不同时间使用：单人手推童车用于其仅随身带一个孩子时的时间且双人手推童车用于其需要将容纳两个孩子的手推童车时的时间。此通常产生其自身的一组问题。必须储存多个手推童车且典型汽车的尾箱或运动型多用途车的后部中存在很少空间来用于折叠式双人手推童车及折叠式单人手推童车两者。

[0005] 手推童车制造商已尝试通过提供用于使第二个儿童站在单人手推童车的后部上的地方或为第二个儿童提供挂在单人手推童车的座椅下方且稍靠后的另一座位的附接件来解决此问题。此为儿童提供第二个座椅，但所述儿童被紧裹到前座椅的后部，此可能为不舒适的、减少座椅下方储存的容量且妨碍父母将手提袋挂在把手上。

[0006] 存在对可方便地转换成双人手推童车的单人手推童车的需要。还需要将单人手推童车转换成能够容纳两名儿童而不损失父母或监护者的方便性的全双人手推童车的转换套件。

发明内容

[0007] 手推童车通常为单人手推童车（具有一个座椅以用于运输一名儿童的手推童车）或还可为双人手推童车（具有两个座椅以用于运输两名儿童的手推童车）。本发明的实施例针对一种用于手推童车的座椅附接件，其包括：连接器部分，其能够直接连接到手推童车框架或连接到所述手推童车框架的附接框架部件；及座椅支撑元件，其能够支撑座椅。在某些实施例中，所述用于手推童车的附接件包括具有第一端及第二端的附接框架部件。所述

第一端可能够将所述座椅附接件连接到手推童车框架且所述第二端可能够连接到所述座椅支撑元件。所述座椅支撑元件因此能够将座椅支撑在手推童车上。在更特定实施例中，可将所述座椅支撑在前向或后向位置中。

[0008] 另一实施例包括手推童车及用于所述手推童车的座椅附接件，其中所述手推童车包括连接到所述手推童车的框架的附接框架部件且所述用于手推童车的座椅附接件包括连接器部分。所述附接框架部件及所述连接器部分包括能够牢固地连接在一起的组件。在某些实施例中，所述附接框架部件及所述连接器部分包括能够牢固地且以可释放方式连接在一起的组件。以此方式，所述座椅附接件可附接到所述手推童车，且如上文所界定的座椅可连接到所述座椅附接件，因此将单人手推童车以可逆方式转换成双人手推童车。

[0009] 在另一实施例中，所述用于手推童车的座椅附接件进一步包括至少一个车轮。所述车轮可通过车轮支撑框架连接到所述座椅附接件，所述车轮支撑框架可刚性地附接到或可以枢转方式附接到所述座椅附接件。所述车轮支撑框架可连接到座椅附接件的任一区段，优选地所述车轮支撑框架以枢转方式连接到所述座椅附接件的后部部分在邻近于连接器部分的区域中或连接于接近附接部分的中间处。

[0010] 所述用于手推童车的座椅附接件的实施例可进一步包括折叠机构。所述折叠机构可包括以滑动方式连接到所述附接部分的滑动部件以及具有连接到所述滑动部件的第一端及连接到所述车轮支撑框架的第二端的折叠框架部件或斜撑。所述折叠机构允许所述车轮支撑框架从第一位置（使用中位置）枢转到第二位置（折叠位置）。所述用于手推童车的附接件还可包括锁定机构，其在使用中位置中将所述附接件紧固到手推童车且在处于折叠位置中时将所述手推童车解锁以允许所述附接件连接到所述手推童车或从所述手推童车拆卸。所述锁定机构可为附接到所述车轮支撑框架的小突出部，其啮合所述手推童车或所述手推童车附接部分中的对应孔口以将所述附接件紧固到所述手推童车。在折叠位置中，所述突出部不啮合在所述孔口中。

[0011] 另一方面针对一种双人手推童车。所述双人手推童车可包括框架，其中所述框架包括把手部分、前车轮支撑部分、后车轮支撑部分及折叠机构。所述双人手推童车的实施例包括手推童车框架，所述手推童车框架包括车轮、所述框架、第一座椅及连接到所述框架的连接器部分。所述双人手推童车可进一步包括座椅附接框架，所述座椅附接框架包括车轮、第二座椅及能够连接到手推童车框架的连接器部分的第二附接部分。所述第二附接部分可以可释放方式连接到所述连接器部分。此外，所述第二座椅可以可释放方式连接到所述座椅附接框架且能够将所述第二座椅支撑在前向或后向位置中。

[0012] 所述双人手推童车的另一实施例包括能够以可释放方式支撑第一儿童座椅的第一座椅附接件及能够以可释放方式支撑第二儿童座椅的第二座椅附接件。所述座椅附接件可包括用于将座椅支撑在两个侧上的两个座椅连接器部分。

[0013] 所述双人手推童车的又一实施例包括邻近于前车轮支撑部分的至少一个第一座椅附接件及邻近于每一折叠机构及 / 或把手部分的第二座椅附接件。所述第一座椅附接件可位于连接到所述车轮支撑部分的至少一个前车轮上面。

[0014] 所述手推童车的又一实施例包括：框架；至少一个前车轮；至少一个后车轮；第一手推童车座椅，其具有永久地附接到所述框架的至少一个第一附接部分；及至少一个以可释放方式连接的第二座椅附接部分，其能够将第二座椅支撑在所述第一手推童车座椅的前

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部。如同在其它实施例中一样，所述座椅附接件可包括两个座椅连接器。任一个或两个座椅附接部分可为具有两个座椅连接器的单个部分或各自包括一座椅连接器的两个单独件。

[0015] 在以上实施例中的任一者中，手推童车、双人手推童车或附接件可包括以下特征中的一者或一者以上，用于以可拆卸方式接纳所述附接部分的套筒。所述座椅附接部分可包括突出部，其具有与所述套筒的互补形状以用于插入到所述套筒中。此外，所述第二座椅可与所述座椅附接件成整体。

[0016] 在各种实施例中呈现了手推童车、双人手推童车及附接件的方面，然而，所属领域的技术人员将理解各种实施例的组件的各种变化形式及可互换性，其打算包含在本发明的范围中。

附图说明

[0017] 图 1 展示单人手推童车的实施例；

[0018] 图 2 展示用以将单人手推童车转换成双人手推童车的座椅附接件的实施例；

[0019] 图 3 展示图 1 的单人手推童车附接到图 2 的座椅附接件的组合；

[0020] 图 4 展示能够将汽车座椅支撑在图 2 的附接件上的座椅附接件的实施例；

[0021] 图 5 展示图 1 的单人手推童车附接到呈三轮车样的骑乘装置形式的附接件的实施例的组合；且

[0022] 图 6A 展示用于将附件支撑在手推童车上的附件附接件，图 6B 展示用于附接到图 6A 的附件附接件的手提袋或手提包。

[0023] 图 7 展示用于支撑包括一个车轮的座椅的附接件。

[0024] 图 8 展示能够以可逆方式从单人手推童车转换成双人手推童车的手推童车的实施例，其包括不包括车轮的附接部分。

[0025] 图 9A、9B、9C、9D、9E 及 9F 展示图 8 中所示的手推童车的实施例的各种配置。

具体实施方式

[0026] 本发明涉及一种用于手推童车的附件、附接件或转换套件（下文中称“座椅附接件”）。如上文所论述，父母或监护者可能发现自己处于其中在一手推童车中运输两个儿童会更方便的情形中，但同时发现具有单人手推童车及双人手推童车两者是不方便的。所述座椅附接件的实施例解决此问题。在一个方面中，所述用于手推童车的座椅附接件的实施例能够将单人手推童车转换成双人手推童车。举例来说，所述座椅附接件可支撑例如但不限于手推童车座椅，婴儿座椅、摇篮、婴儿车、婴儿吊篮或汽车座椅的座椅。因此，父母或监护者不需要单人手推童车及双人手推童车两者。经配置以接纳用于将单人手推童车转换成双人手推童车的座椅附接件的手推童车为使用者提供方便性。可通过将所述座椅附接件附接到单人手推童车且接着附接第二座椅来将所述单人手推童车连接成双人手推童车。如此，所述用于将单人手推童车转换成双人手推童车的座椅附接件的实施例包括能够连接到手推童车框架的至少一个连接器部分及能够支撑座椅的座椅支撑元件。所述座椅附接件可任选地包括用于额外支撑及稳定性的至少一个车轮，然而，为更方便起见，所述附接件的实施例不包含车轮。在某些实施例中，车轮可使双人手推童车稳定，但在所述附接件的其它实施例中，所述车轮可能并非合意的或必需的。举例来说，所述附接件的额外实施例包括手推

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车样、四车轮货车样、三轮车样的附接件或可连接到手推童车的其它骑乘玩具。三轮车样的附接件将允许儿童在手推童车的前部骑乘或被推着。

[0027] 图 1 中展示单人手推童车 10 的实施例的侧视图。注意，图 1 仅展示单人手推童车 10 的一侧，然而，大多数组件包含位于所述单人手推童车的另一侧上但未展示于图 1 中的互补组件。单人手推童车 10 包括支撑座椅 13 的框架 12。框架 12 可任选地包含至少一个（优选地为两个）折叠机构 16，其允许将手推童车 10 折叠成用于储存或运输手推童车 10 的更方便大小。

[0028] 在此实施例中，将座椅 13 展示为典型的手推童车座椅，然而，其它类型的座椅可用于单人手推童车中。The 座椅 13 可永久地附加到框架 12 或以可释放方式连接使得其能够被拆卸并用不同座椅来替代。如本文中所使用，“以可释放方式连接”或“以可释放方式附接”意指所述连接并非永久连接且所述连接能够由手推童车的使用者连接及断开而不需要特殊工具或特殊技能。可释放连接包含（但不限于）钮扣、搭扣件、摩擦配件、干涉配合、螺纹连接、锁定连接片、键式连接、其它扣件等。在图 1 的手推童车 10 上，框架 12 支撑在一对后车轮 14 及一对前车轮 15 上。在此实施例中，后车轮 14 为固定的且不以所述框架为轴而旋转或枢转。单人手推童车 10 上的所述对前车轮 15 枢转以使得使单人手推童车 10 转动更容易且更方便。虽然在某些手推童车中枢转车轮可为优选的，但具有固定非枢转车轮的手推童车也为常见的。应注意，单人手推童车不需要成对的前车轮或后车轮且可用单个车轮来替代前对车轮 15 或后对车轮 14。按常规，许多单人手推童车（包含伞式手推童车、慢跑手推童车、全地形手推童车以及其它手推童车）可仅包含一个前车轮。本发明的座椅附接件的实施例可能够将任何样式的手推童车转换成双人手推童车，包含具有一个或两个前车轮的手推童车。

[0029] 手推童车 10 的实施例包括两个附接框架部件 17。连接器部分优选地位于手推童车的前部上以允许座椅附接件及座椅连接到手推童车 10 的前部。附接框架部件 17 允许座椅附接件（例如用于将单人手推童车 10 转换成如图 3 中所示的双人手推童车的座椅附接件）连接到手推童车。图 3 中仅展示一个座椅附接件，手推童车 10 将使用如图 3 中所展示的两个座椅附接件或包括两个座椅支撑元件的一个座椅附接件。手推童车 10 的实施例具有左侧及右侧附接框架部件 17。手推童车 10 的座椅附接件的实施例将包括能够在附接框架部件 17 处连接到手推童车框架的对应连接器部分。虽然关于单人手推童车描述了用于手推童车的座椅附接件，但所述附接件可类似地附接到双人手推童车。因此，所述座椅附接件的实施例可用于将双人手推童车转换成三人手推童车（如果需要的话）。

[0030] 图 2 中展示本发明的座椅附接件 20 的实施例。图 2 的座椅附接件呈解锁及折叠配置。座椅附接件 20 包括：能够连接到附接框架部件 17 的一对连接器部分 21；能够支撑座椅的两个座椅附接元件 22；及车轮 23。在此实施例中，所述连接器部分连接到座椅附接件 20 的后部，从而允许座椅附接件 20 连接到手推童车（例如图 1 中所示的手推童车 10）的前部。所述座椅附接件的其它实施例可包含一个以上车轮、一个连接器部分、一个座椅支撑元件或这些元件的组合。举例来说，在具有一个车轮的手推童车的实施例中，所述附接框架部件可位于前车轮的轮叉上。

[0031] 座椅附接件 20 包括将附接件 20 的车轮 23 连接到附接框架部件 24 的车轮支撑框架 26。每一附接框架部件 24 具有第一及第二端。所述第一端能够连接到手推童车框架且

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所述第二端连接到座椅支撑元件 22。座椅附接件 20 的实施例包括以枢转方式连接到两个附接框架部件 24 的车轮支撑框架 26。车轮支撑框架 26 或附接框架 24 可横跨手推童车在两个附接框架部件 17 之间的宽度。枢转连接 27 允许折叠并方便地储存或运输座椅附接件，但并非是本发明所必需的。所述枢转连接为任选的且提供更大方便性，然而，附接件的实施例可包括以可释放方式连接的车轮支撑框架或刚性框架，其可经并入以产生具有更大强度以供在其中（例如）可需要更强座椅附接件的情形中（例如在全地形或慢跑手推童车的情况下）使用的座椅附接件。可在附接框架上的任一点处连接所述车轮支撑框架，优选地在接近连接器部分 21 处或在接近附接框架 24 的中间处连接所述车轮支撑框架。

[0032] 举例来说，不具有车轮的座椅附接件的实施例可包含连接器部分 21 或附接框架部件 24 及座椅附接部件 22。在此实施例中，将不需要枢转连接 27、车轮支撑框架 26、滑动连接器 25 或车轮 23。

[0033] 座椅附接件 20 包括折叠机构，所述折叠机构包括连接到斜撑 28 的第一端的滑动连接器 25。斜撑 28 的第二端以枢转方式连接到车轮支撑框架 26。在此实施例中，可使滑动连接器 25 在附接框架部件 24 上于第一位置与第二位置之间移动。随着滑动连接器 25 移动，斜撑 28 将车轮支撑框架 26 从使用中位置推到储存位置。所述储存位置较紧凑，如图 2 中所示。另外，座椅附接件 20 的实施例包括能够将座椅附接件 20 紧固到手推童车（例如图 1 中所示的手推童车 10）的锁定机构 29。通过将滑动连接器 25 移动到其中使车轮支撑框架 26 及车轮 23 延展的使用中位置来啮合锁定机构 29。在用于手推童车 10 的座椅附接件 20 的实施例中，座椅附接件 20 的车轮以枢转方式连接到所述连接器部分，且当所述车轮处于使用中位置时，可释放连接被锁定，且当将车轮 23 移动到储存位置时，可释放连接被解锁，从而允许从手推童车 10 拆卸座椅附接件 20。可储存座椅附接件 20 且手推童车 10 可方便地用作单人手推童车。按设计，座椅附接件 20 可重新连接到手推童车 10 以用作双人手推童车。在本发明的任一实施例中，可将座椅附接部分在手推童车框架上紧固到适当位置中且锁定机构可与具有或不具有车轮的实施例一起使用。所述座椅附接件或手推童车框架可包括用于将手推童车与座椅附接件紧固在一起的锁定机构。所述锁定机构可为能够在使用期间将各组件紧固在一起的任何机构且可为（例如）摩擦锁定装置、螺纹连接、孔中栓塞（peg in a hole）或干涉锁定装置，例如孔或槽中销子。在图 2 中所示的实施例 20 中，在使附接件 20 从展开位置移动到折叠位置时，锁定机构 29 随车轮支撑框架 26 枢转。锁定机构 29 可滑动到图 1 中所示的手推童车 10 的附接框架部件中的孔或凹口中。如此，可通过将附接件 20 的附接部分 21 定位于手推童车 10 的附接部分 17 的槽 18 中而将附接件 20 附接到手推童车 10。可将滑动连接器 25 移动到使用中位置，移动车轮支撑框架且将锁定机构 29 定位到手推童车 10 的锁定槽 19 中。

[0034] 座椅附接件 20 的实施例的连接器部分 21 具有圆柱形形状。可将连接器部分 21 插入到图 1 的手推童车 10 的附接框架部件 17 的圆柱形凹部 18 中以紧固所述座椅附接件并将单人手推童车转换成双人手推童车，如图 3 中所示。座椅附接件的其它实施例可包含任何类型的连接器部分。所述连接器部分可具有实心或管状构造且可为任何横截面形状，举例来说，包含（但不限于）圆形、多边形、正方形、矩形及三角形。可利用其它附接机构将所述座椅附接件连接到手推童车，例如（但不限于）U 形托架、U 形螺栓、管夹、O 形托架、螺丝、螺栓或其它夹紧或附接构件。手推童车的附接框架部件具有互补及协作形状，其允许将

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连接器部分紧固到手推童车的附接部分。

[0035] 在图 3 中，展示图 2 的座椅附接件 20 连接到图 1 的单人手推童车 10，从而形成双人手推童车。将双人手推童车配置展示为两个手推童车座椅 13 呈直列式配置，但还可将其它配置（例如手推童车座椅及摇篮或婴儿车）支撑在所述双人手推童车上。此外，座椅附接件的座椅支撑元件可能够将前手推童车座椅支撑在前向或后向位置中。

[0036] 手推童车 10 的实施例仅作为一种类型的手推童车的实例而展示，所述手推童车的框架可为许多可能配置中的任一者。本发明的附件的实施例可经配置以用在手推童车的任何此种配置上。举例来说，婴儿手推童车的不同实施例可不包含两个前车轮、可不包含折叠机构或可只包含仅一个折叠机构。另外，婴儿手推童车可包含婴儿手推童车 10 中不包含的额外特征。举例来说，所述手推童车可任选地包括固定前车轮、完全不同的框架配置或位于手推童车的座椅底下的储存篮。

[0037] 座椅支撑部件可为能够将座椅支撑在座椅附接件上的任何配置。图 4 中展示供与汽车座椅或其它婴儿座椅一起使用的座椅支撑部件的另一实施例。图 4 的座椅支撑部件 40 的实施例包括主要支撑件 41。主要支撑件 41 包括用于支撑座椅的中心部分的支架。座椅的另一部分可搁靠在支撑杆 42 上。在此实施例中，支撑杆 42 可经调整以容纳不同形状及大小的座椅。支撑杆 42 可在孔口 43 内滑动且当处于支撑某一座椅的所要位置中时被锁定于适当位置中。因此，座椅被支撑在两个主要支撑件 41 及支撑杆 42 上。可通过将带 44 及 45 环绕在座椅上并借助带扣或其它紧固构件将所述带锁定于此位置中来进一步将所述座椅紧固在座椅附接部件 40 中。

[0038] 图 5 中展示用于手推童车的座椅附接件的另一实施例。组合 50 包括手推童车 10 及座椅附接件 51。座椅附接件 51 为三轮车样的附接件，其包括连接器部分 52、具有座椅支撑元件 56、座椅 57 及车轮 55 的框架 53。所述三轮车样的附接件可附接到手推童车 10 以允许在手推童车 10 中推着一名儿童而一名儿童骑乘座椅附接件 51。举例来说，所述座椅附接件还可为其它形状，例如汽车、卡车或动物形状。

[0039] 图 5 的手推童车 10 的实施例包括额外附件附接部分 58。附件附接部分 58 附接到手推童车 10 的框架部件。附件附接部分 58 的实施例展示于图 6A 上。此实施例特别适用于将如图 6B 中所示的手提袋或手提包 64 附接到手推童车 10。

[0040] 当使用手推童车时，父母或监护者通常携带其它物项，例如手提包、食品杂货手提袋、蜂窝电话、尿布、清洁湿巾或者其它个人或婴儿相关物项。一些手推童车具有用于放置此些物项的底部储存篮。然而，这些储存篮可能不方便接近或一些轻量手推童车不包含此些储存物。因此，手推童车的使用者可将手提包或购物手提袋挂在手推童车的把手上。此由于容易接近而为方便的，但把手上的手提袋的重量可导致手推童车不平衡且增加手推童车向后倾倒的趋势。挂在手推童车的把手上的沉重的手提袋可甚至在座椅上有儿童的情况下也导致手推童车向后倾斜。如果手推童车正面临上坡或不平坦的地形、正被向上推过路边或由幼小的儿童占用，那么问题会更糟。举例来说，可通过上文所描述的夹紧或附接方法中的任一者将附接部分附接到手推童车的框架。优选地，在接近手推童车 10 的重心处附接附件附接件 58 以避免产生手推童车的不平衡条件。图 6A 中展示附件附接件 58 的实施例。展示附件附接件 58 在接近折叠机构处连接到图 1 中的手推童车 10 的手推童车框架 12。所述附件的实施例包括用于连接到手推童车框架的第一端 61 及用于以可释放方式连接到所

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述附件的第二端 62。第一端 61 包括可连接到手推童车 10 的框架 12 的孔口 64。在某些实施例中，孔口 64 在一角度上～使得附件附接部分 58 的轴线为大致水平的。附件附接件 58 可任选地包括用于将附件附接到附件附接件 58 的肋状件。如图 6A 中所示的肋状件可用任何其它锁定元件或紧固构件替换，包含（例如）摩擦配件、旋紧式配件、干涉配件。

[0041] 图 6B 中展示用于附接到附件附接件 58 的附件的一个实例。所述附件为手提袋或手提包 64。所述附件包含能够紧固到附件附接件 58 上的附接部分 62 的附接部分 65。可通过将附接部分 65 紧固到附接部分 62 而将手提袋或手提包 64 紧固在手推童车 10 上。如所展示，附接部分 65 在附件附接件 58 的圆柱形附接部分 62 上滑动。附接部分 65 可包含接纳将手提袋或手提包 64 紧固到手推童车 10 的肋状件 63 的内部环形凹部。因此，如从侧面所观看，手提袋或手提包 64 被紧固到手推童车 10 在所述手推童车的中心部分中。因此，手提袋或手提包 64 被方便地紧固到手推童车 10，同时不引起手推童车 10 的不平衡条件。

[0042] 图 8 中展示手推童车 80 的另一实施例。可在附接件上不添加另一车轮的情况下容易地将手推童车 80 从包括一个座椅的单人手推童车转换成包括两个座椅的双人手推童车。手推童车 80 包括能够支撑手推童车座椅 86 的框架 81。在此实施例中，框架 81 包括前车轮支撑部分 81a、后车轮支撑部分 81b 及把手部分 81c。手推童车 80 的实施例的框架 81 进一步包括连接前车轮支撑部分 81a、后车轮支撑部分 81b 及把手部分 81c 的折叠机构 81d。折叠机构 81d 允许将手推童车折叠成较紧凑大小以便储存或运输。图 8A 展示呈折叠配置的手推童车 80。

[0043] 手推童车 80 进一步包括至少一个前车轮 82（可在图 8A 中看到手推童车 80 的两个前车轮 82）、至少一个后车轮 83（可在图 8A 中看到手推童车 80 的两个后车轮 83）、手推童车座椅 86 及能够将第二个座椅支撑在所述手推童车座椅的前部的座椅支撑部分 84。手推童车 80 可进一步包括储存篮 87。座椅支撑部分可具有能够牢固地将座椅支撑在手推童车上的任何设计。举例来说，座椅支撑部分 84 可类似于图 2 中所示的座椅支撑部分 20，但不具有车轮 23、斜撑 28、枢转连接 27 及 / 或车轮支撑框架 26。优选地，所述座椅支撑部分能够支撑座椅使得处于所述座椅中的儿童大致高于手推童车的框架。此提供对座椅的更容易接近、不阻挡对储存篮的接近、允许座椅的更通用配置、允许将更多种的座椅附接到所述框架且允许父母或其它监护者更容易地监视并看到每一座椅中的儿童。

[0044] 手推童车 80 包括手推童车座椅 86。手推童车座椅 86 位于邻近于把手部分 81c 处。手推童车座椅 86 可以固定方式附接到或以可拆卸方式附接到框架 81。在其中手推童车座椅 86 以可拆卸方式附接到框架 81 的手推童车 80 的实施例中，手推童车座椅 86 可被拆卸及重新放置成后向配置（参见图 9A）、由座椅支撑元件 84 上的幼儿提篮 91 或汽车座椅替换（参见图 9C）或者用座椅支撑元件 84 上的婴儿车 92 替换（参见图 9D）。手推童车 80 的实施例可包括邻近于把手部分 81c 的第二座椅支撑元件 89。包括第二座椅支撑元件 89 的手推童车 80 允许座椅被容易地拆卸并重新配置成不同定向或用不同样式的座椅替换。

[0045] 手推童车 80 的实施例包括第一座椅支撑元件 84。座椅支撑元件 84 连接到手推童车 80 的前车轮支撑框架 81a。座椅支撑元件 84 邻近于框架 81 的前车轮支撑部分 81a。所述座椅支撑元件能够将第二手推童车座椅 85 支撑在手推童车座椅 86 的前部。此为手推童车 80 的使用者提供方便性及多用性。座椅支撑元件可以固定方式附接到或以可拆卸方式附接到前车轮支撑部分 81a。前座椅 85 可大致定位于前车轮上方，使得手推童车保持稳

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定。优选地，所述座椅应经定位使得手推童车的重心在前车轮与后车轮之间。如果不，那么可在附接件上放置额外车轮，如先前所描述。座椅支撑元件 84 包括座椅连接器 88。座椅连接器 88 可为多用途的通用连接器，其允许在座椅支撑元件 84 上更换不同座椅。举例来说，任何样式的座椅可经配置以连接到所述座椅连接器，例如（但不限于）手推童车座椅、婴儿座椅、摇篮、婴儿车、婴儿吊篮或汽车座椅。

[0046] 所述手推童车附接件的实施例包括连接器部分及座椅支撑元件。所述连接器部分能够将所述座椅附接件连接到框架。

[0047] 在图 8 中所示的实施例中，手推童车 80 包括第一手推童车座椅 86 及第二手推童车座椅 85。展示手推童车座椅 86 呈前向配置且展示第二手推童车座椅 85 呈后向配置。座椅支撑元件 84 能够将座椅支撑在连接到车轮支撑部分 81a 的前车轮 82 上面。优选地，前座椅大致位于前车轮上方且后座椅大致位于后车轮上方。

[0048] 虽然在图 8 的侧视图中无法看到，但所述手推童车的典型实施例将包括两个座椅连接器部分。一个座椅连接器部分将支撑座椅的每一侧。所述连接器部分可为一件式或多个部分。

[0049] 图 9A 到图 9F 展示对于本发明的手推童车可能有的各种配置。这些配置不应被视为手推童车的所有可用配置且所属领域的技术人员基于本说明书及图式集将认识到许多额外可能性。依据前文将了解，虽然本文已出于说明的目的描述了本发明的特定实施例，但可做出各种修改，此并不背离本发明的精神及范围。因此，本发明不受除所附权利要求书以外的限制。

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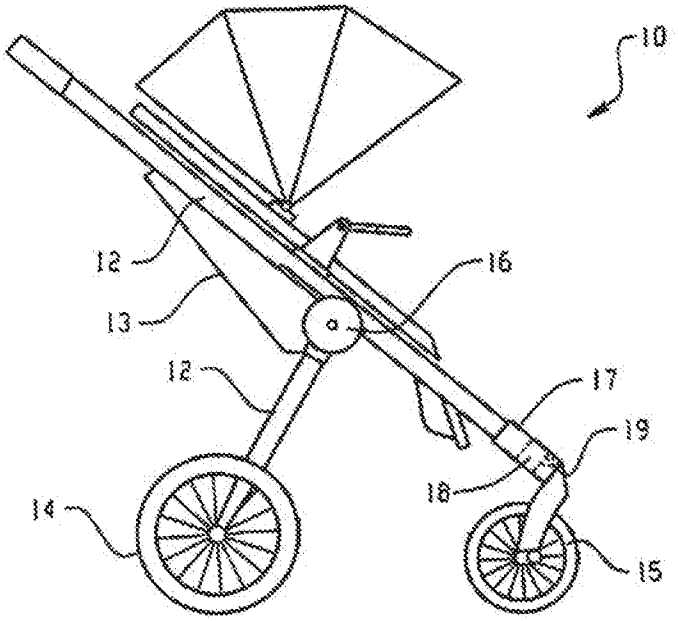

图 1

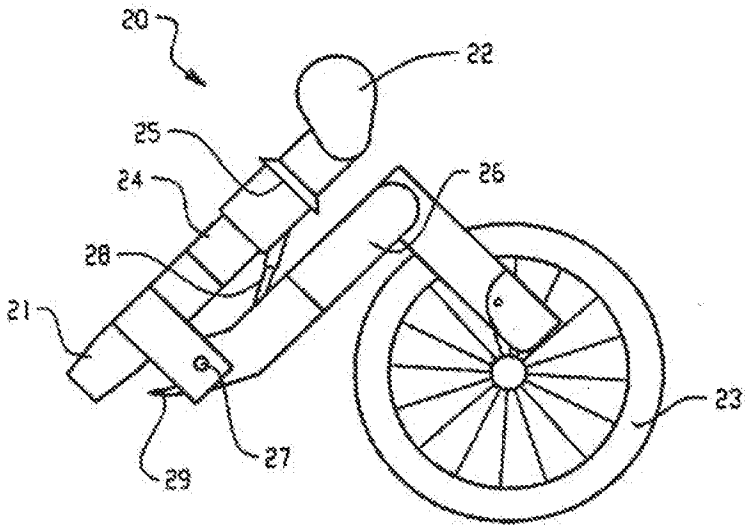

图 2

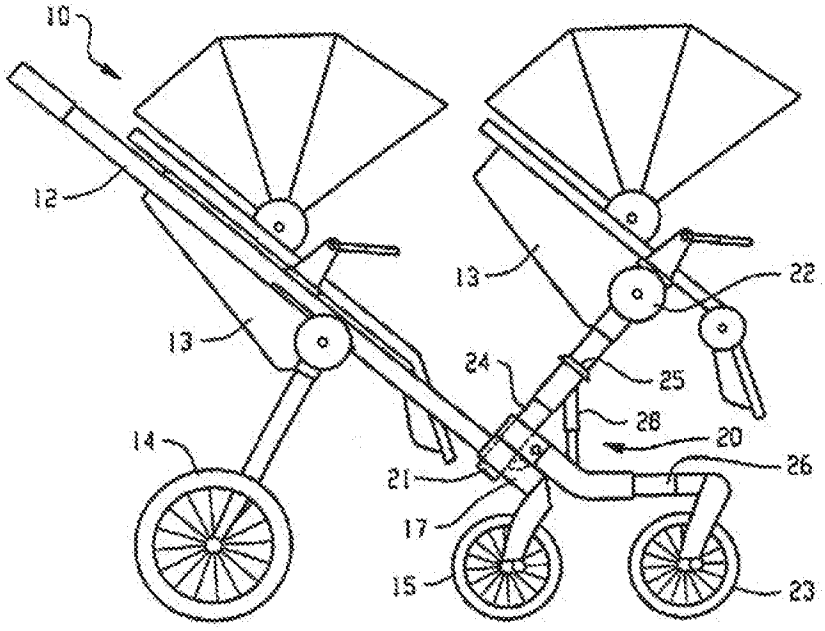

图 3

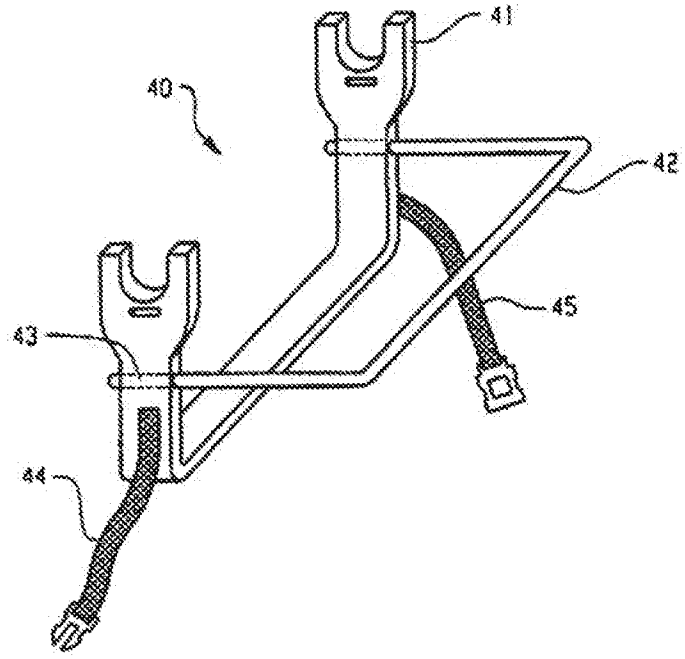

图 4

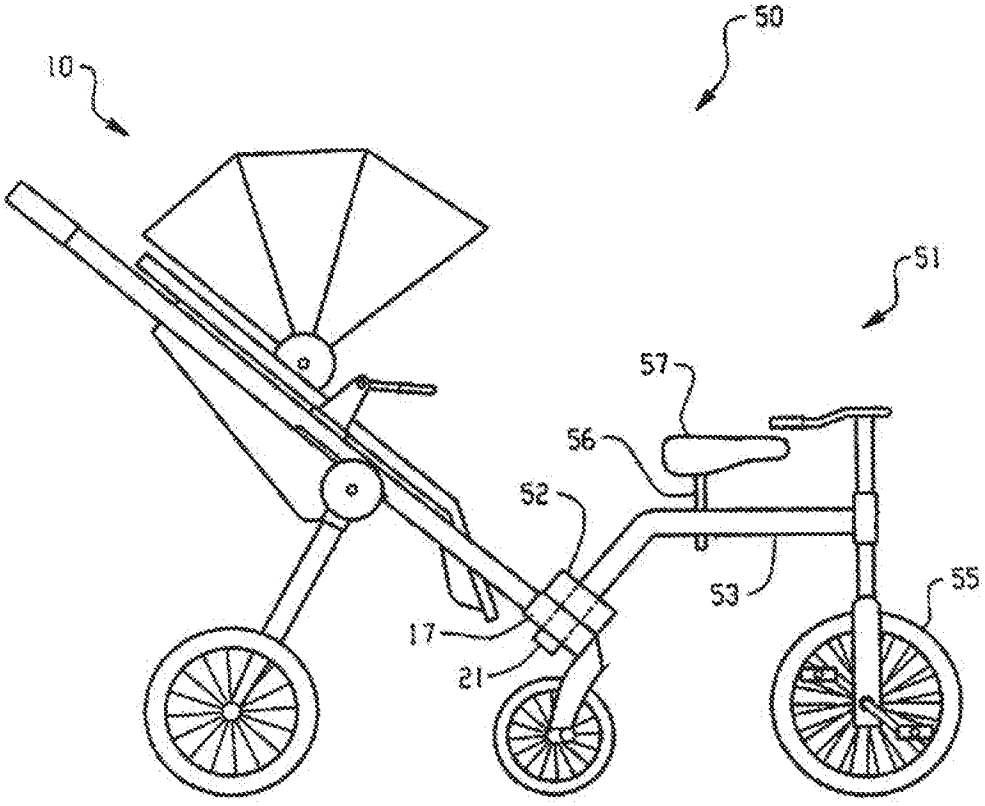

图 5

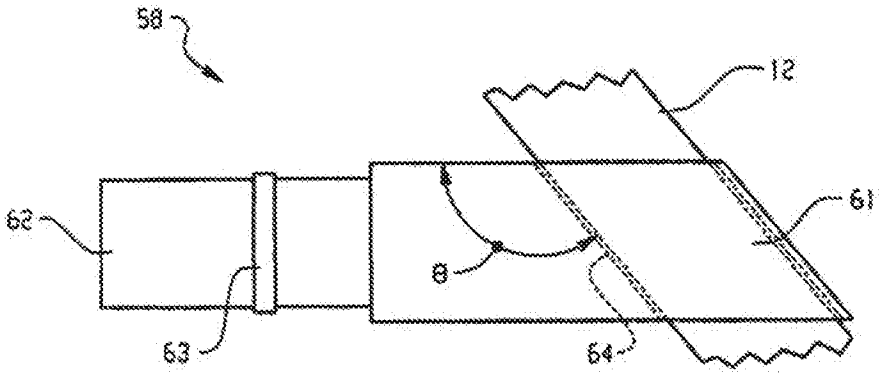

图 6A

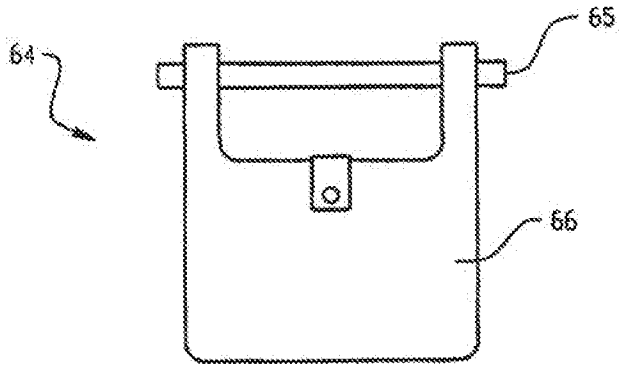

图 6B

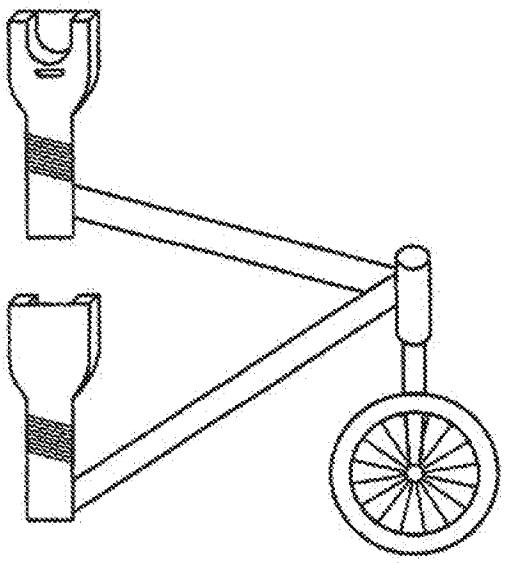

图 7

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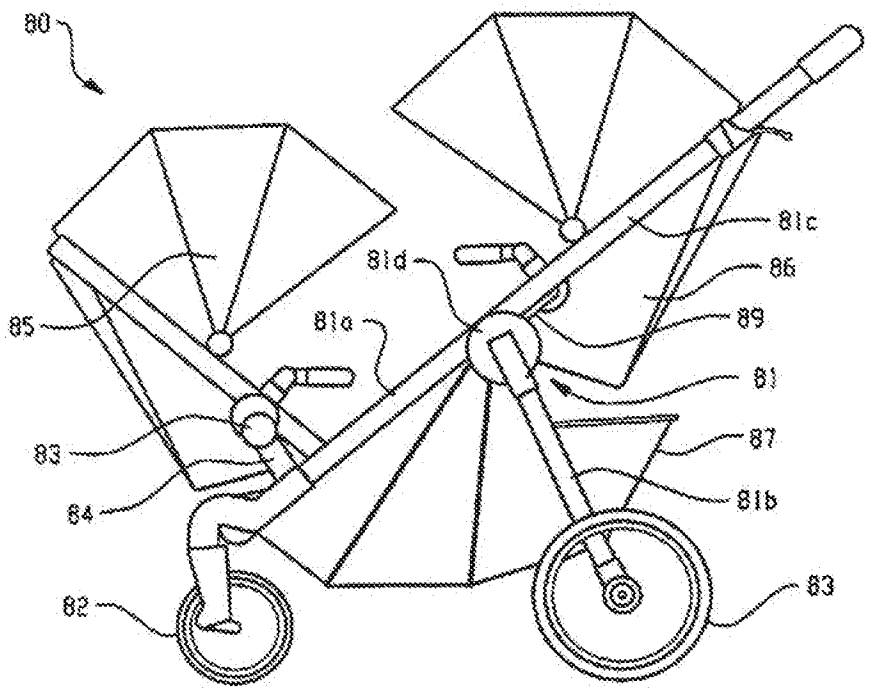
80
81c
81d
86
89
85
81a
81
87
83
84
81b
82
83

图 8

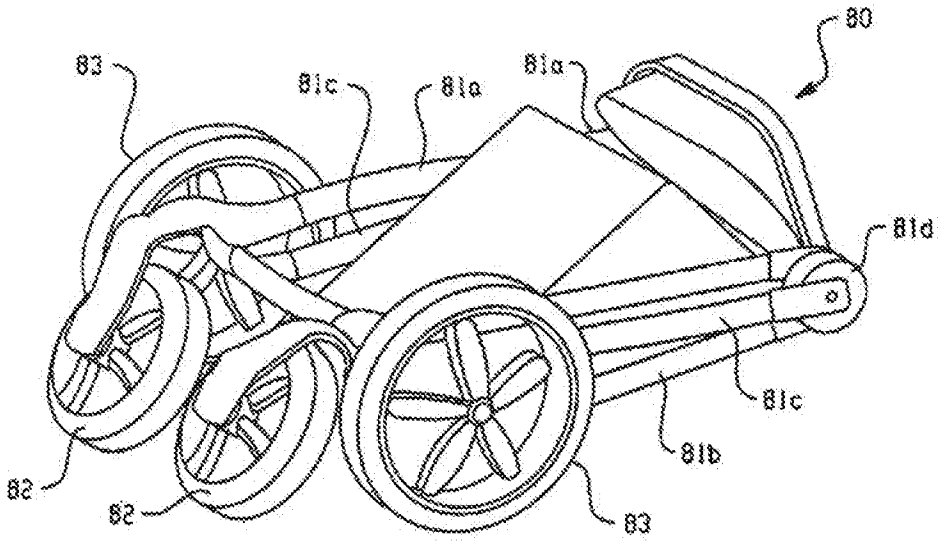
80
83
81c
81a
81a
81d
81c
81b
82
82
83

图 8A

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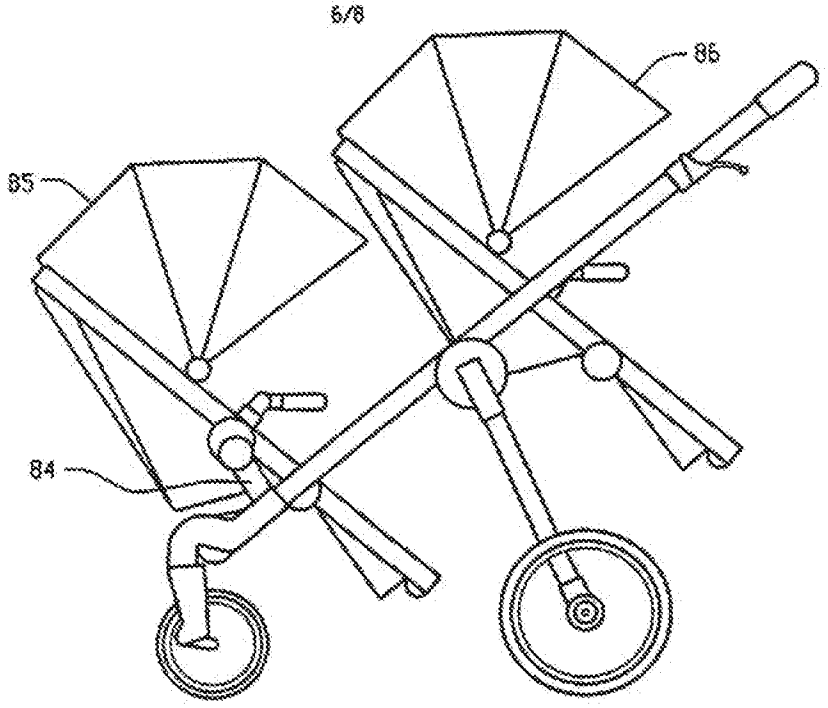

图 9A

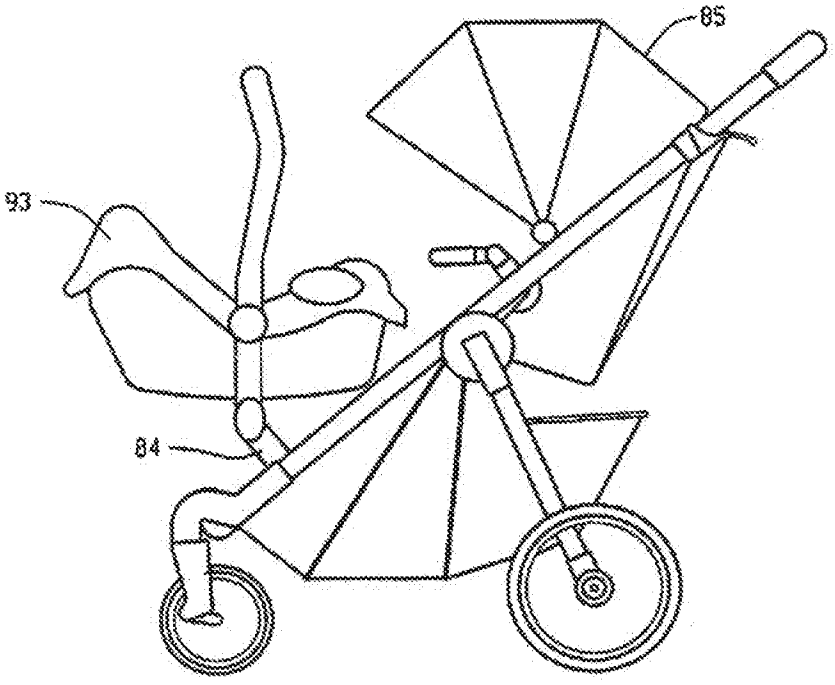

图 9B

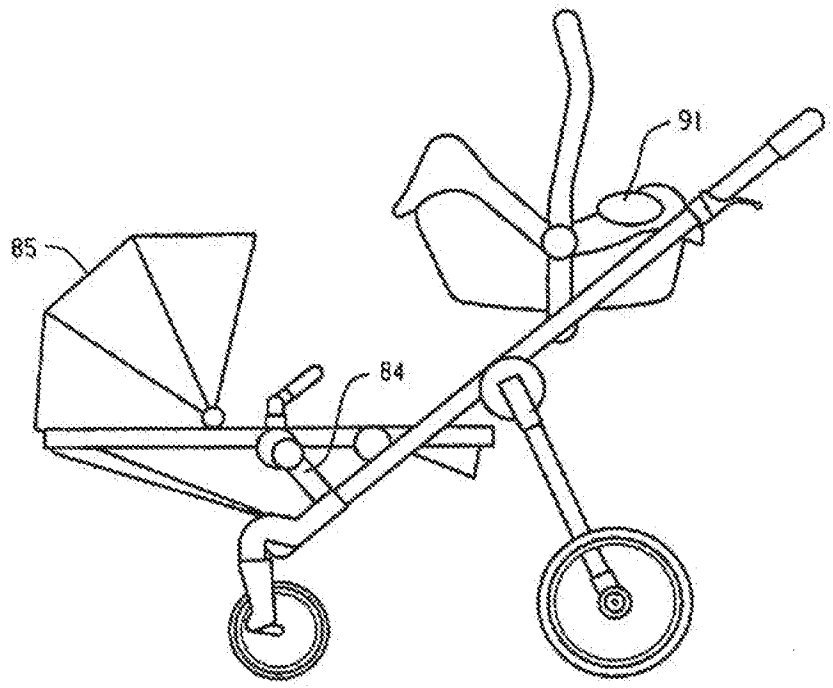

图 9C

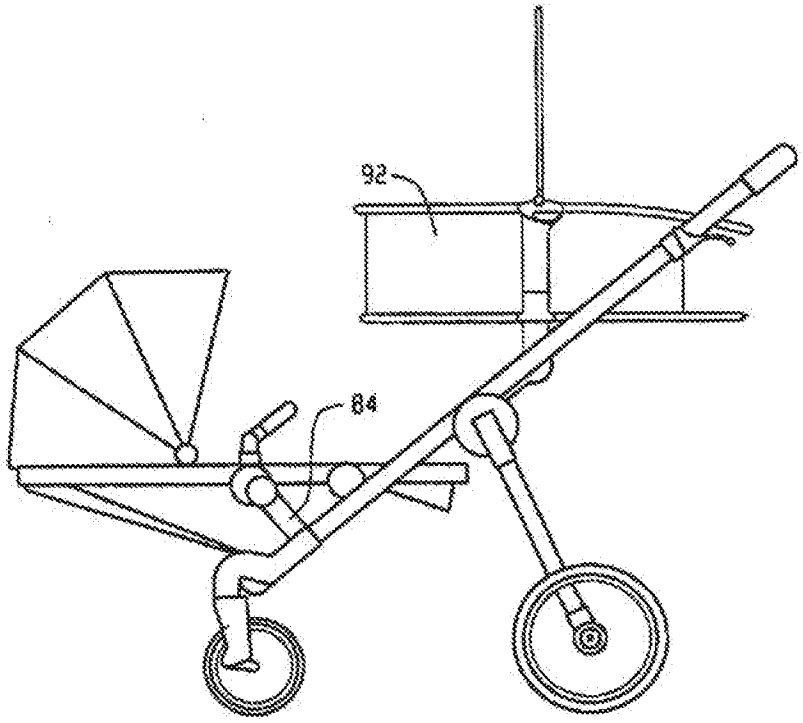

图 9D

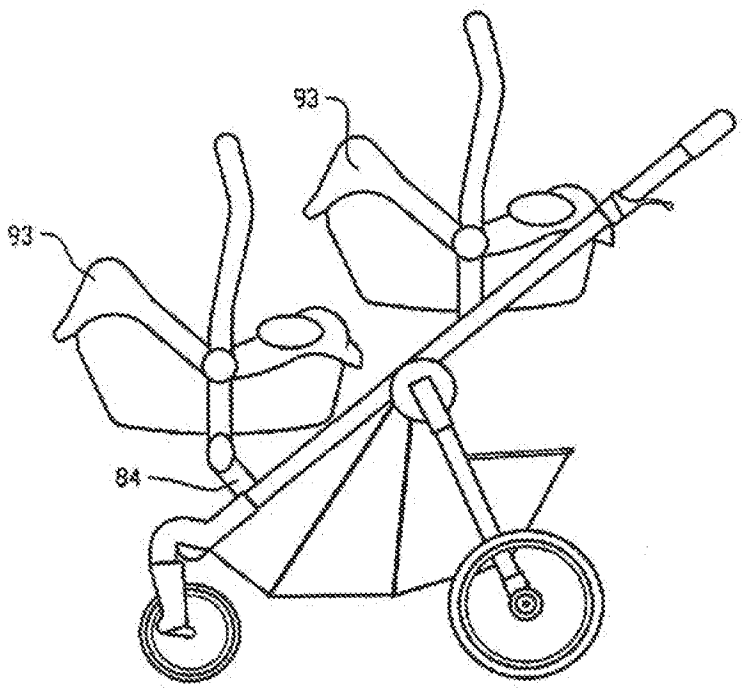

图 9E

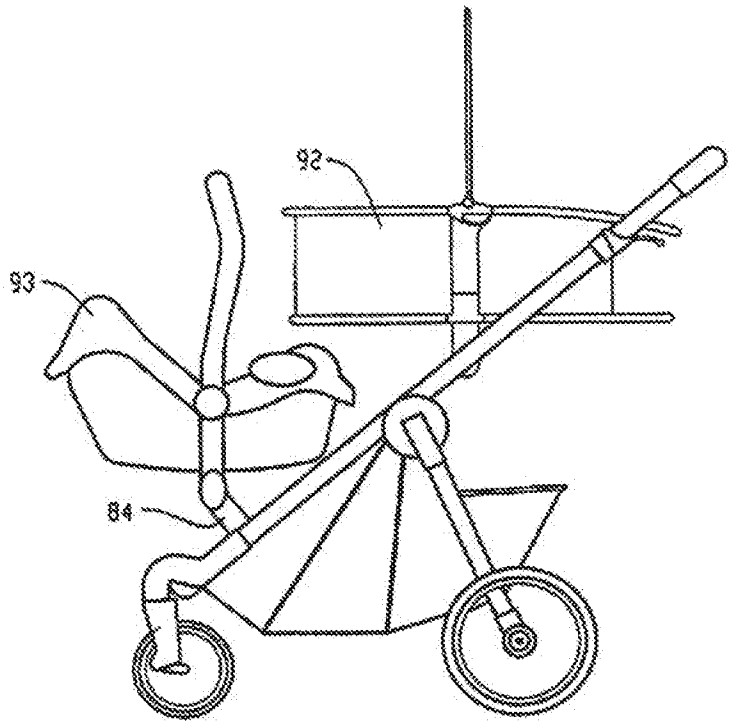

图 9F

Espacenet

Bibliographic data: CN103909960 (A) — 2014-07-09

Maneuverable strollers

Inventor(s):	ROLICKI PETER; IFTINCA LIVIU; THOMAS WES; BRETSCHGER TED ± (ROLICKI PETER, ; IFTINCA LIVIU, ; THOMAS WES, ; BRETSCHGER TED)
Applicant(s):	KOLCRAFT ENTPR INC ± (KOLCRAFT ENTERPRISES, INC)
Classification:	**- international:** ***B62B7/10*** **- cooperative:**
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Priority number (s):	US201361749728P 20130107 ; US201313828344 20130314
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Abstract of CN103909960 (A)

Maneuverable strollers are disclosed herein. An example stroller disclosed herein includes a frame having a front wheel and a rear wheel to support the frame. An intermediate wheel is positioned between the front wheel and the rear wheel. A carriage is coupled to the rear wheel, the intermediate wheel and the frame.

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(71)申请人 考可拉夫特公司
地址 美国伊利诺伊州

(72)发明人 P·罗利瓷基 L·伊夫廷卡
韦斯·托马斯 T·布雷斯奇格

(74)专利代理机构 北京三友知识产权代理有限公司 11127
代理人 王小东

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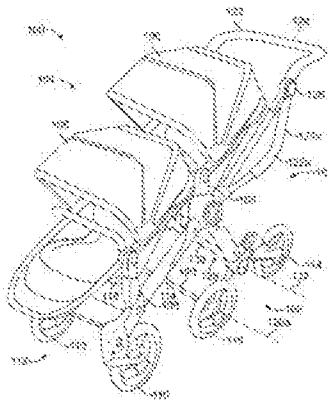
权利要求书2页 说明书10页 附图25页

(54)发明名称

容易操纵的婴儿车

(57)摘要

本文公开了一种容易操纵的婴儿车。在此公开的示例婴儿车包括框架，该框架具有前轮和后轮以支撑该框架、中间轮位于前轮和后轮之间、托架被连接至后轮、中间轮和框架。



CN 103909960 A

1. 一种婴儿车，该婴儿车包括：

框架；

用于支撑所述框架的前轮和后轮；

位于所述前轮和所述后轮之间的中间轮；以及

联接至所述后轮、所述中间轮和所述框架的托架。

2. 根据权利要求 1 所述的婴儿车，该婴儿车还包括在所述框架的第一侧面框架组件和第二侧面框架组件之间延伸的轮轴。

3. 根据权利要求 2 所述的婴儿车，其中，所述轮轴位于所述中间轮的旋转轴线与所述后轮的旋转轴线之间。

4. 根据权利要求 1 所述的婴儿车，其中，所述托架被枢转地安装至所述框架，以使得当向所述婴儿车的手柄施加向下力时所述婴儿车的所述前轮能够相对于所述中间轮和所述后轮被抬起。

5. 根据权利要求 4 所述的婴儿车，其中，当所述前轮相对于行进表面被抬起时，所述中间轮和所述后轮保持与所述行进表面接合。

6. 根据权利要求 1 所述的婴儿车，该婴儿车还包括悬架，当在所述后轮和所述中间轮位于地面上的情况下使所述婴儿车的前端向上枢转时，所述悬架提供反作用力。

7. 根据权利要求 6 所述的婴儿车，其中，所述悬架包括联接至所述婴儿车的轮轴的扭转弹簧。

8. 根据权利要求 1 所述的婴儿车，该婴儿车还包括一限制件，以限制所述框架绕所述婴儿车的轮轴枢转的旋转距离。

9. 根据权利要求 1 所述的婴儿车，其中，所述中间轮提供一转动枢转点，以在向所述婴儿车的手柄施加转动力时使所述婴儿车绕该转动枢转点来转动。

10. 根据权利要求 1 所述的婴儿车，其中，所述中间轮的中心与所述后轮的中心之间的距离小于所述中间轮的中心与所述前轮的中心之间的距离。

11. 一种婴儿车，该婴儿车包括：

框架，该框架具有第一侧面框架组件，该第一侧面框架组件与第二侧面框架组件横向间隔开，以在这些侧面框架组件之间限定座椅区域；

用于支撑所述框架的前端的前轮；

用于支撑所述框架的后端的后轮；

中间轮，该中间轮用于提供位于所述前轮和所述后轮之间的转动枢轴；以及

在所述第一侧面框架组件和所述第二侧面框架组件之间延伸的轮轴，该轮轴限定了这样的轴线，即：当所述前轮相对于所述后轮和所述中间轮升起时所述框架绕该轴线枢转，并且该轴线位于所述中间轮和所述后轮之间。

12. 根据权利要求 11 所述的婴儿车，该婴儿车还包括联接至所述轮轴的悬架，以当所述框架绕所述轮轴枢转时向所述框架提供增加的力。

13. 根据权利要求 12 所述的婴儿车，其中，所述悬架包括同轴地联接至所述轮轴或所述框架的扭转弹簧。

14. 根据权利要求 11 所述的婴儿车，该婴儿车还包括托架，该托架用于将所述中间轮和所述后轮安装至所述框架。

15. 根据权利要求 14 所述的婴儿车，其中，每个侧面框架组件都包括下框架支撑件、上框架支撑件和中间框架支撑件，所述下框架支撑件、所述上框架支撑件和所述中间框架支撑件经由位于该下框架支撑件、该上框架支撑件和该中间框架支撑件的相应的第一端处的枢转连接件而被枢转地联接。

16. 根据权利要求 15 所述的婴儿车，其中，当所述框架处于使用中的位置时，所述下框架支撑件与所述上框架支撑件基本上对齐或平行，并且所述中间框架支撑件相对于所述下框架支撑件和所述上框架支撑件基本上垂直。

17. 根据权利要求 15 所述的婴儿车，该婴儿车还包括邻近所述中间框架支撑件定位的悬架，该悬架具有联接至所述上框架支撑件的第一端和联接至所述托架的第二端。

18. 根据权利要求 17 所述的婴儿车，其中，所述悬架基本上平行于所述中间框架支撑件。

19. 根据权利要求 17 所述的婴儿车，其中，所述悬架、所述中间框架支撑件、所述上框架支撑件和所述托架限定一联动装置，当将所述婴儿车折叠至塌缩位置时，该联动装置使得所述托架绕所述轮轴旋转。

20. 一种制造婴儿车的方法，该方法包括：

将前轮安装至框架的前部；

将后轮和中间轮安装至所述框架，使得所述中间轮位于所述前轮和所述后轮之间；以及

在所述后轮和所述中间轮之间提供一枢转轴，以使得所述框架的所述前部能够相对于该框架的后部抬起。

21. 根据权利要求 20 所述的方法，其中，将所述后轮和所述中间轮安装至所述框架包括将所述中间轮和所述后轮安装至一托架并且在所述枢转轴处将所述托架安装至所述框架。

22. 根据权利要求 21 所述的方法，该方法还包括以可旋转的方式联接所述框架，从而相对于所述托架绕所述枢转轴旋转。

23. 根据权利要求 21 所述的方法，该方法还包括将悬架联接至所述托架，使得当所述框架绕所述枢转轴旋转时所述悬架提供增加的力。

24. 根据权利要求 21 所述的方法，该方法还包括通过以下步骤来形成所述框架：将下框架支撑件、上框架支撑件和中间框架支撑件联接至位于这些框架支撑件的相应的第一端处的枢转连接件，并且在所述中间框架支撑件的第二端处将所述中间框架支撑件以可旋转的方式联接至所述枢转轴。

25. 根据权利要求 24 所述的方法，该方法还包括将悬架安装至所述框架而与所述中间框架支撑件相邻，所述悬架具有联接至所述上框架支撑件的第一部分和联接至所述托架的第二部分，当所述框架绕所述枢转轴枢转时，所述悬架提供增加的力。

容易操纵的婴儿车

技术领域

[0001] 本公开大体上涉及一种儿童照顾装置，并且更具体地，涉及一种容易操纵的婴儿车。

背景技术

[0002] 在本领域中，婴儿车是已知的。典型地，已知的婴儿车包括可折叠框架、车轮以及用于支撑处于就坐、斜卧和/或平躺位置的儿童或婴儿的一个或多个座椅。婴儿车框架通常能沿至少一个方向折叠以允许所述婴儿车塌缩至折叠位置。

发明内容

[0003] 依照第一方面，提供了一种婴儿车，该婴儿车包括：框架；用于支撑所述框架的前轮和后轮；位于所述前轮和所述后轮之间的中间轮；以及联接至所述后轮、所述中间轮和所述框架的托架。

[0004] 依照第二方面，提供了一种婴儿车，该婴儿车包括：框架，该框架具有第一侧面框架组件，该第一侧面框架组件与第二侧面框架组件横向间隔开，以在这些侧面框架组件之间限定座椅区域；用于支撑所述框架的前端的前轮；用于支撑所述框架的后端的后轮；中间轮，该中间轮用于提供位于所述前轮和所述后轮之间的转动枢轴；以及在所述第一侧面框架组件和所述第二侧面框架组件之间延伸的轮轴，该轮轴限定了这样的轴线，即：当所述前轮相对于所述后轮和所述中间轮升起时所述框架绕该轴线枢转，并且该轴线位于所述中间轮和所述后轮之间。

[0005] 依照第三方面，提供了一种制造婴儿车的方法，该方法包括：将前轮安装至框架的前部；将后轮和中间轮安装至所述框架，使得所述中间轮位于所述前轮和所述后轮之间；以及在所述后轮和所述中间轮之间提供一枢转轴，以使得所述框架的所述前部能够相对于该框架的后部抬起。

附图说明

[0006] 图 1 是依照在此公开的教导而构造的示例婴儿车的立体图。

[0007] 图 2 是图 1 的示例婴儿车的左侧面视图。

[0008] 图 3 是图 1 和图 2 的示例婴儿车的右侧面视图。

[0009] 图 4 是图 1 至图 3 的示例婴儿车的侧面视图，示出了当示例婴儿车的全部车轮都与基本上平坦或水平的行进路径接触时示例婴儿车的枢转运动的示例范围。

[0010] 图 5A 是图 1 至图 4 的示例婴儿车的局部左侧面立体图。

[0011] 图 5B 是图 1 至图 4 的示例婴儿车的局部右侧面立体图。

[0012] 图 6 是图 1 至图 4、图 5A 和图 5B 的示例婴儿车的侧面视图，示出了示例婴儿车的前轮相对于示例婴儿车的后轮和中间轮而升高。

[0013] 图 7 是图 1 至图 4、图 5A、图 5B 和图 6 的示例婴儿车的侧面视图，示出了部分塌缩

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的婴儿车。

[0014] 图 8 是图 1 至图 4、图 5A、图 5B、图 6 和图 7 的示例婴儿车的侧面视图，示出了完全塌缩的婴儿车。

[0015] 图 9A 和图 9B 示出了在此公开的示例座椅安装件。

[0016] 图 10 示出了在此公开的另一示例座椅安装件。

[0017] 图 11 示出了依照本公开的教导而构造的另一示例婴儿车。

[0018] 图 12 是依照该公开的教导而构造的另一示例婴儿车的侧面视图。

[0019] 图 13 是图 12 的示例婴儿车的示例手柄的顶视图。

[0020] 图 14 是图 12 和图 13 的示例婴儿车的处于部分塌缩状态的框架的一部分的侧面视图。

[0021] 图 15 是图 12 至图 14 的示例婴儿车的侧面视图，示出了完全塌缩的婴儿车。

[0022] 图 16 是依照在此公开的教导而构造的另一示例婴儿车的立体图。

[0023] 图 17 是图 16 的示例婴儿车具有柔软品的侧面视图。

[0024] 图 18 是图 16 和图 17 的示例婴儿车的顶视图。

[0025] 图 19 是图 16 至图 18 的示例婴儿车的左侧面视图，但是为了清楚起见而移除了柔软品。

[0026] 图 20 是图 16 至图 19 的示例婴儿车的右侧面视图。

[0027] 图 21 是图 16 至图 20 的示例婴儿车的侧面视图，示出了示例婴儿车的示例悬架装置。

[0028] 图 22A 至图 22D 示出了图 16 至图 21 的示例婴儿车的示例制动机构。

[0029] 图 23 是图 16 至图 21 的示例婴儿车的侧面视图，示出了部分塌缩的婴儿车。

[0030] 图 24 是图 16 至图 21 的示例婴儿车的侧面视图，示出了完全塌缩的婴儿车。

[0031] 图 25A 和图 25B 示出了图 16 至图 21 的示例婴儿车的示例锁闩释放机构。

[0032] 图 26 是依照本公开的教导而构造的又一示例婴儿车的侧面视图。

[0033] 图 27 是图 26 的示例婴儿车的侧面视图，示出了部分塌缩的婴儿车。

[0034] 图 28 是图 26 和图 27 的示例婴儿车的侧面视图，示出了完全塌缩的婴儿车。

[0035] 图 29 描述了在此公开的组装示例覆盖组件的示例方法的流程图。

具体实施方式

[0036] 在此公开的示例婴儿车相对于一些已知的婴儿车提高了婴儿车的稳定性、操纵性和 / 或转向控制，和 / 或提供了改进的震动吸收性。在此公开的示例婴儿车使得使用者能够在一紧密的转动半径内转动或枢转示例婴儿车。在一些示例中，婴儿车可以在其自身的总长度或包络尺寸内转动 360 度。为了能够这样转动，在此公开的示例婴儿车采用一个或多个中间的、能够枢转的和 / 或变大的车轮。在一些示例中，中间轮（例如，中央轮）被布置在支撑婴儿车框架的前部的一个或多个前轮和支撑婴儿车框架的后部的一个或多个后轮之间。前轮和后轮之间的距离基本上限定了婴儿车的总长度。在一些示例中，中间轮基本上位于前和后轮之间的中途，和 / 或基本上位于被使用的婴儿车的质量中心的下方（例如，正下方）。在一些示例中，为了进一步改进转向和 / 或操纵性，中间轮定位成与前轮相比更接近于后轮，使得中间轮的中心与后轮的中心之间的距离小于中间轮的中心与前轮的中

心之间的距离。在一些示例中，与前轮相比将中间轮定位得更接近于后轮在操纵婴儿车越过诸如路缘之类的障碍时，便于提升婴儿车的前端。

[0037] 为了在婴儿车的前端相对于婴儿车的后端被提升或抬高时（例如，当婴儿车的前端被提升、枢转或倾斜以前进通过路缘时）改进婴儿车的控制或操纵性，在此公开的示例婴儿车采用了枢轴或枢转轮轴。在一些示例中，枢轴位于后轮和中间轮之间。结果，这样的示例婴儿车包括框架，当婴儿车的前端相对于婴儿车的后端被提升时，该框架相对于中间轮和后轮枢转。一些这样的婴儿车采用壳体、托架或承载架来将中间轮和后轮联接至车架的侧面框架组件。在一些实例中，框架例如经由套管联接（例如，枢转联接）至枢轴。另选地，在此公开的一些示例婴儿车的框架被安装至枢转轮轴和托架，一些这样的示例经由套管被联接至枢转轮轴。在此公开的示例托架可以使得联接至该托架的中间轮和后轮绕由枢转轮轴或枢转轴提供的枢轴相对于框架枢转。

[0038] 此外或另选地，为了提供更大的稳定性、便于平衡和 / 或便于提升婴儿车的前端，在此公开的一些示例婴儿车采用悬架装置。在一些这样的示例中，当婴儿车的前端绕由枢转轴提供的枢轴向上或远离一表面枢转时，悬架装置提供朝向框架的前端的反作用力。结果，悬架装置降低（例如，显著降低或防止）朝向后轮转移婴儿车的重量。换句话说，当婴儿车的前端绕枢转轴枢转时，悬架装置将婴儿车的质量中心保持在由中间轮和后轮限定的周界内。当示例婴儿车的手柄移动或绕枢转轮轴枢转来提升婴儿车的前端时，一些这样的示例的悬架装置提供了朝向中间轮和 / 或后轮的反作用力（例如，增加的力）。结果，当婴儿车的前轮相对于后轮和中间轮被提升或抬高时，一些这样的示例的悬架装置帮助保持后轮和中间轮与行进路径或地面接合。当婴儿车的前端被提升时帮助保持中间轮和后轮与地面接合有助于防止婴儿车绕其中一个后轮倾翻。

[0039] 为了便于或有助于折叠婴儿车，在此公开的一些示例婴儿车提供了辅助框架构件或杆。在一些这样的示例中，框架构件与婴儿车的框架的折叠枢轴间隔开，以使得当示例婴儿车被折叠至塌缩位置时，托架和因而联接至该托架的中间轮相对于框架旋转至存放位置。

[0040] 改进了婴儿车的稳定性、操纵性和 / 或转向控制的一些示例婴儿车在国际专利申请序列号 PCT/US2011/062669 中公开，该国际专利申请的全部内容通过引用合并于此。

[0041] 图 1 是依照在此公开的教导而构造的示例婴儿车 100 的立体图。图 1 的示例婴儿车 100 包括框架 102，该框架限定了用于容纳或支撑一个或多个儿童和 / 或婴儿座椅 106 的座椅区域 104。为了支撑婴儿座椅 106，所示示例的框架 102 包括一个或多个婴儿座椅安装件 108。更具体地，婴儿座椅 106 借助由座椅 106 和座椅安装件 108 提供的接口（例如，锁扣件或连接件）以可移除的方式联接至座椅安装件 108。为了从座椅安装件 108 移除婴儿座椅 106，由所述接口限定的连接件经由一释放装置（例如，弹簧加载的推动按钮）而释放。附加地或另选地，座椅安装件 108 可沿着框架 102 被调整，从而相对框架 102 和 / 或相对于彼此调整婴儿座椅 106 的位置。

[0042] 所示示例的框架 102 由位于框架 102 前端 112 处的一个或多个前轮 110 和位于框架 102 的后端 116 处的一个或多个后轮 114 支撑。所示示例的框架 102 被组装形成这样的结构，该结构旨在在其使用和存放的所有阶段中都保持被组装。附加地，为了改进操纵性、转向控制和 / 或提供震动吸收性，所示示例的框架 102 采用被布置在前轮 110 和后轮 114

之间的一个或多个中间轮 118。为了向示例婴儿车 100 提供震动吸收性，所示示例的中间轮 118、前轮 110 和 / 或后轮 114 可实施为由橡胶构成的可充气轮。如在所示示例中所示的，中间轮 118 的直径基本上类似或等于前轮 110 和后轮 114 的直径。

[0043] 在图 1 的所示示例中，中间轮 118 被定位成与前轮 110 相比更接近后轮 114。然而，在其它示例中，中间轮 118 可以被布置在前轮 110 和后轮 114 之间的近似中点处。所示示例的每个中间轮 118 均限定了枢轴（例如，转动枢转点）提供结构，该枢轴提供结构被布置或定位在前轮 110 和后轮 114 之间。因此，在所示的示例中，每个中间轮 118 均提供了用于婴儿车 100 的枢转点，该枢转点从婴儿车 100 的后端 116 和 / 或后轮 114 偏离或横向间隔开。因此，当使用者在使所有车轮 110、114 和 118 都与地面或行进表面接触的情况下沿向右方向、向左方向和 / 或以 360 度的转或圈转动所示示例的婴儿车 100（例如，通过向婴儿车 100 施加侧向力）时，婴儿车 100 的前端 112 和婴儿车 100 的后端 116 都能够绕由其中一个相应的中间轮 118 提供的转动枢轴或枢转点沿弧形路径枢转或旋转。

[0044] 如在示出的示例中所示的，中间轮 118 经由轮轴 120 相互联接，并且绕公共的旋转轴线 120a 旋转。然而，在其它示例中，轮轴 120 可被移除以使得中间轮 118 相对于彼此独立地驱动或旋转。此外，虽然示例婴儿车 100 包括两个中间轮 118，但其它示例婴儿车可以仅采用一个中间轮 118 或两个以上的中间轮 118。例如，婴儿车 100 可以包括在轮轴 120 上布置在第一和第二中间轮 118 之间的第三中间轮。

[0045] 由于中间轮 118 基本上位于婴儿车 100 的座椅区域 104 的下方（例如，垂直地与该座椅区域对齐），因此中间轮 118 吸收由儿童坐在所示示例的婴儿车 100 的婴儿座椅 106 中所提供的负载的大部分。换句话说，在所示的示例中，当使用者转动所示示例的婴儿车 100 时，坐在座椅区域 104 中的儿童的负载或重量大部分由中间轮 118 承载。结果，由儿童提供的负载绕由其中一个中间轮 118 提供的枢转点旋转。以这样的方式，婴儿车 100 和婴儿车 100 中的儿童的组合负载或重量与在没有中间轮 118 的情况下类似组合重量的婴儿车和儿童所需要力（或转矩）小的力（或转矩）来转动或枢转婴儿车 100。由于所示示例的婴儿车 100 中的儿童的重量（或质量中心）接近中间轮 118 的枢转轴线或枢转点，因此当儿童坐在座椅区域 104 中时枢转或转动所示示例的婴儿车 100 所需的力或转矩相对低。结果，所示示例的婴儿车 100 可以在相对紧密的转动半径的情况下相对轻松地绕由任一中间轮 118 提供的枢转点转动。例如，图 1 的示例婴儿车 100 可以在其自身的长度内转动 360 度。

[0046] 为了使得使用者能够推动、转动和 / 或倾斜所示示例的婴儿车 100，框架 102 包括具有把手 124 的手柄 122，使用者可以握住该把手 124 来移动、控制和 / 或转向婴儿车 100。此外，所示示例的手柄 122 邻近后轮 114。所示示例的婴儿车 100 包括具有辅助把手 124a 的辅助手柄 122a，以使得儿童或成人在沿着婴儿车 100 行走时能够握住辅助把手 124a 来进行支撑。辅助手柄 122a 通常并不用于操纵婴儿车 100，而是可以将其用作其它一些使用目的。手柄 122 经由手柄关节毂或接头 126 联接至框架 102，该手柄关节毂或接头使得手柄 122 能够相对于框架 102 调整。

[0047] 如在下文更详细地描述的，为了当操纵婴儿车 100 越过路缘或其它障碍时进一步改进稳定性和 / 或便于平衡，所示示例的示例婴儿车 100 采用悬架装置 128。更具体地，当婴儿车 100 的前端 112 经由手柄 122 相对于框架 102 的后端 116 枢转或倾斜时（例如，前端 112 相对于支撑表面（例如，地面）沿向上方向被提升），图 1 的示例悬架装置 128 提供

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了稳定性和 / 或便于平衡。此外，如在下文结合图 2A、图 2B、图 3 和图 4 更详细地讨论的，示例婴儿车 100 采用轮轴 130，来使得当前端 112 相对于后轮 114 和中间轮 118 从行进表面被抬起、倾斜或升起时框架 102 能够围绕轮轴 130 的轴线 132 枢转。

[0048] 图 2 示出了婴儿车 100 的第一侧面视图或左侧面视图。图 3 示出了图 1 的示例婴儿车 100 的第二侧面视图或右侧面视图。参考图 2 和图 3，所示示例的框架 102 包括第一侧面框架组件 202a，该第一侧面框架组件与第二侧面框架组件 202b 横向间隔开而限定座椅区域 104。所示示例的第一侧面框架组件 202a 和第二侧面框架组件 202b 基本上类似或相同并且是对称的。所示示例的手柄 122 在侧面框架组件 202a、202b 之间延伸，并且可以由弯曲成大体 U 型的结构的单个管件形成。

[0049] 参考图 2 和图 3，所示示例的侧面框架组件 202a、202b 均包括下框架支撑件 204、上框架支撑件 206 和中间框架支撑件 208。在示出的示例中，框架支撑件 204、206 和 208 具有基本上线性的轮廓（例如，直的和 / 或平坦的轮廓）。然而，在其它示例中，框架支撑件 204、206 和 208 可以是任何形状的，包括大体上弯曲的形状或具有一个或多个弯曲和 / 或线性部分的形状。

[0050] 为了使得所示示例的婴儿车 100 沿至少一个方向折叠或塌缩，第一侧面框架组件 202a 的框架支撑件 204、206 和 208 经由第一枢转连接件或枢转接头 210a 被枢转地联接。更具体地，连接件或枢转接头 210a 由毂 212a（例如，T 形毂）限定，以接收第一侧面框架组件 202a 的每个框架支撑件 204、206 和 208 的相应端。所示示例的毂 212a 使得框架支撑件 204、206 和 208 能够相对彼此枢转，以例如如在下文更详细地讨论的塌缩婴儿车 100。相似地，第二侧面框架组件 202b 的框架支撑件 204、206 和 208 在第二枢转连接件或枢转接头 210b 处枢转地联接。更具体地，连接件或枢转接头 210b 由毂 212b（例如，T 形毂）限定，以接收第二侧面框架组件 202b 的每个框架支撑件 204、206 和 208 的相应端部。与毂 212a 一样，毂 212b 使得第二侧面框架组件 202b 的框架支撑件 204、206 和 208 能够相对于彼此枢转。

[0051] 参考图 3，所示示例的每个毂 212a、212b 均包括：第一腿或开口 214a，该第一腿或开口以接收下框架支撑件 204 的第一端 204a 或联接至该第一端 204a；第二腿或开口 214b，该第二腿或开口以接收上框架支撑件 206 的第一端 206a 或联接至该第一端 206a；以及第三腿或开口 214c，该第三腿或开口以接收中间框架支撑件 208 的第一端 208a 或联接至该第一端 208a。在这一示例中，毂 212a、212b 还包括第四腿或开口 214d，以接收辅助手柄 122a 的端部。腿 214a 至 214c 使得当毂 212a、212b 的锁定机构（例如，锁闩）处于释放或解锁状态时框架支撑件 204、206 和 208 能够绕相应的枢转连接件 210a、210b 相对于彼此枢转。当毂 212a、212b 的锁定机构处于解锁状态时，框架支撑件 204、206 和 208 不能绕相应的枢转连接件 210a、210b 相对于彼此枢转。毂 212a、212b 的锁定机构可经由释放致动器 216 移动至解锁状态，所述释放致动器位于可以由使用者致动的上框架支撑件上。

[0052] 参考图 2，当框架 102 直立时，第一侧面框架组件 202a 的下框架支撑件 204 和上框架支撑件 206 相对于彼此基本上对齐或平行，使得下框架支撑件 204 的轴线 218 基本上与上框架支撑件 206 的轴线 220 对齐。然而，在其它示例中，当框架 102 处于直立状态时，下框架支撑件 204 可以相对于上框架支撑件 206 定位在任意角度。例如，下框架支撑件 204 的轴线 218 与上框架支撑件 206 的轴线 220 之间的角度 222 可以在近似 100 度至 200 度之

间。

[0053] 所示示例的中间框架支撑件 208 从相应的毂 212a 和 212b 朝向后轮 114 伸出。为了使得框架 102 能够相对于中间轮 118 和 / 或后轮 114 枢转，中间框架支撑件 208 枢转地联接至轮轴 130（图 1）。更具体地，在示出的示例中，中间框架支撑件 208 的第二端 208b 经由连接件或套管 211 被联接至轮轴 130（图 1）。所示示例的套管 211（其包括轴向联接至轮轴 130 的部分）使得中间框架支撑件 208 且因此使和下框架支撑件 204 和上框架支撑件 206 能够绕轮轴 130 的轴线 132 枢转。

[0054] 当联接至相应的枢转接头 110a 和轮轴 130 时，所示示例的中间框架支撑件 208 基本上垂直于下框架支撑件 204 和上框架支撑件 206。换句话说，由中间框架支撑件 208 限定的轴线 224 相对于下框架支撑件 204 的轴线 218 和上框架支撑件的轴线 220 呈大致九十度的角度。然而，在其它示例中，中间框架支撑件 208 可以相对于下框架支撑件 204 和 / 或上框架支撑件 206 呈任何不同的角度。例如，中间框架支撑件 208 的轴线 224 和下框架支撑件 204 的轴线 218 之间的角度 226a 和 / 或中间框架支撑件 208 的轴线 224 和上框架支撑件 206 的轴线 220 之间的角度 226b 可以是小于九十度或大于九十度的任何其它合适的角度。

[0055] 参考图 2 和图 3，为了将所示示例的前轮 110 安装或附接至侧面框架组件 202a、202b 中的一者，所示示例的每个前轮 110 都包括前轮毂体 230。例如，前轮壳体 230 可以被联接或附接至下框架支撑件 204 件的一端。所示示例的每个前轮壳体 230 均包括以可旋转的方式安装至连接件 234 的叉或轮支撑件 232。每个前轮 110 均可以以可旋转的方式轴颈连接至轮支撑件 232，以使得每个前轮 110 都能够绕单独的旋转轴线 236a、236b（例如，相对于供定位婴儿车 100 的水平地面基本上水平的轴线）独立地旋转。附加地，为了改进转向，所示示例的每个前轮 110 都能够绕基本上垂直于对应的旋转轴线 236a、236b 的对应的基本上竖直的轴线 238a、238b 旋转，回转或枢转。在所示示例中，由于对应的轮支撑件 232 和对应的连接件 234 之间的枢转连接件，因此前轮 110 能够绕对应的竖直轴线 238a、238b 枢转。

[0056] 为了将后轮 114 和中间轮 118 安装或附接至相应的侧面框架组件 202a、202b，所示示例的每个侧面组件 202a、202b 都采用壳体或托架 240（例如，摇摆件）。所示示例的托架 240 是整体件或整体结构。更具体地，所示示例的托架 240 包括或限定了毂 242，该毂将后轮 114 和中间轮 118 附接或联接至框架 102。在示出的实例中，轮轴 130 轴颈连接在托架 240 上。示例托架 240 可相对于框架 102 和 / 或中间框架支撑件 208 枢转。所示示例的每个毂 242 都包括：第一部分或腿 242a，该第一部分或腿用于接收其中一个后轮 114 或者联接至其中一个后轮 114；以及第二部分或腿 242b，该第二部分或腿用于接收其中一个中间轮 118 或者联接至其中一个中间轮 118。

[0057] 例如，示例托架 240 的第一部分 242a 接收后轮壳体 244，该后轮壳体具有以可旋转的方式安装至连接件 248 的叉或后轮支撑件 246，所述连接件 248 安装至（例如，通过螺钉）托架 240 或与该托架一体地形成。每个后轮 114 都以可旋转的方式安装至后轮支撑件 246，以使得每个后轮 114 都能够绕单独的旋转轴线 250a、250b（它们中的每一个都是相对于供定位婴儿车的水平地面的基本上水平的轴线）独立地旋转。附加地，为了改进转向，所示示例的每个后轮 114 都能够绕基本上垂直于相应的旋转轴线 250a、250b 的基本上竖直的轴线 252a、252b 旋转、回转或枢转。在示出的实例中，后轮 114 由于位于对应的轮支撑件 246 和

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/或托架 240 和对应的连接件 248 之间的枢转连接件而能够绕相应的竖直轴线 252a、252b 枢转。

[0058] 在示出的示例中，每个中间轮 118 都经由臂或框架构件 254 联接至相应的托架 240。在示出的示例中，臂 254 的第一端 254a 被联接或固定至托架 240 的第二部分 242b，并且臂 254 的第二端 254b 限定中间轮 118 的毂 256 或被联接至中间轮 118 的毂 256。臂 254 在被联接至托架 240 时沿远离后轮 114 且朝向前轮 110 的方向从托架 240 伸出，以在后轮 114 和前轮 110 之间定位中间轮 118。如在所示的示例中所示的，臂 254 将中间轮 118 定位得与前轮 110 相比更接近后轮 114。然而，在其它示例中，臂 254 可以被构造成将中间轮 118 定位在前轮 110 的旋转轴线 236a、236b 和后轮 114 的旋转轴线 250a、250b 之间的近似中点处。所示示例的臂 254 的中间轴线 258（图 2）相对于中间框架支撑件 208 的中心轴线 224 成角度 260（例如，基本上垂直）。如在下文中更详细地描述的，当中间框架支撑件 208 和/或框架 102 相对于托架 240 绕由轮轴 130 限定的轴线 132 枢转时，角度 260 发生改变。

[0059] 如上文注意到的，所示示例的中间轮 118 被安装在在侧面框架组件 202a、202b 之间延伸的轮轴 120 上（图 1）。因此，轮轴 120 以可旋转的方式联接中间轮 118。结果，所示示例的中间轮 118 绕轮轴 120 的旋转轴线 120a 旋转。然而，虽然所示示例的中间轮 118 能够绕旋转轴线 120a 旋转，但中间轮 118 被固定而不能在其它方向上回转或枢转（例如，与前轮 110 和后轮 114 不一样，中间轮 118 不能绕基本上垂直于相应的旋转轴线 120a 的基本上竖直的轴线 264a、264b 旋转）。结果，当婴儿车 100 在基本上直的路径中移动或被推动时，图 1 的示例婴儿车 100 的中间轮 118 阻止婴儿车 100 的横向漂移。然而，在其它示例中，中间轮 118 可以相对于框架 102 绕竖直轴线 264a、264b 旋转。

[0060] 如上文注意到的，所示示例的中间轮 118 限定了枢轴或枢转点，所示示例的婴儿车 100 可以绕这些枢轴或枢转点转动。换句话说，所示示例的每个中间轮 118 都限定布置于前轮 110 和后轮 114 之间的枢转点。例如，当相对于站在婴儿车之后且抓握手柄 122 的使用者的取向沿向左方向（例如，从婴儿车 100 的上方向下看的顺时针方向）向所示示例的婴儿车 100 的手柄 122 施加足够力时，婴儿车 100 绕第二框架组件 204b 的（右侧）中间轮 118 枢转，使得前轮 110 在朝向第二侧面框架组件 202b 的方向上沿着弧形路径移动，并且使得后轮 114 在朝向第一侧面框架组件 202a 的方向上沿着弧形路径移动。同样，当相对于抓握手柄 122 的使用者的取向沿向右方向（例如，从婴儿车 100 的上方向下看的逆时针方向）向婴儿车 100 的手柄 122 施力时，所示示例的婴儿车 100 绕第一框架组件 202a 的（左侧）中间轮 118 枢转，使得前轮 110 在朝向第一侧面框架组件 202a 的方向上沿着弧形路径移动，并且使得后轮 114 在朝向第二侧面框架组件 202b 的方向上沿着弧形路径移动。在一些示例中，婴儿车可以在其自身的总长或包络尺寸内转动 360 度。

[0061] 图 4 是图 1 至图 3 的示例婴儿车 100 的侧视图。在图 4 的所示示例中，第一侧面框架组件 202a 的托架 240 经由轮轴 130（图 1）的第一端被联接或安装至框架 102。第二侧面框架组件 202b 的托架 240 基本上与第一侧面框架组件 202a 的托架 240 相同，并且以与第一侧面框架组件 202a 的托架 240 相同的方式被安装至轮轴 130 的第二端。因此，下面的描述将集中于一个托架，来用作对两个托架 240 的说明。托架 240 以及因此附接至该托架的中间轮 118 和后轮 114 可以相对于中间框架支撑件 208（例如，经由套管）绕由轮轴 130 限定的轴线 132 枢转。结果，中间框架支撑件 208 和/或相应的左侧面框架组件 202a 和右

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侧面框架组件 202b 的托架 240 可以相对于彼此绕由轮轴 130 和 / 或轴线 132（图 1）限定的枢轴 404 枢转。例如，中间框架支撑件 208、框架 102 和 / 或托架 240 可以绕由轴线 132 限定的枢转点 404 在旋转方向 402 上枢转（例如，绕轴线 132 的顺时针和逆时针旋转）。虽然第一侧面框架组件 202a 的托架 240 可以相对于第二侧面框架组件 202b 的托架 240 绕由轮轴 130 限定的轴线 132 枢转，但在中间轮 118 之间延伸的轮轴 120（图 1）连接或联接每个托架 240 的相应的中间轮 118。结果，所示示例的第一侧面框架组件 202a 的托架 240 和第二侧面框架组件 202b 的托架 240 一起绕轴线 132 旋转或枢转。然而，在没有使用轮轴 120 的示例中，第一侧面框架组件 202a 的托架 240 可以绕轴线 132 相对于第二侧面框架组件 202b 的托架 240 和 / 或中间框架支撑件 208 独立地旋转或枢转。

[0062] 所示示例的枢转点 404 位于中间轮 118 和后轮 114 之间。具体地，枢转点 404 位于中间轮 118 的旋转轴线 120a 和后轮 114 的旋转轴线 250a、250b 之间。同样，在这一示例中，枢轴 404 相对于旋转轴线 120a 和 250a、250b 偏移（例如，至少在上方定位）。结果，中间轮 118 和后轮 114 可以相对框架 102 枢转，以移动和 / 或跟随轮廓行进表面。因此，可以导致前端 112 相对于后端 116 提升或抬起（或另选地，下降）的在行进表面中的一些轮廓变化将不导致中间轮 118 和 / 或后轮 114 分离或抬离行进表面。例如，图 4 的所示示例的婴儿车 100 被示出为从通过虚线示出的初始位置 408 移动或移位至第一位置 406。换句话说，随着框架 102 绕枢轴 404 枢转或倾斜，臂 254 的轴线 258 和中间框架支撑件 208 的轴线之间的角度 260 在当框架 102 处于初始位置 408 时的第一角度 410 和当框架 102 处于第一位置 406 时的第二角度 412 之间改变。

[0063] 为了限制中间框架支撑件 208 可以相对于托架 240 枢转的角度 260（例如，在中间框架支撑件 208 与臂 254 之间的角度），所示示例的婴儿车 100 采用一个或多个行进限制件。在示出的示例中，行进限制件是物理障碍件（例如，止动件），这些物理障碍件借助中间框架支撑件 208 和 / 或臂 254 接合，以阻挡沿相应方向的进一步旋转运动。所示示例的婴儿车 100 采用位于轮轴 130 上的行进限制件 403，以限制中间框架支撑件 208 可以相对于托架 240 或臂 254 在第一旋转方向 404a（例如，顺时针方向）上可以枢转的角度 260。例如，中间框架支撑件 208 的轴线 224 与臂 254 之间的角度 260 可以被限制至近似 0 至 120 度。在其它示例中，行进限制件 403 可以位于托架 240 和 / 或中间框架支撑件 208 上。在一些示例中，可以使用两个行进限制件来限制中间框架支撑件 208 可以相对于托架 240 或臂 254 枢转的角度 260。在其它示例中可以采用行进限制件的其它位置、构件和 / 或构造。

[0064] 图 5A 和图 5B 示出了相应的侧面框架组件 202a、202b 的局部后部立体图。参考图 5A 和图 5B，当框架 102 绕枢轴 404 枢转时为了进一步帮助支撑框架 102，所示示例的婴儿车 100 采用悬架装置 128。所示示例的示例悬架装置 128 是联接至轮轴 130、中间框架支撑件 208 和 / 或套管 211 的扭转弹簧 502。例如，图 5A 的第一侧面框架组件 202a 包括第一扭转弹簧 502，并且图 5B 的第二侧面框架组件 202b 具有第二扭转弹簧 502。每个扭转弹簧 502 都具有由中间框架支撑件 208 联接或接合的第一部分 502a 以及联接或固定至轮轴 130 的第二部分 502b。结果，中间框架支撑件 208 绕轴线 132 在方向 402a 上的旋转导致每个扭转弹簧 502 的第一部分 502a 相对于扭转弹簧 502 的第二部分 502b 移动，因而增加了由每个扭转弹簧 502 提供的张力或力。在其它示例中，扭转弹簧 502 是整体弹簧，该整体弹簧沿着轮轴 130 的长度延伸，轮轴 130 的相应端部联接至第一侧面框架组件 202a 和第二侧面框架

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组件 202b（例如，中间框架支撑件 208、托架 240 等）。在其它示例中，悬架装置 128 可以是联接至轮轴 130 的板簧和 / 或扭转杆，位于上框架支撑件 206 和托架 240 之间的流体缸、和 / 或当婴儿车 100 的手柄 122 绕枢轴 404 朝向后轮 114 移动或枢转时提供反作用力或增加的力的任何其它悬架装置。

[0065] 所示示例的示例托架 240 还支撑制动装置的一部分。示例婴儿车 100 的制动装置可在防止或限制相应在的中间轮 118 和 / 或后轮 114 旋转的锁定位置和使得中间轮 118 和 / 或后轮 114 能够旋转的解锁位置之间选择性地移动。为了在锁定和解锁位置之间移动制动装置，所示示例的婴儿车 100 采用由托架 240 支撑的制动杆或脚踏板 504。所示示例的制动杆 504 可以相对于托架 240 被按压，从而摩擦性地接合或阻碍相应的后轮 114 绕它们的旋转轴线 250a、250b 旋转。

[0066] 图 6 是图 1 至图 4、图 5A 和图 5B 的示例婴儿车 100 的侧面视图，框架 102 的前端 112 相对于框架 102 的后端 116 被向上提升或倾斜。更具体地，图 6 的所示示例中的前轮 110 相对于供定位中间轮 118 和后轮 114 的表面 604 位于升高表面 602 上。在示出的示例中，升高表面 602 可以是路缘 606 或台阶的顶面。此外，如上面结合图 4 所注意到的，用于限制中间框架支撑件 208 可以绕轮轴 130 枢转的旋转距离（例如，五度的旋转）的行进限制件 403 足以使得在中间轮 118 和后轮 114 保持在下表面 604 上的情况下婴儿车 100 的前端 112 能够克服（例如，到达其顶部）路缘 606（例如 5 英寸的高度）。

[0067] 当框架 102 的前端 112 绕枢轴 404 向上枢转（例如，绕枢轴 404 在顺时针方向上）时，悬架装置 128 朝向前端 112 提供反作用转矩或力（例如，增加的力）来增强稳定性。为了增强稳定性，悬架装置 128 通常减缓或分散在侧面框架组件 202a、202b 之间施加至手柄 122 的向下力，并且支撑婴儿车 100 的重量，在当婴儿车 100 的前端 112 被提升、枢转或倾斜（例如，为了前进经过路缘或台阶 606）时中间框架支撑件 208 绕枢轴 404 在方向 608 上移动时，该重量否则可以朝向框架 102 的后端 116 移位（例如，远离中间轮 118）。例如，当框架 102 的前端 112 绕枢轴 404 枢转或倾斜时，由悬架装置 128 提供的反作用力或转矩阻止（例如，显著降低或防止）婴儿车 100 的质量中心（例如，婴儿车和 / 或位于座椅区域 104 中的儿童的重量）远离中间轮 118 且朝向后轮 114 移位。换句话说，反作用力将婴儿车 100 的质量中心保持或定位成基本上对齐和 / 或邻近中间轮 118。为了当婴儿车 100 的前端 112 相对于框架 102 的后端 116 向上倾斜时便于控制婴儿车 100，悬架装置 128 帮助将婴儿车 100 的质量中心保持或定位在后轮 114 的旋转轴线 250a、260b 和中间轮 118 的旋转轴线 120a 之间。

[0068] 结果，除了由座椅区域 104（图 1）中的儿童提供的负载之外，悬架装置 128 向中间轮 118 和 / 或后轮 114 提供有效的向下偏压力。以这一方式，当前轮 110 相对于后轮 114 和中间轮 118 被抬高或提离表面 604 时，悬架装置 128 通过帮助保持中间轮 118 和 / 或后轮 114 与行进路径或表面 604（例如，地面）保持接合和 / 或接触而便于平衡婴儿车 100 和 / 或改进婴儿车 100 的稳定性。当婴儿车 100 的前端 112 被提升时保持中间轮 118 和后轮 114 与表面 604 接触帮助防止婴儿车 100 绕其中一个后轮 114 倾翻（例如，向侧面的施加转矩）。如果没有悬架装置 128，则当婴儿车 100 的前端 112 相对于后端 116 被提升（例如，在向上方向上）时，使用者将需要施加较大的力来平衡婴儿车 100 且保持中间轮 118 和后轮 114 与地面接触。

[0069] 所示示例的中间轮 118 基本上没有增加婴儿车 100 的总体包络尺寸。具体地，中间轮 118 没有显著地影响所示示例的婴儿车 100 塌缩为紧凑轮廓的能力。图 7 和图 8 示出了图 1 的示例婴儿车 100 被从图 1 至图 6 中所示的使用中的未折叠位置折叠成图 8 中所示的塌缩，折叠或存放位置 800。如上文注意到的，侧面框架组件 202a、202b 构造得使得所示示例的整个婴儿车 100 可在延伸、展开、使用位置（图 1 至图 6）与塌缩，折叠或存放位置 800（图 8）之间选择性地移动。当婴儿车 100 处于塌缩位置 800 时，所示示例的婴儿车 100 具有低轮廓或紧凑的包络尺寸。当婴儿车 100 处于展开位置（图 1 至图 6）和 / 或折叠位置 800（图 8）时，所示示例的中间轮 118 没有显著地增加所示示例的婴儿车 100 的总体包络尺寸。此外，中间轮 118 不干涉将婴儿车 100 折叠至折叠位置 800。

[0070] 为了保持婴儿车 100 处于使用或展开位置，所示示例的婴儿车 100 的每个毂 212a、212b 都包括锁闩机构。所示示例的锁闩机构包括由棘爪、锁、弹簧和 / 或其它任何机构固定的锁闩盘，以将所示示例的框架 102 锁定并保持在使用位置。任何已知的锁闩可被用于这一角色。所采用的锁闩机构对于这一公开是不重要的。锁闩机构将毂 212a、212b 以及固而将框架支撑件 204、206 和 208 保持在锁定状态，以防止框架支撑件 204、206 和 208 相对彼此旋转（以由此防止婴儿车 100 塌缩）。为了塌缩所示示例的婴儿车 100，释放装置 216 被致动（例如，被滑动和 / 或按压），以解锁锁闩机构并且使得毂 212a、212b 的相应部分 214a 至 214c 能够相对于彼此旋转。更具体地，在解锁状态下，框架支撑件 204、206 和 / 或 208 不相对于彼此绕由枢转连接件 210a、210b 提供的枢轴 704 旋转或枢转。在示出的示例中，所示示例的下框架支撑件 204 和上框架支撑件 206 沿由各箭头 706 和 708 示出的方向朝向中间框架支撑件 208 枢转到图 7 和 8 中示出的构造。此外，当将婴儿车 100 折叠至折叠位置 800 时，所示示例的托架 240 也在由箭头 710 表示的方向上朝向中间框架支撑件 208 旋转。托架 240 沿箭头 710 的方向的旋转没有被上面讨论的行进限制件 403 阻碍。相反地，如上面注意到的，行进限制件 403 限制托架 240 在方向 403a 上的旋转，该方向 403a 是箭头 710 的相反方向。

[0071] 如图 8 所示，在完全塌缩、折叠或存放位置 800 中，所示示例的婴儿车 100 具有相对低的轮廓或包络尺寸以及相对小的轮廓。在折叠位置 800 中，后轮壳体 244 的轴线 802 相对于中间框架支撑件 208 的轴线 244 基本上对齐（例如，稍微偏离）。虽然示出了可塌缩的框架 102，但在一些示例中，婴儿车并不塌缩。

[0072] 在一些示例中，座椅安装件 108 可以在婴儿车 100 处于折叠位置 800 之前或之后相对于框架 102 被折叠。例如，图 9A 和图 9B 示出了相对于框架 102 折叠的示例座椅安装件 108。所示示例的座椅安装件 108 被枢转地联接或附接至婴儿车 100 的连接件或壳体 902 和 / 或框架 202。所示示例的每个座椅安装件 108 都相对于连接件 902 或框架 202 绕枢转点 904 在第一竖立或使用位置 906 和第二或下降折叠位置 908 之间枢转。在图 9B 的所示示例中，在第一位置 906，座椅安装件 108 的锁闩 910（例如，伸出构件或突出部）接合框架 202 中的开口或凹部 912，以锁定或限制座椅安装件 108 相对于框架 202 和 / 或连接件 902 绕枢转点 904 旋转。为了折叠座椅安装件 108，将锁闩 910 从凹部 912 移动或撤回，以使得座椅安装件 108 能够相对于框架 202 和 / 或连接件 902 旋转。在折叠位置 908，锁闩 910 接合第二凹部 914 以防止当婴儿车 100 处于塌缩状态 800 时座椅安装件 108 意外地或无意地绕枢转点 904 枢转。

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[0073] 在一些示例中，座椅安装件 108 可以在婴儿车 100 处于折叠位置 800 之前或之后相对于框架 102 被移除。例如，图 10 示出了被从连接件 902 或框架 202 的开口或凹口 1002 移除的示例座椅安装件 108。为了从连接件 902 和 / 或框架 102 移除座椅安装件 108，将座椅安装件 108 固定至连接件 902 和 / 或框架 102 的锁或锁闩机构被释放，并且将座椅安装件 108 从开口 1002 移除。

[0074] 图 11 示出了另一示例婴儿车 1100。图 11 的示例婴儿车 1100 基本上类似或等同于图 1 至图 8 的婴儿车 100。然而，不同于图 1 的婴儿车 100，图 11 的示例婴儿车 1100 仅具有一个婴儿座椅 106。在一些示例中，图 1 的婴儿车 100 可被构造或转换为图 11 的婴儿车 1100。例如，图 1 的其中一个座椅 106 可以被从框架 102 移除，并且与被移除的婴儿座椅 106 相关联的座椅安装件 108 可以被从框架 102 移除。在图 1 至图 11 的示例中，座椅安装件 108 是卡口型安装件。

[0075] 图 12 示出了另一示例婴儿车 1200。基本上类似或等同于上面描述的图 1 至图 8 的示例婴儿车 100 的部件、并且具有基本上类似或等同于那些部件的功能的示例婴儿车 1200 的那些部件在下文将不再详细地描述。相反地，感兴趣的读者将参考上文的相应描述。为了便于这一过程，对于相似结构的将使用相似的附图标记。例如，在图 12 的所示示例中，示例婴儿车 1200 包括框架 1202，该框架具有用于支撑该框架 102 的前端 112 的一个或多个前轮 110 以及用于支撑该框架 102 的后端 116 的一个或多个后轮 114。所示示例的框架 1202 包括彼此横向间隔开的第一侧面框架组件和第二侧面框架组件，以容纳在这些侧面框架组件之间延伸的一个或多个婴儿座椅 106。每个侧面框架组件都包括绕由枢轴连接件 210 提供的枢轴 704 枢转地联接的下框架支撑件 204、上框架支撑件 206 和中间框架支撑件 208。托架或壳体 240 绕由在框架 1202 的侧面框架组件之间延伸的轮轴 130 提供的枢转点 404 枢转地连接中间轮 118 和后轮 114。

[0076] 图 12 的示例婴儿车 1200 具有框架 1202，该框架 1202 基本上类似或等同于图 1 至图 8 的示例婴儿车 100 的框架 102。然而，图 12 的所示示例的婴儿车 1200 具有不同的手柄 1222。手柄 1222 可以相对于上框架支撑件 206 活动连接在第一或上部位置 1204 和第二或下部位置 1206 之间。为了使得手柄 1222 能够相对于上框架支撑件 206 活动连接，示例婴儿车 1200 采用枢转接头或活动连接毂 1208。毂 1208 采用锁闩机构，以将手柄 1222 锁定或保持在上部位置 1204 和下位置 1206 之间的位置。为了释放锁闩机构以使得手柄 1222 能够在上部位置 1204 和下部位置 1206 之间活动连接，框架 1202 包括释放装置 1210（例如，推动按钮）。

[0077] 图 13 是联接至图 12 的上框架支撑件 206 的示例手柄 1222 的平面图。如在图 13 的所示示例中所示的，示例婴儿车 1200 采用锁闩释放装置 1302 来塌缩所示示例的婴儿车 1200。为了起动锁闩释放装置 1302，该释放装置的一个或多个触发器 1304a、1304b 相对于上框架支撑件 206 移动（例如，拉动、推动、扭动、滑动等），以解锁由枢转连接件 210 提供的闩锁或锁定。此外，当被起动时，锁闩释放装置 1302 还释放毂 1208 的锁闩机构，以使得手柄 1222 能够相对于上框架支撑件 206 旋转。

[0078] 图 14 和图 15 示出了图 12 的示例婴儿车 1200，该婴儿车从图 12 中所示的使用中的展开位置被折叠到图 15 中所示的塌缩、折叠或存放位置 1500。更具体地，在未被锁定的情况下，框架支撑件 204、206 和 / 或 208 相对彼此而枢转。参考图 14，当锁闩释放装置 1302

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被起动时，手柄 1222 绕毂 1208 朝向上框架支撑件 206 在图 14 的取向中沿绕毂 1208 的逆时针方向枢转，然后手柄 1222 和上框架支撑件 206 朝向中间框架支撑件 208 枢转。

[0079] 下框架支撑件 204 和上框架支撑件 206 相对于中间框架支撑件 208 绕枢轴 704 旋转。如图 15 所示，在完全塌缩、折叠或存放位置 1500 中，所示示例的婴儿车 1200 具有相对低的轮廓或包络尺寸。

[0080] 图 16 示出了依照在此公开的教导构造的另一示例婴儿车 1600。基本上类似或等同于上面描述的示例婴儿车 100 的部件、并且具有基本上类似或等同于那些部件的功能的示例婴儿车 1600 的那些部件在下文将不再详细地描述。相反地，感兴趣的读者将参考上文的相应描述。为了便于这一过程，对于相似的结构将使用相似的附图标记。

[0081] 图 16 是示例婴儿车 1600 的立体图。在图 16 的所示示例中，示例婴儿车 1600 包括框架 1602，该框架 1602 限定了用于接收一个或多个婴儿座椅 106 的座椅区域 104。所示示例的框架 1602 采用座椅安装件 108 来将婴儿座椅 106 接收或联接至框架 1602。在一些示例中，安装件 108 可被相对于框架 1602 调整。为了使得使用者能够推动、转动和 / 或倾斜所示示例的婴儿车 1600，框架 1602 包括手柄 1622。所示示例的手柄 1622 可相对于框架 1602 沿方向 1622a 被伸缩性地调整。

[0082] 所示示例的框架 1602 由位于框架 1602 的前端 112 处的一个或多个前轮 110 和位于框架 1602 的后端 116 处的一个或多个后轮 114 支撑。所示示例的框架 1602 被组装形成这样的结构，该结构旨在在其使用和存放的全部阶段中保持组装。此外，为了改进操纵性、控制转向和 / 或为了提供震动吸收性，所示示例的框架 1602 采用布置在前轮 110 和后轮 1114 之间的一个或多个中间轮 118。为了向示例婴儿车 1600 提供震动吸收性，所示示例的中间轮 118、前轮 110 和 / 或后轮 114 可以被实施为由橡胶组成的可充气车轮。

[0083] 此外，所示示例的中间轮 118 的直径大于相应的前轮 110 和后轮 114 的直径。在这一示例中，相应的前轮 110 和后轮 114 的直径基本上是相同的。因此，前轮 110 和后轮 114 以比中间轮 118 相对较小的部分或接触面积接合行进表面。结果，由于与中间轮 18 的接合行进表面的接触面积相比，相应的前轮 110 和 / 或后轮 114 的接合行进表面的接触面积相对较小，因此前轮 110 和 / 或后轮 114 的滚动摩擦降低。此外，中间轮 118 的较大直径允许所示示例的婴儿车 1600 滚过粗糙或不平坦表面而没有困难。然而，在其它示例中，中间轮 118 的直径基本上类似或等同于前轮 110 和 / 或后轮 114 的直径。

[0084] 图 17 是示例婴儿车 1600 的侧面视图，该婴儿车具有柔软品 1702 来限定一个或多个存放区域 1704。在图 17 的所示示例中，示例婴儿车 1600 的中间轮 118 位于前轮 110 和后轮 114 之间的近似中点。所示示例的每个中间轮 118 都限定布置在前轮 110 和后轮 114 之间的枢转点。换句话说，每个中间轮 118 都提供了用于婴儿车 1400 的枢转点，该枢转点偏离婴儿车 1400 的后端 116 和 / 或后轮 114 或者与婴儿车 1400 的后端 116 和 / 或后轮 114 横向间隔开。当侧向或基本上水平的力被施加至手柄 1422 时，由中间轮 118 提供的枢转点使得婴儿车 1400 能够相对轻松地向左或向右转动。

[0085] 图 18 是图 14 的示例婴儿车 1400 的顶面视图。如图 18 所示，由中间轮 118 提供的偏移枢转点使得婴儿车 1400 的前端 112 和婴儿车 1400 的后端 116 二者都能够相对于由其中一个中间轮 118 提供的转动枢轴以弧形路径枢转或旋转。例如，使用者可以向手柄 1622 施加转动力 1802，以绕由其中一个中间轮 118 提供的枢转点转动所示示例的婴儿车 1600。

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结果，所示示例的婴儿车 1600 可以相对紧密的旋转半径且相对轻松地绕由任一个中间轮 118 提供的枢转点转动。例如，婴儿车 1600 可以基本上在其自身长度内以完全 360 度的弧形路径转动，如由图 18 中的圆圈 1800 所反映的。

[0086] 在所示示例中，框架 1602 限定了第一侧面框架组件 1802a 和与该第一侧面框架组件 1802a 横向间隔开的第二侧面框架组件 1802b，从而限定了座椅区域 104。所示示例的中间轮 118 经由在侧面框架组件 1802a、1802b 之间延伸的轮轴 120 而彼此联接。然而，在其它示例中，可以不使用公共轮轴 120 并且中间轮 118 因此可以不相对于彼此独立地驱动或旋转。

[0087] 此外，为了当框架 1602 的前端 112 相对于框架 1602 的后端 116 被升起、提升、倾斜或以其它方式抬高时（例如，向手柄 1622 施加垂直于转动力 1802 的向下力）提供枢转轴线 132，所示示例的示例婴儿车 1600 采用轮轴 130。在所示的示例中，枢转轴线 132 位于中间轮 118 与后轮 114 之间。换句话说，枢转轴线 132 相对于中间轮 118 的旋转轴线 120a 与后轮 114 的相应旋转轴线 250a、250b 偏移。

[0088] 为了改进稳定性和 / 或便于在具有很小干涉或没有干涉的情况下塌缩婴儿车 1400，所示示例的中间轮 118 相对于前轮 110 偏移（水平）距离 1804 且相对于后轮 114 偏移距离 1806。更具体地，当婴儿车 1600 沿直线移动时，所示示例的中间轮 118 沿着路线或路径 1808 行进，所述路线或路径 1808 在前轮 110 下降或行进所沿的路线或路径 1810 的外侧以及在后轮 114 下降或行进所沿的路线或路径 1812 的外侧延伸。虽然所示示例的中间轮 118 比起前轮 110 和后轮 114 与婴儿车 1600 的纵向中心线 1814 间隔开更远的距离，但在其它示例中，中间轮 118 可以与前轮 110 和后轮 114 对齐，可以向前轮 110 和后轮 114 的内侧偏移（也就是，更接近于纵向中心线 1814），和 / 或可以向前轮 110 和后轮 114 中的第一者的外侧和向前轮 110 和后轮 114 中的不同的第二者的内侧偏移。在一些示例中，当婴儿车 1400 沿直线向前移动时，前轮 110 和后轮 114 沿着相同路线或行进路径下降。

[0089] 为了塌缩婴儿车 1600，所示示例的框架 1602 包括锁闩释放机构 1816。为了起动锁闩释放机构 1816，所示示例的锁闩释放机构 1816 包括手柄 1818。手柄 1818 支撑在延伸穿过侧面框架组件 1802a、1802b 的横杆或管 1820 上。手柄 1818 定位或位于座椅安装件 108 或上框架支撑件 206 的附近，在座椅区域 104 的婴儿座椅 106 的正下方。这一定位便于在从座椅安装件 108 移除婴儿座椅 106 时进行接近。

[0090] 图 19 是图 16 至图 18 的示例婴儿车 1600 的侧面框架组件 1802a 的左侧视图。图 20 是图 16 至图 18 的示例婴儿车 1600 的侧面框架组件 1802b 的右侧视图。参考图 19 和图 20，每个侧面框架组件 1802a、1802b 都包括绕枢转连接件 210a、210b 或毂 212a、212b 枢转地联接的下框架支撑件 204、上框架支撑件 206 和中间框架支撑件 208。

[0091] 为了将前轮 110 联接至框架 1602，侧面框架组件 1802a、1802b 采用前轮壳体 230。前轮壳体 230 使得每个前轮 110 都能够绕单独的（例如水平的）旋转轴线 236a、236b 独立地旋转，并且使得每个前轮 110 都能够绕竖直轴线 238a、238b 回转或枢转。

[0092] 为了将后轮 114 和中间轮 118 安装或附接至相应的侧面框架组件 1802a、1802b，所示示例的每个侧面框架组件 1802a、1802b 都采用壳体、毂或托架 1940（例如，摆动件）。所示示例的每个托架 1640 都包括一毂、腿或端口 1642a，以接收安装有后轮 114 的后轮壳体 244；以及毂、腿或端口 1642b，以接收联接至中间轮 118 的臂或部分 254。

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[0093] 由于左和右托架 1640 是基本上相同的，因此下面的描述将集中于一个托架 1640，来用作对于两个托架 1640 的描述。

[0094] 所示示例的后轮壳体 244 使得每个后轮 114 都能够绕单独的旋转轴线 250a、250b 独立地旋转，并且使得每个后轮 114 都能够绕基本上垂直于相应的旋转轴线 250a、250b 的基本上竖直的轴线 252a、252b 回转或枢转。托架或壳体 1940 相对于中间框架支撑件 208 绕由轮轴 130 提供的枢转轴线 132 而枢转地联接相应的一对中间轮 118 和后轮 114。

[0095] 为了当操纵婴儿车 1600 越过路缘或其它障碍物时改进稳定性和 / 或便于平衡，所示示例的示例婴儿车 1600 采用悬架装置 1928。当婴儿车 1600 的前端 110 相对于框架 1602 的后端 112 绕枢转轮轴 130 枢转或倾斜（例如相对于支撑表面（例如，地面）的向上方向）时，所示示例的悬架装置 1928 提供稳定性和 / 或便于平衡。当婴儿车 1600 被沿着一路径推动和 / 或绕枢转轴线 132 倾斜或枢转时，所示示例的悬架装置 1928 帮助防止中间轮 118 和 / 或后轮 114 分离和 / 或抬离行进表面（例如，地面）。例如，为了相对于婴儿车 1600 的后端 112 枢转或提升前轮 110，向手柄 1622 施加向下力。该向下力 1902 具有基本上垂直于施加至手柄 1622 的转动力 1802 的分量，以绕其中一个中间轮 118 转动或枢转婴儿车 1600。结果，当婴儿车 1600 的前端 110 围绕枢转轴线 132 被提升时，悬架装置 1928 帮助保持中间轮 118 和后轮 114 与行进路径接合。

[0096] 在示出的示例中，悬架装置 1928 定位成邻近于且平行于中间框架支撑件 208。在示出的实例中，悬架装置 1928 包括附接或联接至上框架支撑件 206 的第一端 1904 以及附接或联接至托架 1940 的第二端 1906。在所示的示例中，通过紧固件 1908（例如，销等）将第一端 1904 联接（例如，固定或枢转地联接）至上框架支撑件 206 并且将第二端 1906 联接（例如，固定或枢转地联接）至托架 1940。上框架支撑件 206、托架 1940、悬架装置 1928 和中间框架支撑件 208 限定了四杆式联动装置 1910。当折叠婴儿车 1600 时，该联动装置 1910 帮助辅助托架 1940 的旋转，如在下文更详细讨论的。在所示的示例中，联动装置 1910 限定了平行四边形。然而，在其它示例中，联动装置 1910 可以具有任何其它合适的形状和 / 或构造。

[0097] 图 21 是图 14 至图 20 的示例婴儿车 1600 的侧视图，其中具有示例悬架装置 1928 的局部剖切视图。所示示例的示例悬架装置 1928 是压缩弹簧 2102。为了在婴儿车 1600 的前端 112 绕枢转轴线 132 或枢轴 404 相对于婴儿车 1600 的后端 116 倾斜或提升时使得压缩弹簧 2102 能够压缩，压缩弹簧 2102 包括以可滑动的方式联接至第二部分 2106 的第一部分 2104。更具体地，第一部分 2104 被固定或联接（例如，枢转地联接）至上框架支撑件 206 并且第二部分 2106 被固定或联接（例如，枢转地联接）至托架 1940。第一部分 2104 包括销或滑块 2108，该销或滑块沿着形成在第二部分 2106 中的槽 2110 滑动或移动。因此，当婴儿车 1600 的前端 112 绕由轮轴 130 提供的枢转轴线 132 被提升时，压缩弹簧 2102 的第一部分 2104 相对于第二部分 2106 在槽 2110 中滑动，以压缩 / 解压位于弹簧筒 2112 中的弹簧。

[0098] 图 22A 至图 22D 示出了示例婴儿车 1600 的示例制动机构 2200。所示示例的制动机构 2200 由中间轮的共用轮轴 120 支撑，并且示例制动机构 2200 的制动杆或脚踏板 2202 由轮轴 130 支撑。如图 22B 和图 22C 中分别所示的，所示示例的制动杆 2202 能够绕轮轴的枢转轴线 132 在用于限制或防止中间轮 118 旋转的锁定位置 2204 与用于使得或便于中间

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轮 118 旋转的解锁位置 2206 之间选择性地移动或旋转。所示示例的制动杆 2202 包括视觉指示器 2208（例如，色彩指示器），以表示制动杆 2202 处于锁定位置 2204 和解锁位置 2206。

[0099] 还参考图 22D，所示示例的制动杆 2202 被致动或相对于轮轴 130 旋转，以起动柱塞 2210a、2210b，所述柱塞能够相对于中间轮 118 的锁定接口 2212a、2212b（例如，毂上的多个突起）移动。为了相对于中间轮 118 的相应的锁定接口 2212a、2212b 移动柱塞 2210a、2210b，所示示例的制动机构 2200 采用致动器 2214。所示示例的致动器 2214 是齿条和小齿轮组件，其中在齿轮 2220 之间定位有两个齿条 2216、2218。所示示例的齿条 2216 致动柱塞 2210b，并且所示示例的齿条 2218 致动柱塞 2210b。为了致动齿条 2216、2218，所示示例的制动机构 2200 采用线缆 2222。更具体地，线缆 2222 的第一端被附接至齿条 2216 并且线缆 2222 的第二端被附接至制动杆 2202。所示示例的线缆 2222 通过托架 1640 的臂 254 被布线至制动杆 1922。图 22D 示出了处于锁定状态的制动机构 2200。为了解锁中间轮 118，而将所示示例的制动杆 2202 旋转至解锁位置 2206（图 22）。结果，线缆 2222 朝向齿条 2218 移动（例如，拉动）齿条 2216，并且使得柱塞 2210b 与接口 2212b 分离。同时，随着齿条 2216 朝向齿条 2218 移动，齿条 2218 通过齿轮 2220 而朝向齿条 2216 移动，因而使得柱塞 2210a 与接口 2212a 分离。所示示例的致动器 2214 采用偏压元件 2224 来偏压或帮助移动齿条 2216、2218。所示示例的致动器 2214 包括由轮轴 120 联接或支撑的壳体 2226。

[0100] 图 23 和图 24 示出了图 14 至图 18 的示例婴儿车 1400 从图 14 至图 21 和图 22A 至图 22D 所示的使用中的展开位置被折叠至图 24 所示的塌缩、折叠或存放位置 2400。如上面注意到的，侧面框架组件 1802a、1802b 被构造得使得所示示例的整个婴儿车 1600 都能够在延伸、展开、使用中的位置（图 14 至图 18 和 22A 至图 22D）与塌缩、折叠或存放的位置 2400（图 24）之间选择性地移动。

[0101] 图 25A 和图 25B 示出了图 18 的锁闩释放机构 1816。参考图 23 至图 24 和图 25A 至图 25B，为了塌缩所示示例的婴儿车 1600，枢转连接件 210a、210b 的闩锁或锁定通过锁闩释放机构 1816 被释放。在解锁位置中，所示示例的枢转连接件 110a、110b 使得框架支撑件 204、206 和 / 或 208 能够相对于彼此绕由枢转连接件 210a、210b 提供的枢轴 704 旋转或枢转，所示示例的锁闩释放机构 1816 被起动。为了解锁枢转连接件 210a、210b，在婴儿座椅 106 已经被从座椅安装件 108 移除之后，所示示例的手柄 1818 首先远离框架 1602 被提升（例如，向上）。在手柄 1818 被提升之后，示例锁闩释放机构 1816 的触发器 2502 由使用者致动（例如，按压），以使得框架 1602 能够塌缩。当被起动时，所示示例的锁闩释放机构 1816 通过任何合适装置（例如，开关、锁定释放装置、拉绳等）移出与枢转连接件 210a、210b 的锁定接口的接合，以使得框架支撑件 204、206 和 208 能够相对彼此绕枢轴 704 枢转。所示示例的触发器 2502 经由位于锁闩释放机构 1816 的壳体或管 1820 中的线缆或条带而被联接至柱塞。示例锁闩机构 1818 使得能够单手操作来塌缩婴儿车 1600。

[0102] 在图 23 的所示示例中，所示示例的下框架支撑件 204 和上框架支撑件 206 沿由各箭头 2304 和 2306 所示的方向朝向中间框架支撑件 208 枢转。附加地，当向折叠位置 2400 折叠婴儿车 1600 时，所示示例的托架 1940 还沿由箭头 2308 表示的方向朝向中间车间支撑件 208 旋转。

[0103] 具体地，随着上框架支撑件 206 朝向中间框架支撑件 208 枢转，悬架装置 1928 通过沿箭头 2310 的方向朝向后轮 114 移动而作为杠杆，以使得托架 1940 沿箭头 2312 的方向

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绕枢转轴线 132 枢转。结果，随着上框架支撑件 206 朝向中间框架支撑件 208 枢转，悬架装置 1928 使得中间轮 118 同时朝向中间框架支撑件 208（经由托架 1940）枢转。

[0104] 如图 24 所示，在完全塌缩、折叠或存放位置 2400 中，所示示例的婴儿车 1600 具有相对低的轮廓和包络尺寸。如图 24 所示，悬架装置 1928 不干涉将婴儿车 1600 塌缩至折叠位置 2400。虽然示出了可塌缩框架 1602，但一些示例婴儿车可以不进行塌缩。

[0105] 在一些示例中，悬架装置 1928 由联接至轮轴 130 的扭转弹簧来实施。此外，所示示例的压缩弹簧 2102 可以由辅助框架构件或杆代替，以帮助塌缩示例婴儿车 1600。

[0106] 图 26 至图 28 示出了依照在此公开的教导而构造的另一示例婴儿车 2600。基本上类似或等同于上面描述的示例婴儿车 100 或 1600 的部件、并且具有基本上类似或等同于那些部件的功能的示例婴儿车 2600 的那些部件在下文将不再详细地描述。相反地，感兴趣的读者将参考上文的相应描述。为了便于这一过程，对于相似的结构将使用相似的附图标记。

[0107] 所示示例的示例婴儿车 2600 采用由一个或多个前轮 110、一个或多个后轮 114 和一个或多个中间轮 118 支撑的框架 2602。前轮壳体 230 将前轮 110 联接至框架 2602。托架或承载件 240 相对于框架 2602 枢转地联接中间轮 118 和后轮 114。例如，托架 240 限定了枢轴 404，中间轮 118 和后轮 114 可以相对框架 2602 围绕该枢轴 404 枢转。

[0108] 所示示例的框架 2602 限定了横向间隔开的侧面组件，以限定座椅区域 104。每个侧面组件都包括下框架支撑件 204、上框架支撑件 206 和中间框架支撑件 208。中间框架支撑件 208 经由连接件 2604（例如，毂）联接至上框架支撑件 206。与上文描述的框架 102 和 1602 不同，上框架支撑件 206 经由枢转连接件 2606 被联接至下框架支撑件 204。更具体地，连接件 2606 沿着上框架支撑件 206 的长度定位，使得连接件 2604 与枢转连接件 2606 间隔开由一部分上框架支撑件 206 限定的距离 2608。所示示例的枢转连接件 2606 提供了枢转点 2610，以使得下框架支撑件 204 能够相对于上框架支撑件 206 枢转，并且所示示例的连接件 2604 提供了枢转点 2612，以使得当婴儿车 2600 被折叠时，上框架支撑件 206 能够相对于中间框架支撑件 208 枢转。因此，中间框架支撑件 208 定位成与由枢转连接件 2606 提供的枢转点 2610 相邻或与该枢转点 2610 间隔开。图 26 中所示的示例婴儿车 2600 没有采用悬架装置。然而，在其它示例中，示例婴儿车 2600 包括悬架装置（例如，在此公开的悬架装置 128 或 1928）。

[0109] 为了便于塌缩或折叠婴儿车 2600，所示示例的框架 2602 采用辅助框架构件或杆 2614。所示示例的辅助框架构件 2614 具有联接或附接连接件 2606 的第一端以及附接或联接至托架 240 的臂 254 的第二端。所示示例的辅助框架构件 2614 基本上平行于中间框架支撑件 208。所示示例的辅助框架构件 2614 通过枢转连接件 2606 被枢转地联接至下框架支撑件 204 和上框架支撑件 206。

[0110] 图 27 和图 28 示出了图 26 的示例婴儿车 2600 从图 26 所示的使用中的展开位置折叠至图 28 所示的塌缩、折叠或存放位置 2800。框架 2602 构造得使得所示示例的整个婴儿车 2600 能够在延伸、展开、使用中的位置（图 26）与塌缩、折叠或存放的位置 2800（图 28）之间选择性地移动。为了塌缩所示示例的婴儿车 2600，通过任何合适的装置（例如，开关、锁定释放装置、拉绳等）来起动锁闩释放装置，以解锁锁闩机构，并且使得框架支撑件 204、206 和 / 或 208 和辅助框架构件 2614 能够相对于彼此绕由枢转连接件 2606 提供的枢轴 2610 和由连接件 2604 提供的枢轴 2612 旋转或枢转。在示出的示例中，下框架支撑件 204

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沿箭头 2702 的方向朝向中间框架支撑件 208 枢转，并且上框架支撑件 206 沿箭头 2704 的方向朝向中间框架支撑件 208 枢转。

[0111] 更具体地，上框架支撑件 206 绕连接件 2604 枢转，使得上框架支撑件 206 的在连接件 2604 和 2606 之间延伸的部分 2608 作为杠杆。随着上框架支撑件 206 绕枢轴 2612 朝向中间框架支撑件 208 枢转，上框架支撑件 206 使得辅助框架构件 26148 沿箭头 2708 的方向（例如，向上方向）移动。继而，辅助框架构件 2614 使得或拉动使得托架 240 的臂 254 沿由箭头 2710 所示的方向朝向中间框架支撑件 208 枢转。结果，当将婴儿车 2600 折叠至折叠位置 2800 时，所示示例的托架 240 沿由箭头 2710 表示的方向朝向中间框架支撑件 208 绕枢轴 140a、404 旋转。框架 2602 的手柄 2722 可以沿箭头 2714 的方向绕枢轴 2712 朝向上框架支撑件 206 旋转。

[0112] 如图 28 所示，在完全塌缩、折叠或存放位置 2800 中，所示示例的婴儿车 2600 具有相对低的轮廓或包络尺寸。虽然示出了可塌缩框架 2602，但一些示例婴儿车可以不进行塌缩。

[0113] 图 29 是示例方法 2900 的流程图，该方法可被用于制造示例婴儿车，例如图 1 至图 8、图 9A、图 9B 和图 10 的示例婴儿车 100、图 11 的示例婴儿车 1100、图 12 至图 15 的示例婴儿车 1200、图 16 至图 21、图 22A 至图 22D、图 23、图 24、图 25A 和图 25B 的示例婴儿车 1600 以及图 26 至图 28 的示例婴儿车 2600。虽然示出了制造示例覆盖组件的示例方式，但在图 29 中示出的一个或多个块和 / 或过程可被组合、分割、再排列、省略、消除和 / 或以其他任何方式而实施。仍进一步的，图 29 的示例方法可以包括除了图 29 中所示的过程和 / 或块之外或作为图 29 中所示的过程和 / 或块代替物的一个或多个过程和 / 或块，和 / 或可以包括多于所示的过程和 / 或块中的任意一个或全部的过程和 / 或块。此外，虽然参考图 29 所示流程图描述了示例方法 2900，但可以另选地使用制造覆盖组件的很多其它方法。

[0114] 为了开始图 29 的示例组装过程，将前轮安装至框架的前部（块 2902）。例如，在此公开的所示示例的前轮 110 经由前轮壳体 230 被安装至下框架支撑件 204。

[0115] 将后轮和中间轮也安装至框架（块 2904）。更具体地，将中间轮定位在后轮和前轮之间，并且该中间轮和后轮 114 经由第一托架 240、1940 被安装至第一侧面框架组件 202a、1202a、1802a、2602a，并且第二组中间轮 118 和后轮 114 经由第二托架 240、1940 被安装至第二侧面框架组件 202b、1202b、1802b、2602b。

[0116] 在后轮和中间轮之间提供枢转轴，以使得后轮和中间轮能够绕枢转轴线枢转（块 2808）。例如，由在第一和第二侧面框架组件 202a、202b ;1202a、1202b ;1802a、1802b ;2602a、2602b 之间延伸的轮轴 130 来提供枢转轴线 132。具体地，托架 240、1640 安装至轮轴 130 的每一端，以将托架 240、1640 枢转地安装至婴儿车的框架。更具体地，中间轮 118 经由臂 254 被安装至托架 240、1640，并且后轮经由后轮壳体 244 被安装至托架 240、1640。在一些示例中，第一和第二侧面框架组件 202a、202b ;1202a、1202b ;1802a、1802b ;2602a、2602b 的中间轮 118 经由轮轴 120 被以可旋转的方式联接在一起。

[0117] 在一些示例中，示例婴儿车可构造有悬架，当婴儿车绕枢转轴线 132 旋转时该悬架提供增加的力，以相对于后端 116 提升婴儿车的前端 112。例如，在此公开的示例婴儿车可构造有悬架装置 128、1928。例如，悬架装置 128 被联接或附接至轮轴 130 或枢转轴线 132 以及中间框架支撑件 208。另选地，悬架 1928 被附接至上框架支撑件 206 和托架 240、1940，

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而邻近中间框架支撑件 208。

[0118] 虽然已经在此描述了一些示例方法、装置和制造环节，但该专利的覆盖范围并不限于此。相反地，该专利覆盖了直接落入本专利的权利要求的范围内的全部方法、装置和制造环节。

[0119] 相关申请的交叉引用

[0120] 本申请要求于 2013 年 1 月 7 日提交的名为“容易操纵的婴儿车 (Maneuverable Strollers)”的、序列号为 61/749,728 的美国临时专利申请的优先权，该专利申请的全部内容通过引用并入本文。

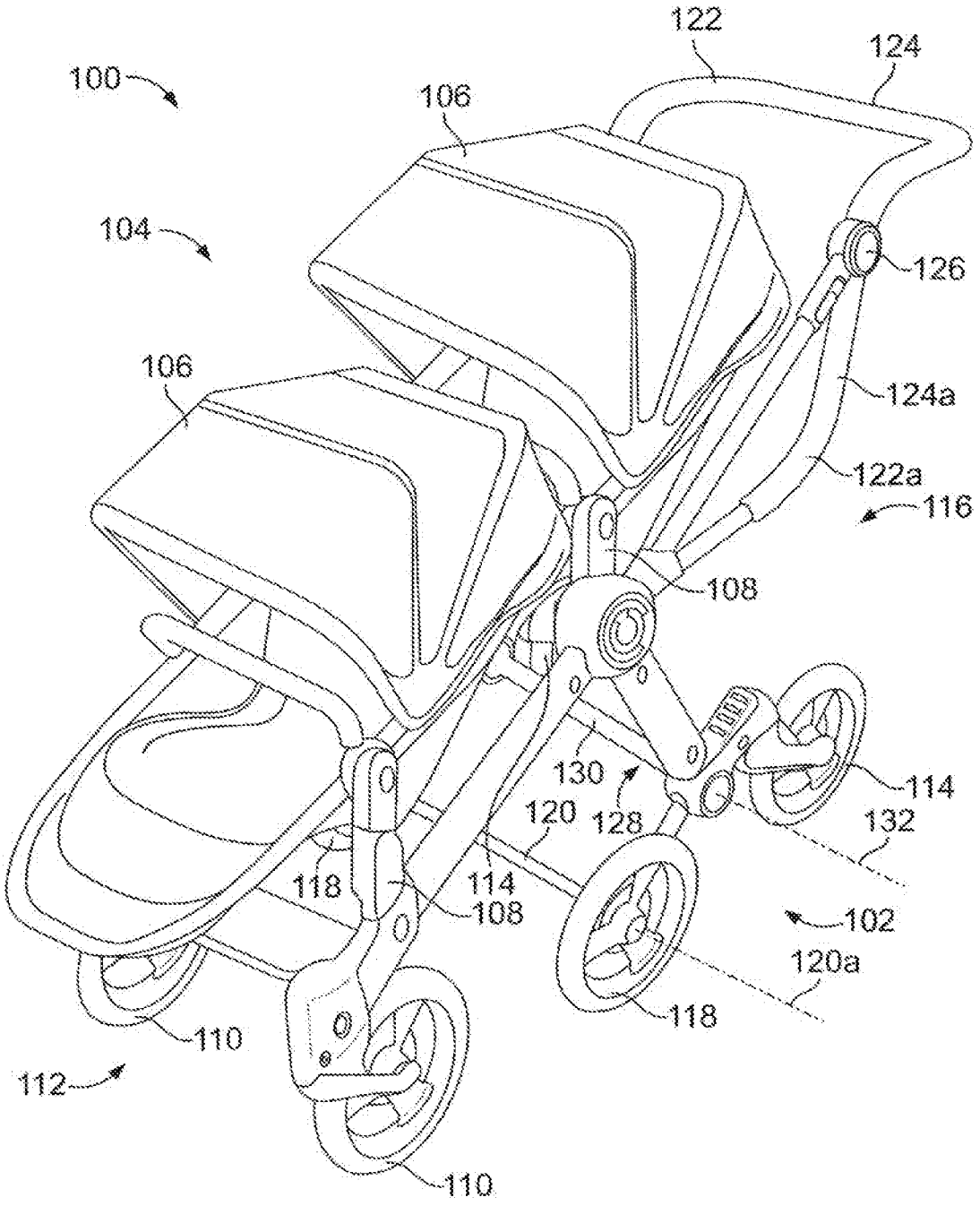
122
124
100
106
104
126
106
124a
122a
116
108
130
114
120
128
132
118
114
108
102
120a
118
110
112
110

图 1

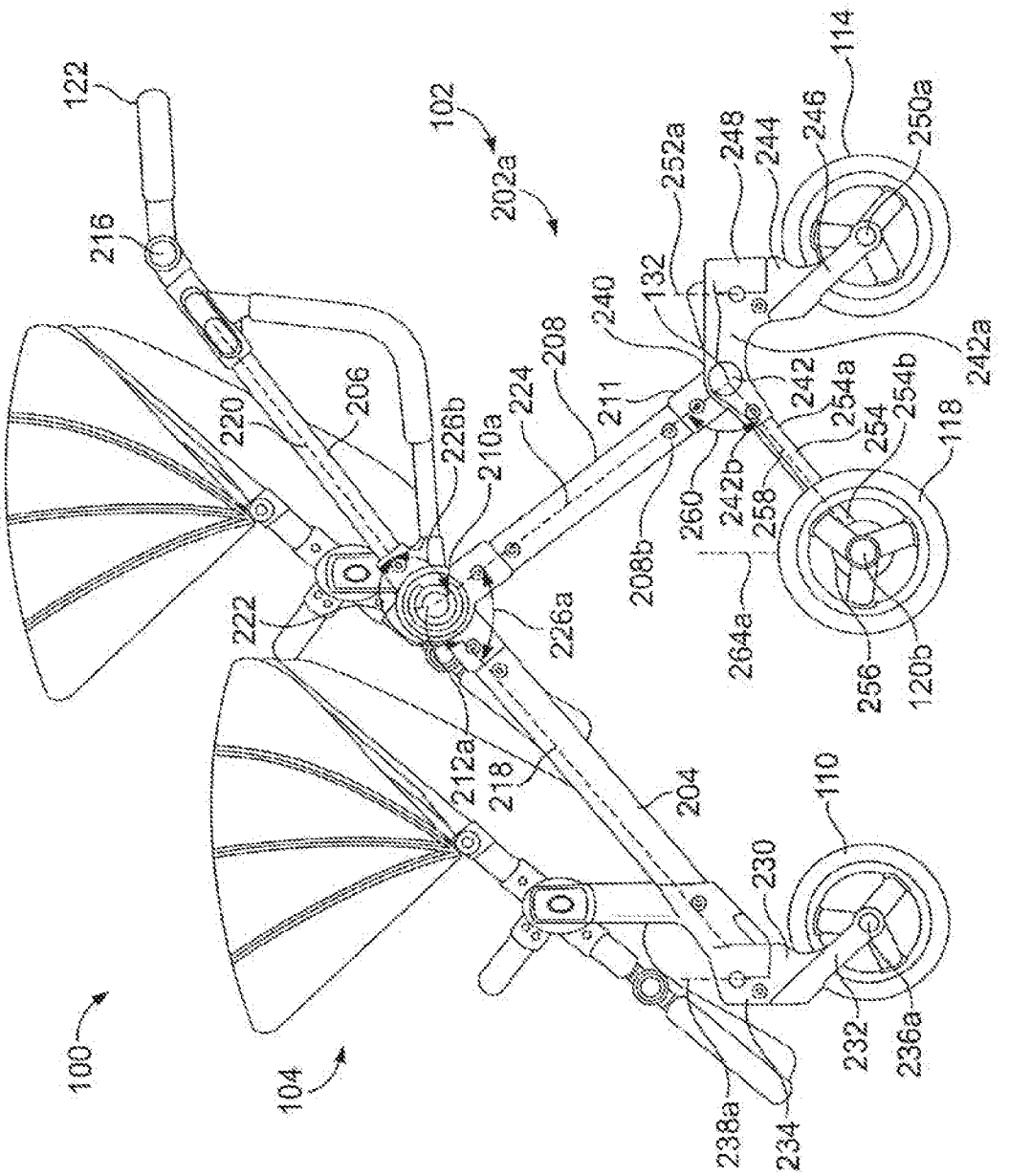
100
102
104
110
114
118
120b
122
202a
204
206
208
208b
210a
211
212a
216
218
220
222
224
226a
226b
230
232
234
236a
238a
240
242
242a
242b
244
246
248
250a
252a
254
254a
254b
256
258
260
264a
132

图 2

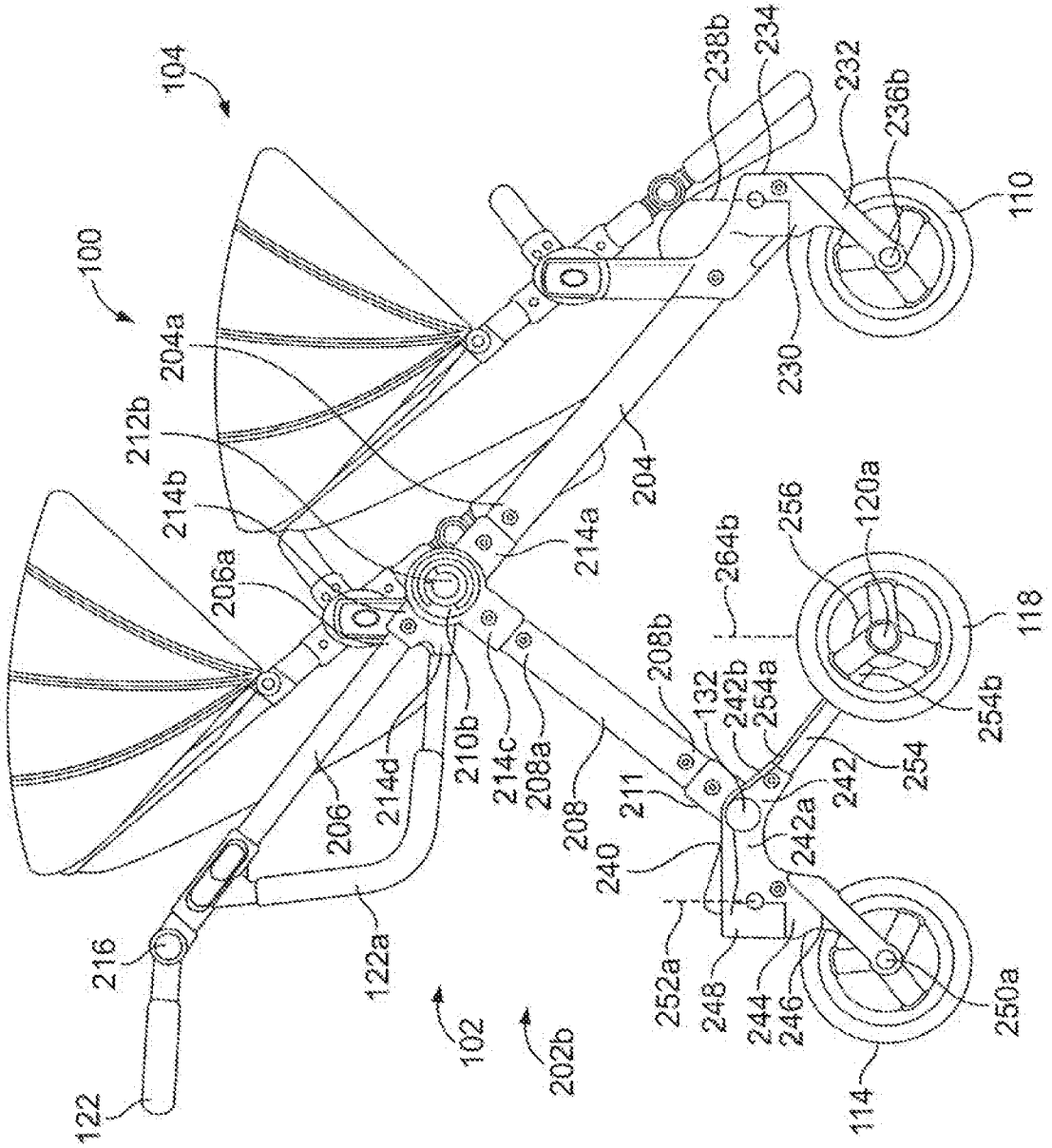
104
100
238b
234
232
236b
110
230
204a
212b
214b
206a
204
214a
256
120a
264b
118
208b
132
242b
254a
254b
254
242
242a
211
208
214c
208a
210b
214d
206
240
252a
248
244
246
250a
114
216
122a
122
102
202b

图 3

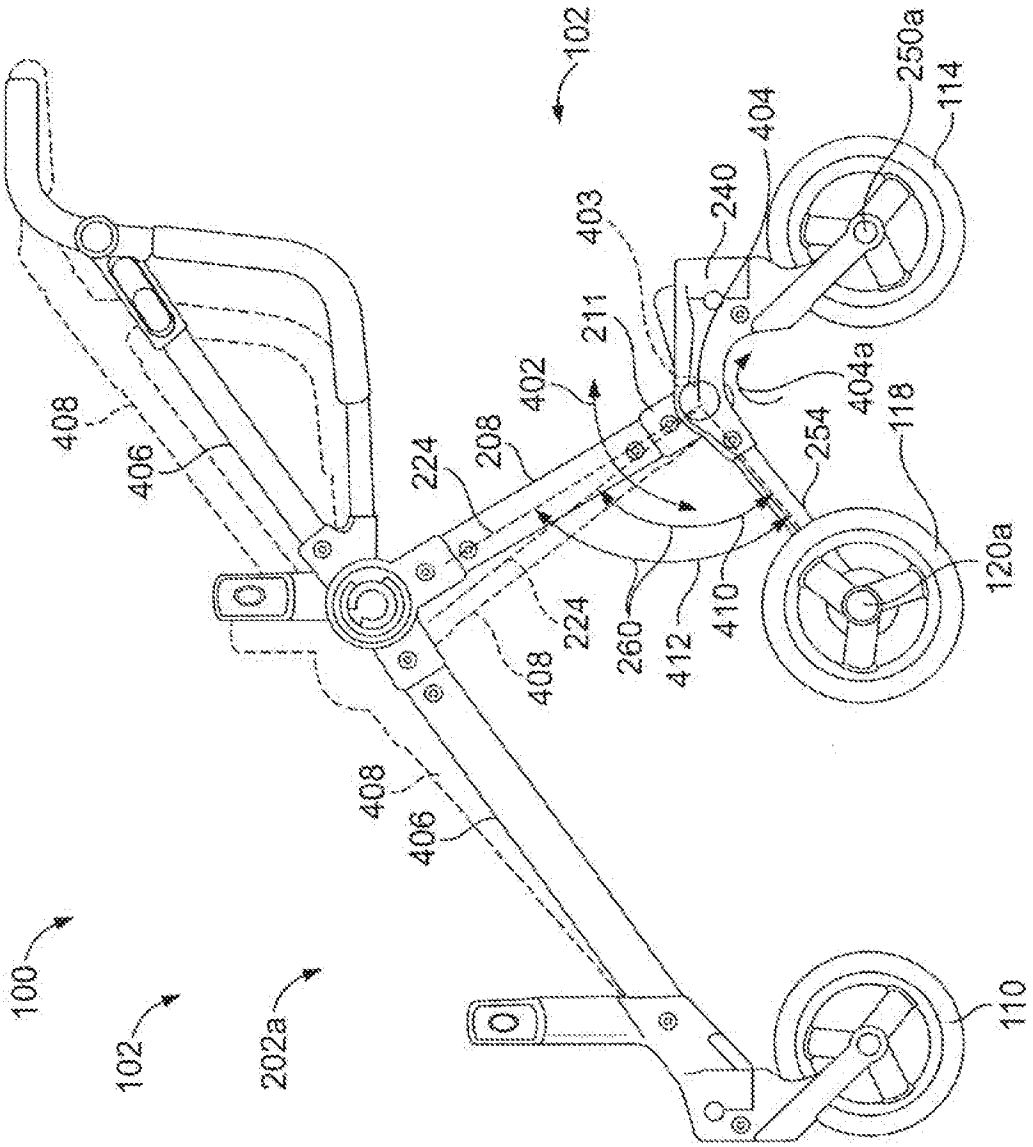
102
250a
114
404
240
403
211
402
404a
118
254
208
224
408
406
120a
410
412
260
224
408
408
406
100
102
202a
110

图 4

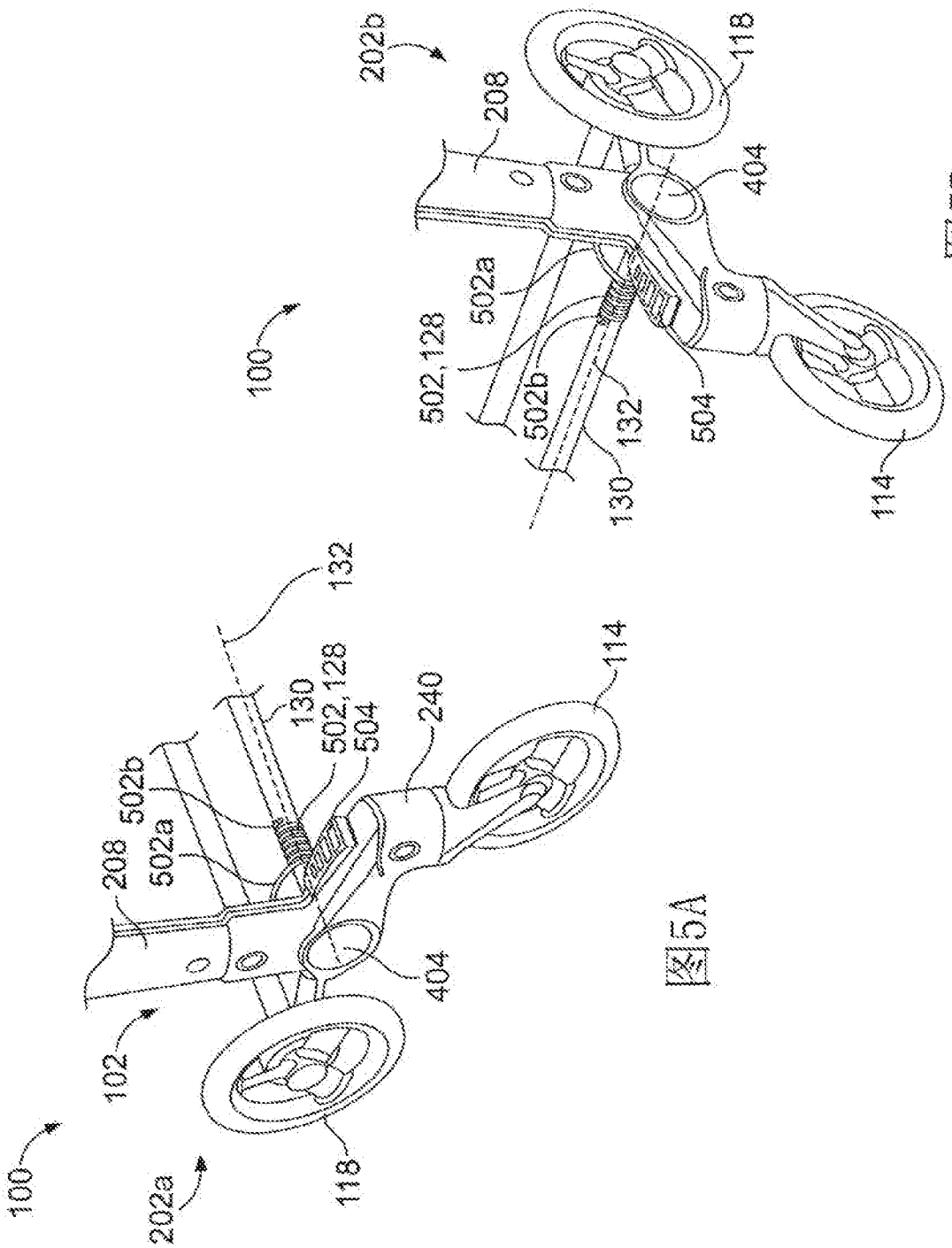
100
102
202a
118
208
502b
502a
132
130
502,128
504
240
114
404
202b
118
208
404
502a
502,128
502b
132
504
130
114

图5A

图5B

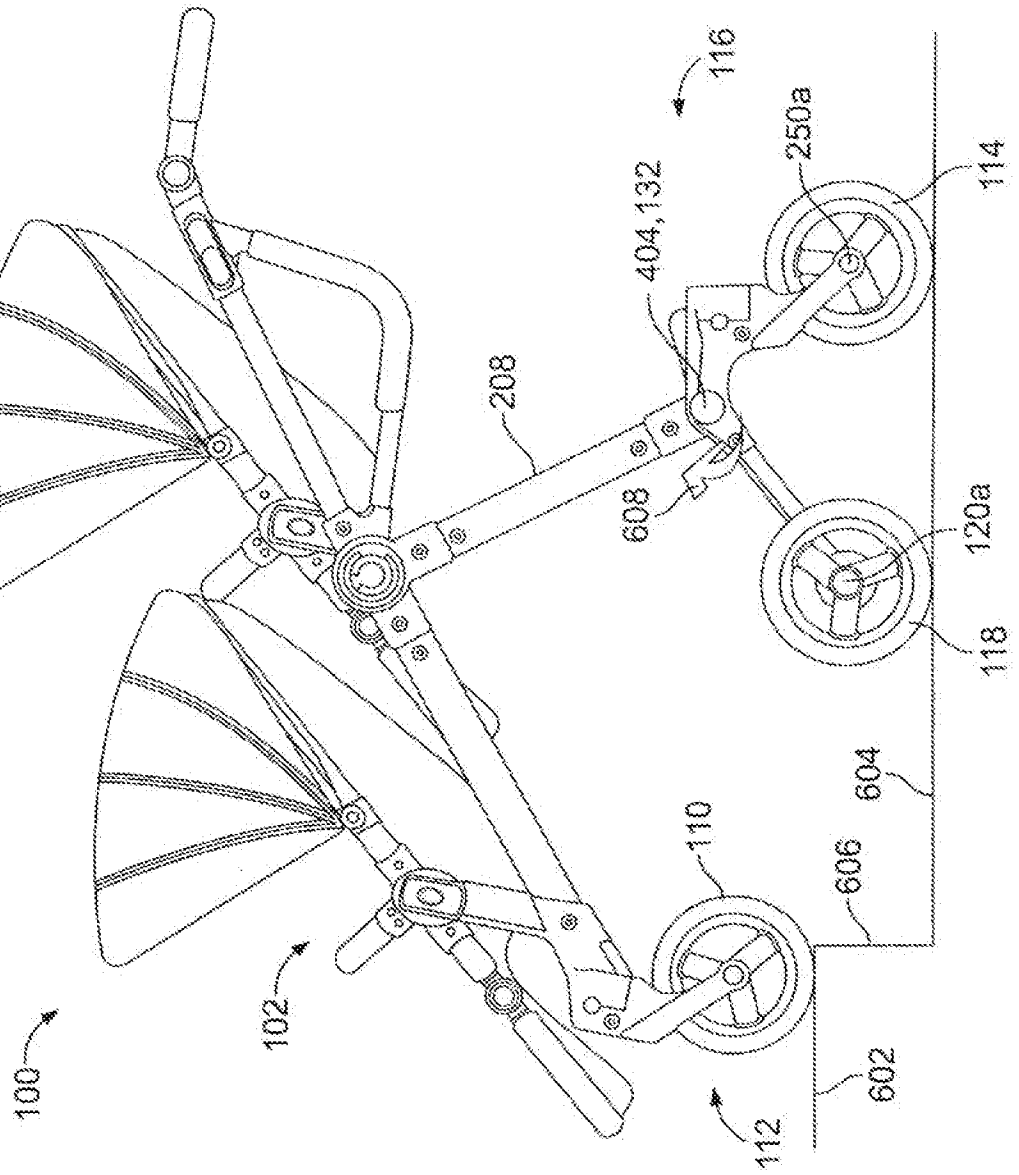
116
250a
114
404,132
208
608
120a
118
604
606
110
602
102
100
112

图 6

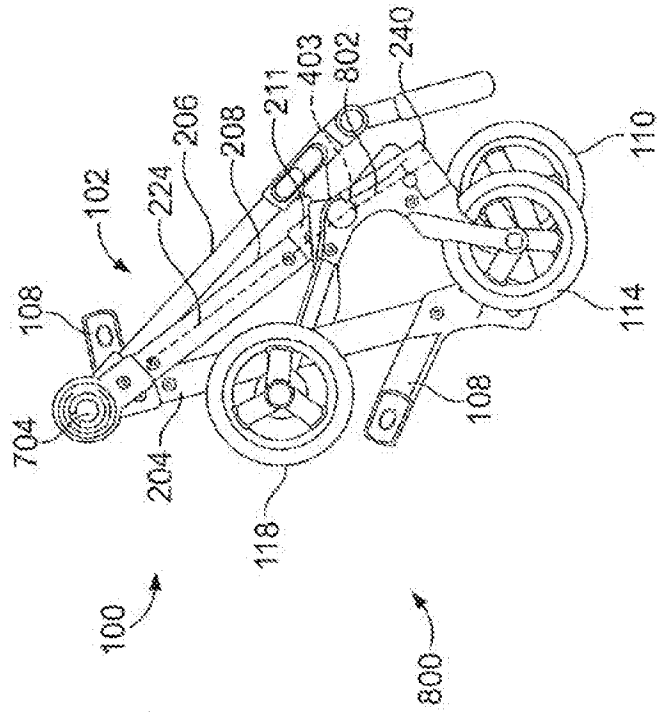
102
224
206
208
211
403
802
240
110
114
108
704
204
118
100
800

图8

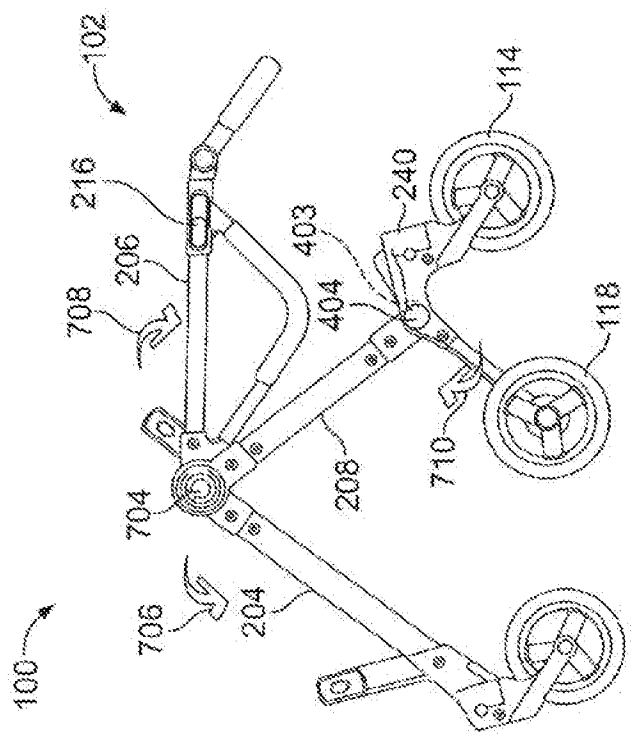
102
216
206
708
403
240
404
114
118
710
208
704
706
204
100

图7

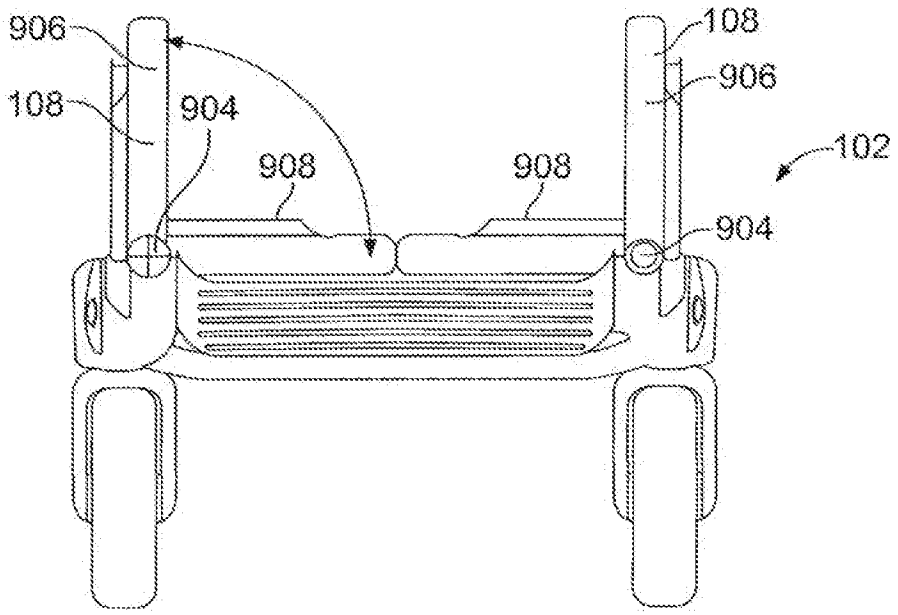

图 9A

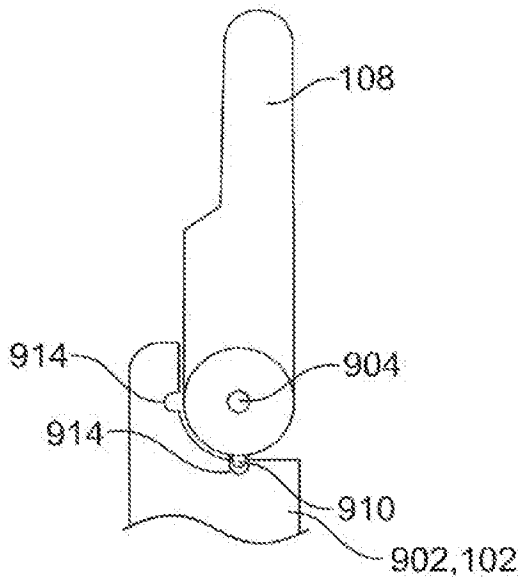

图 9B

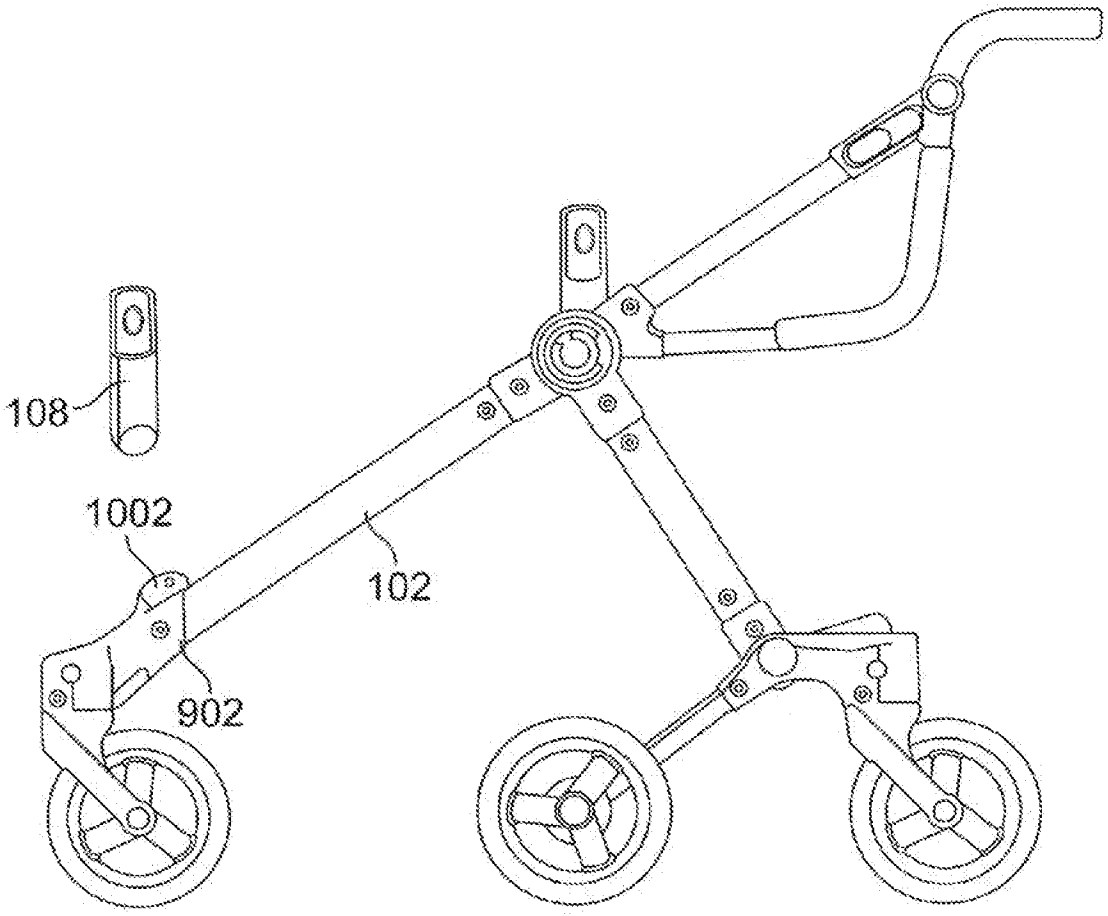

图 10

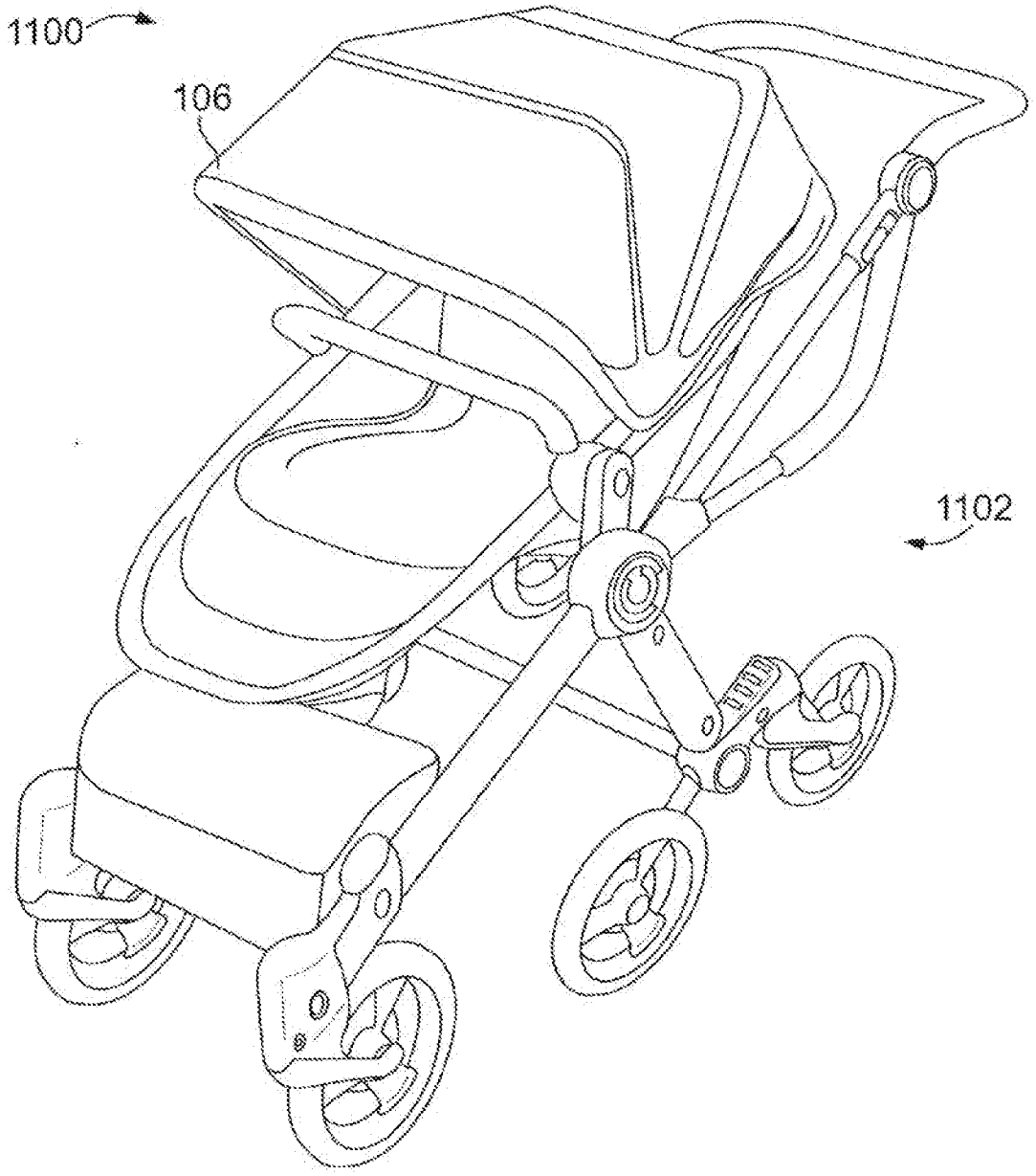

图 11

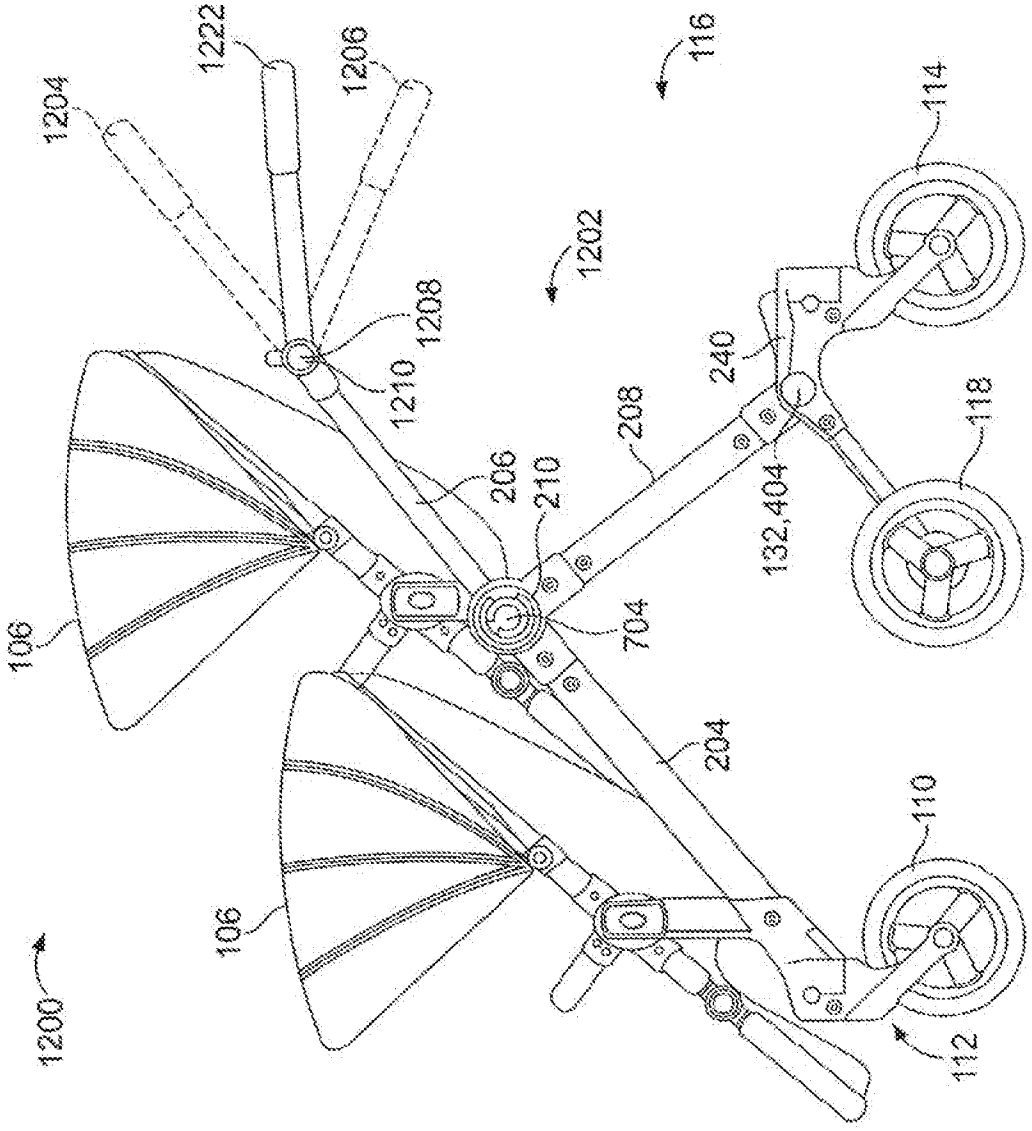
1222
1206
1204
116
114
1202
1208
1210
240
208
206
210
118
132,404
704
106
204
110
106
1200
112

图 12

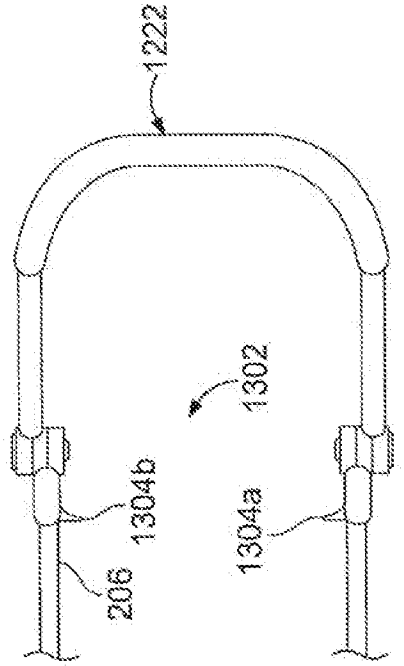
1222
1302
1304b
1304a
206

图 13

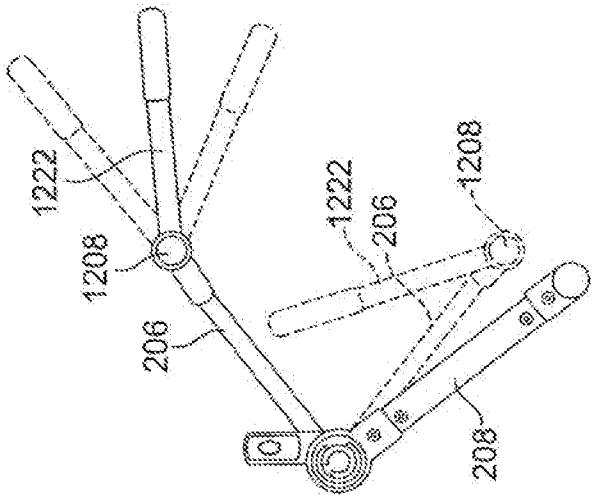
1222
1208
206
1222
206
1208
208

图 14

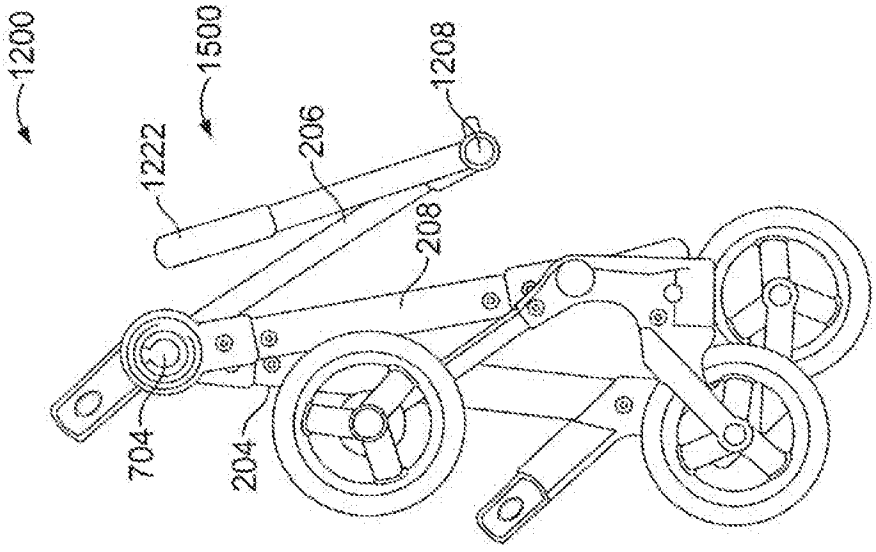
1200
1500
1208
1222
206
208
704
204

图 15

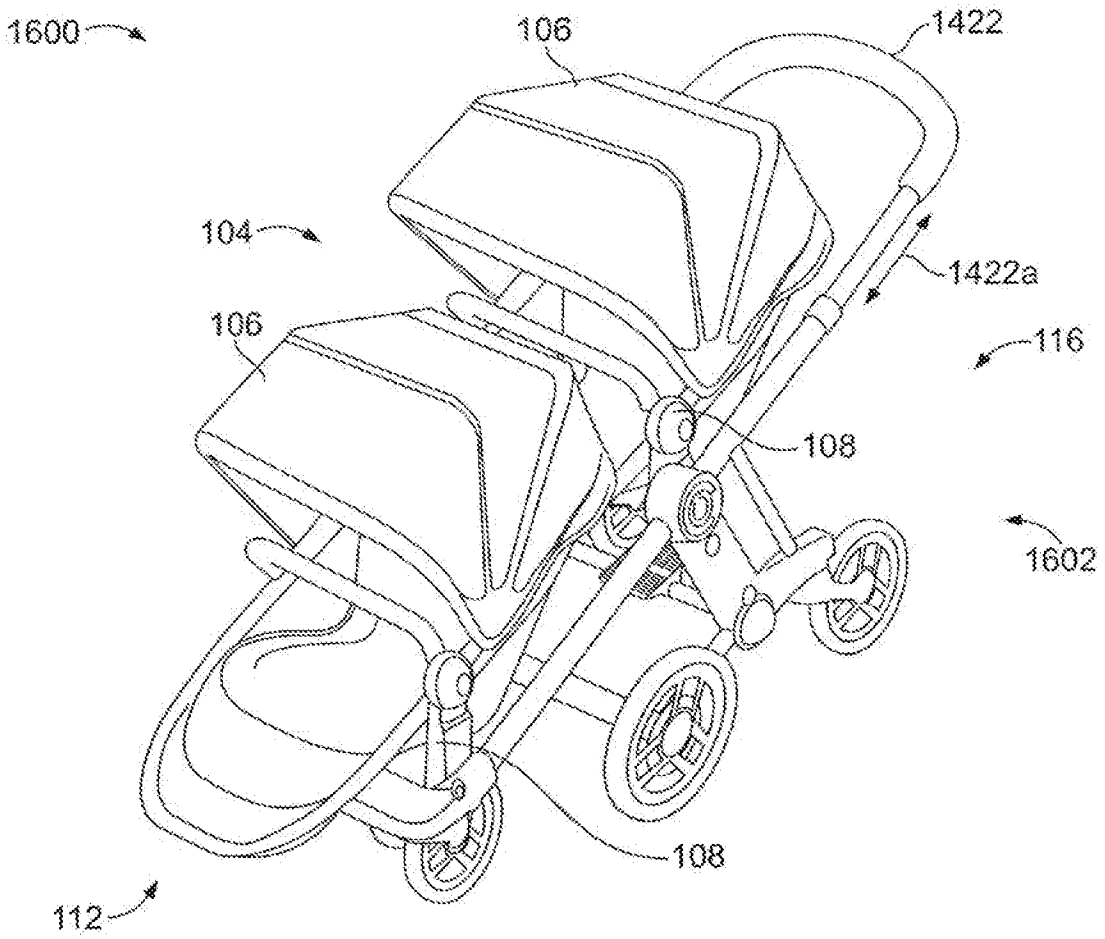

图 16

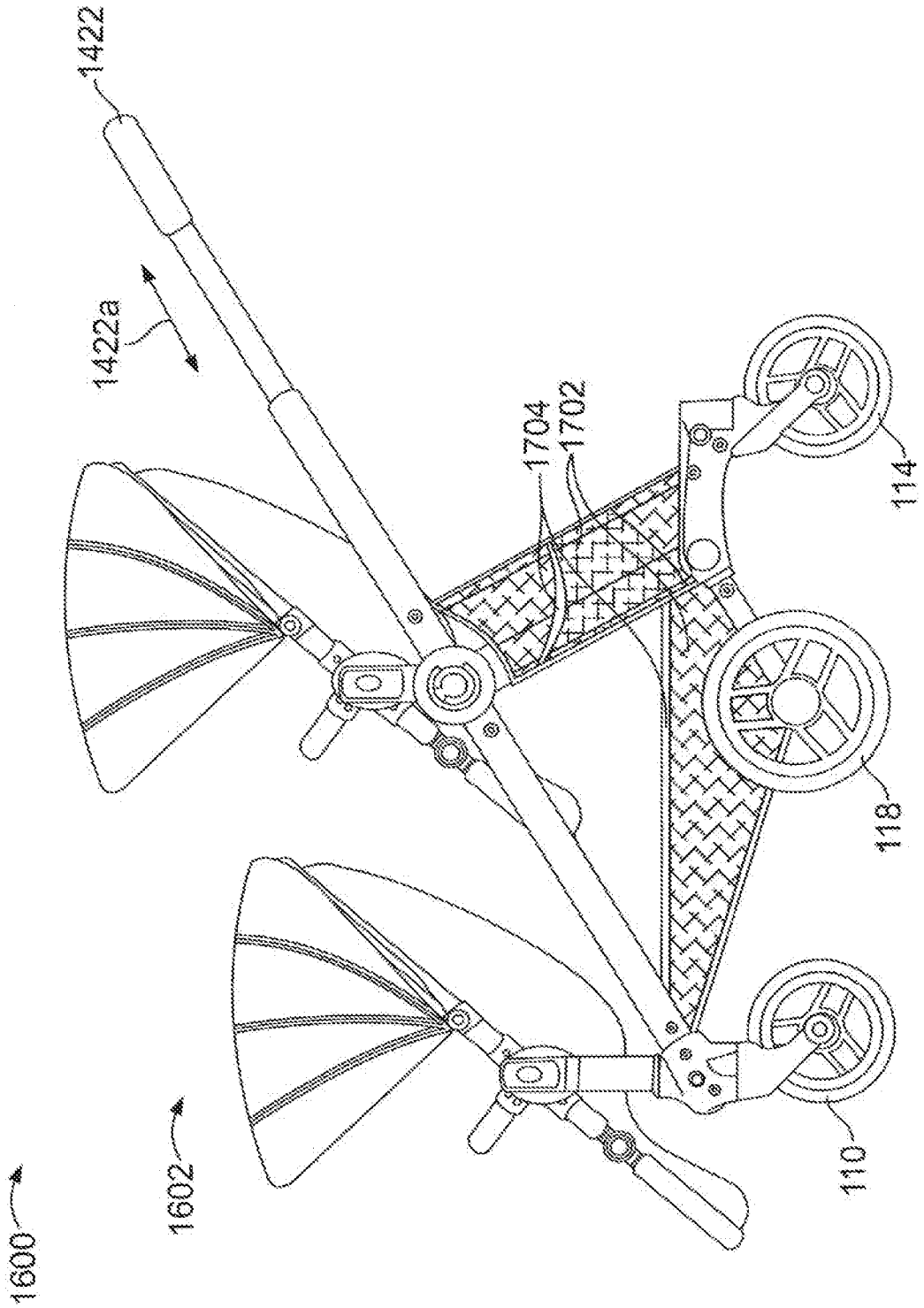

图 17

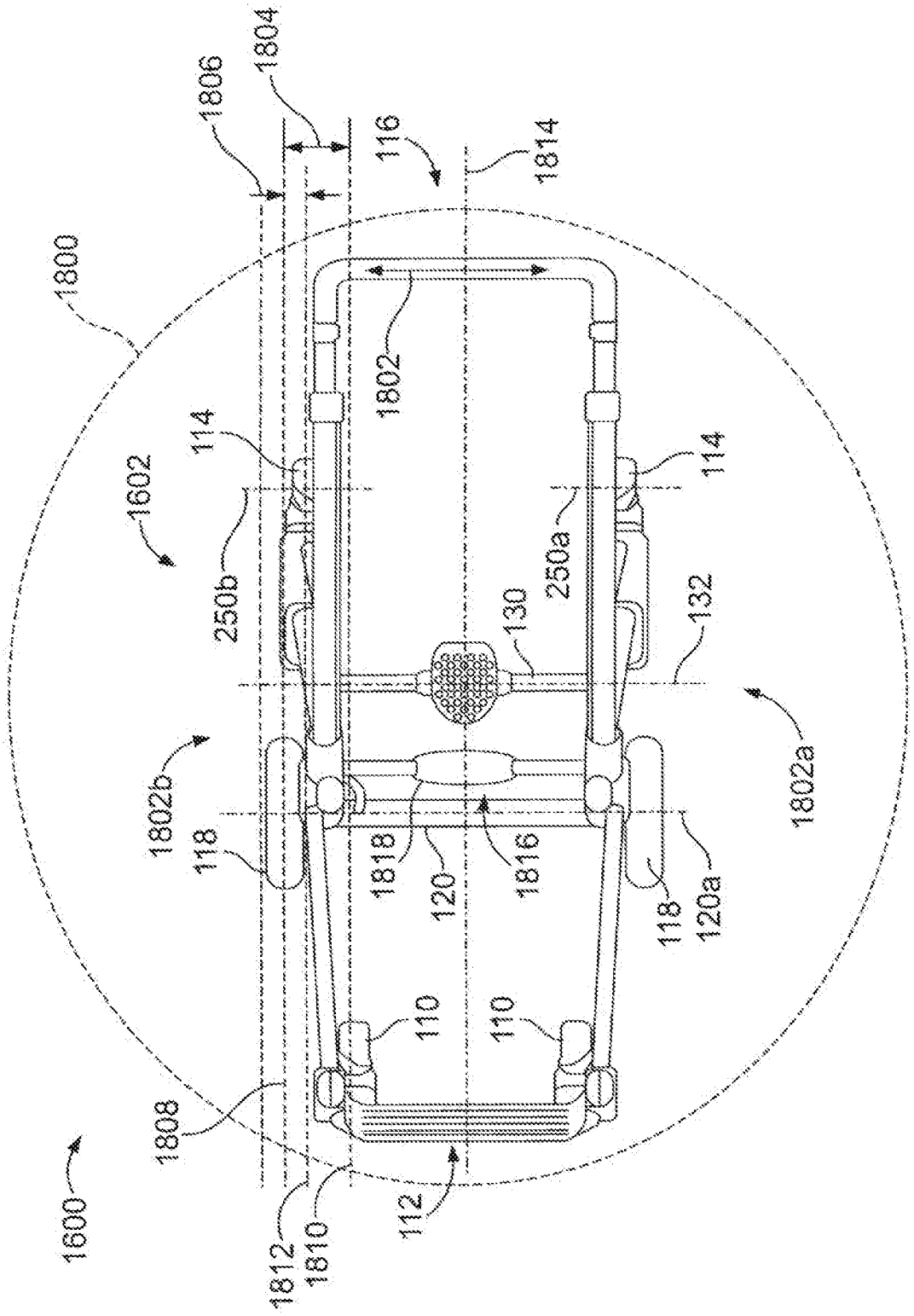
1804
1806
116
1814
1800
1802
114
1602
250b
250a
114
130
132
1802b
1802a
118
1818
120
1816
118
120a
110
110
1808
1600
112
1812
1810

图 18

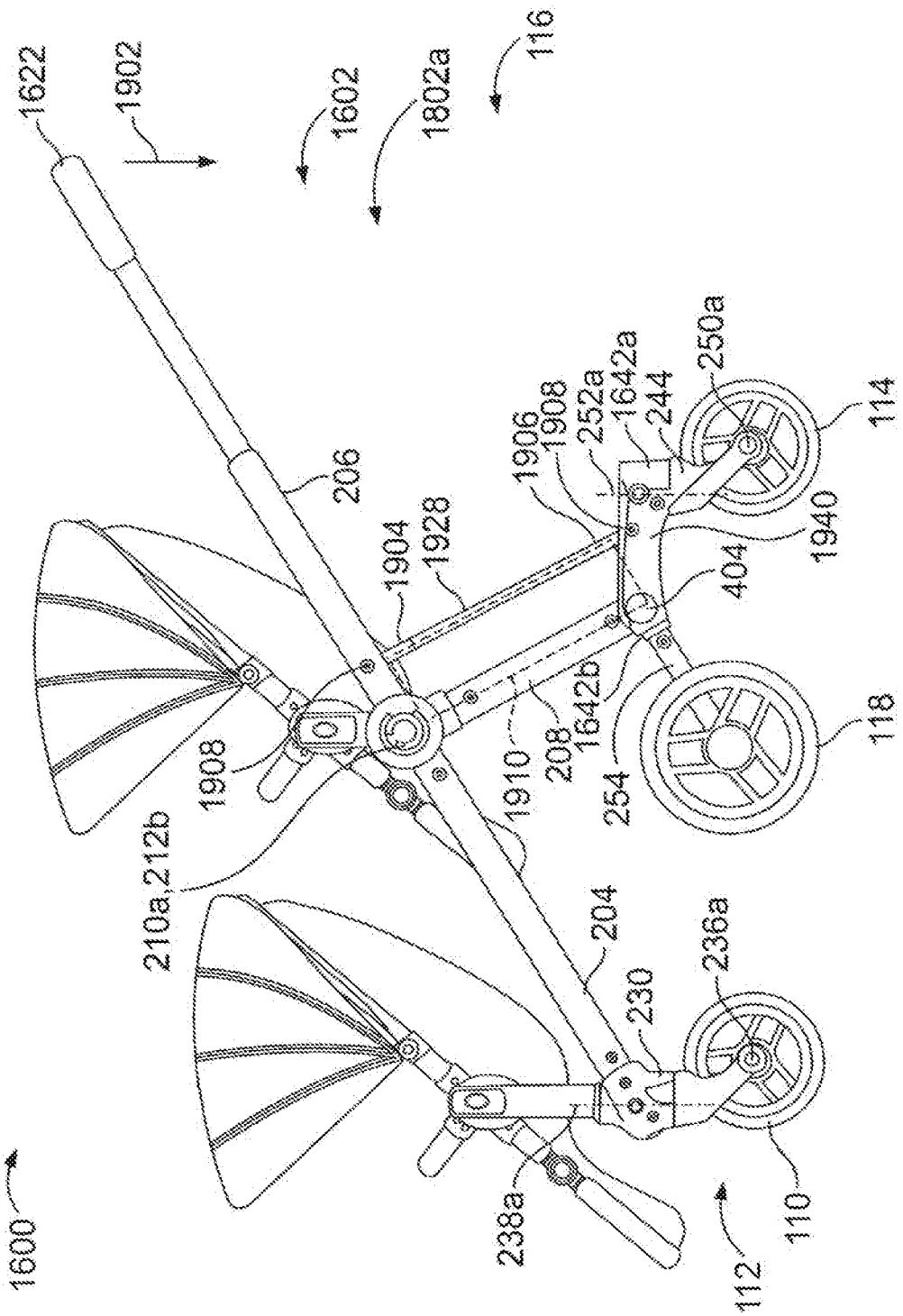
1622
1902
1602
1802a
116
206
1904
1928
1906
1908
252a
1642a
244
250a
114
1940
404
1642b
208
1910
254
118
1908
210a,212b
204
230
236a
238a
1600
112
110

图 19

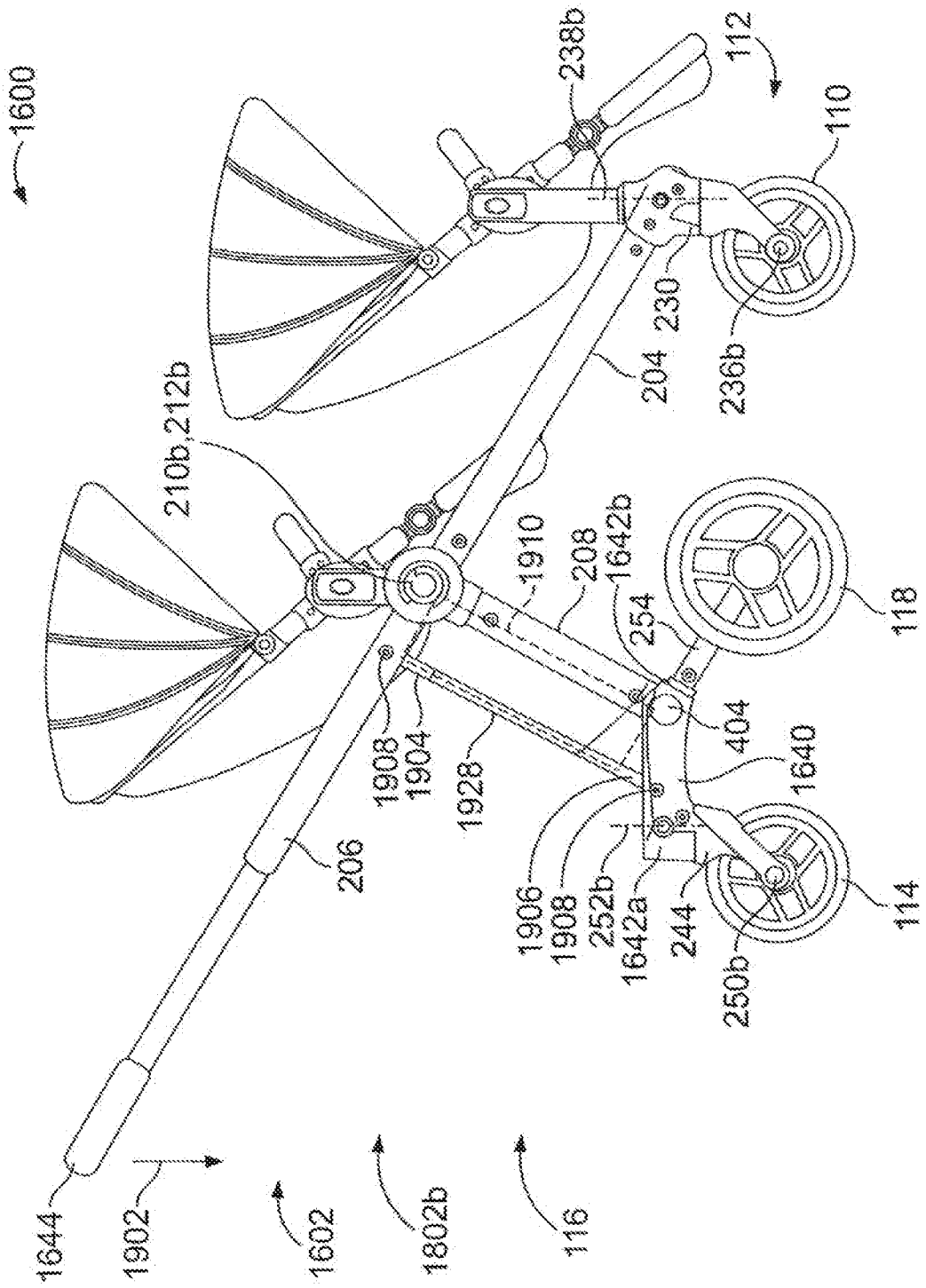
1600
238b
112
110
230
204
236b
210b,212b
1910
208
1642b
254
118
404
1640
1908
1904
1928
206
1906
1908
252b
1642a
244
250b
114
1644
1902
1602
1802b
116

图 20

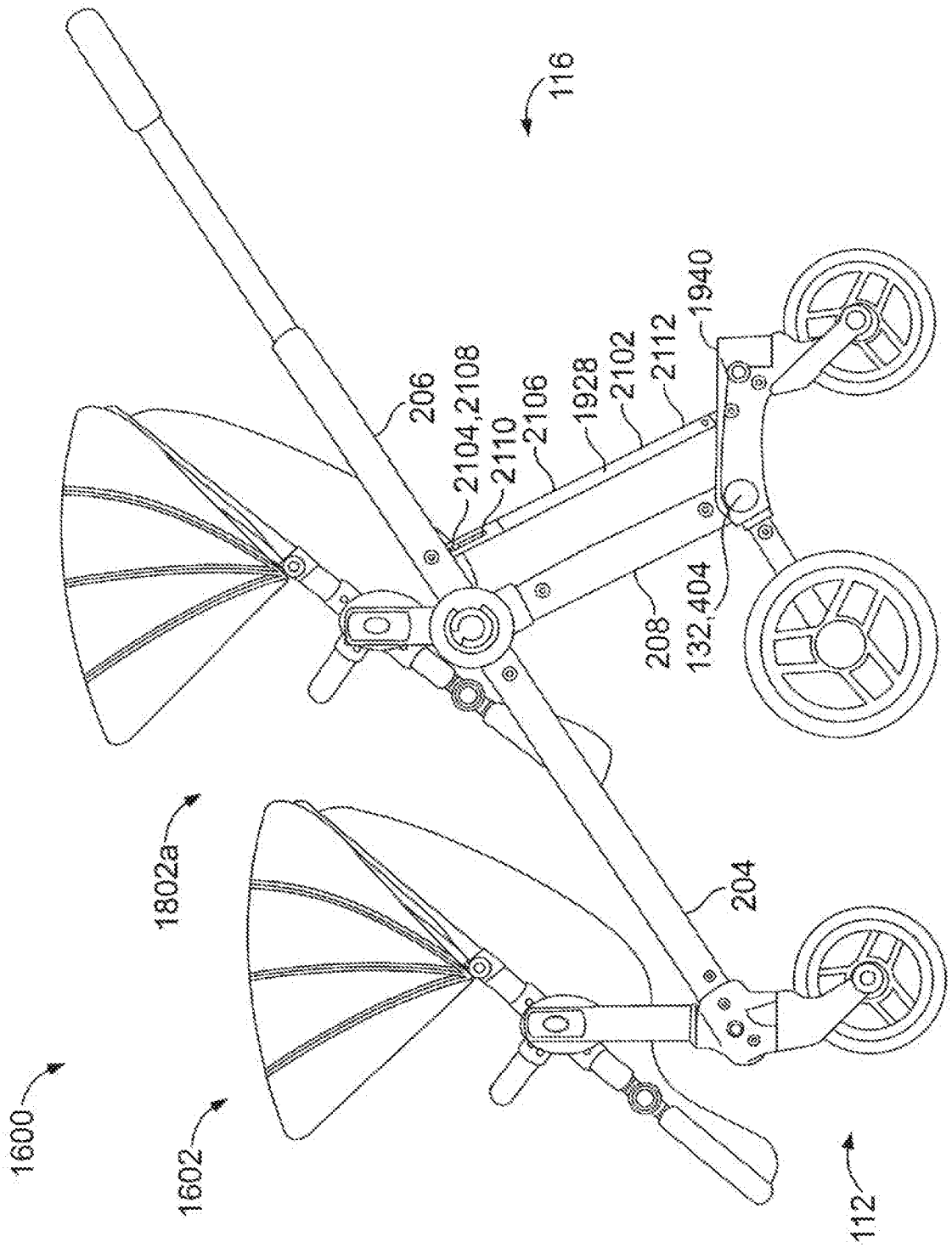

图 21

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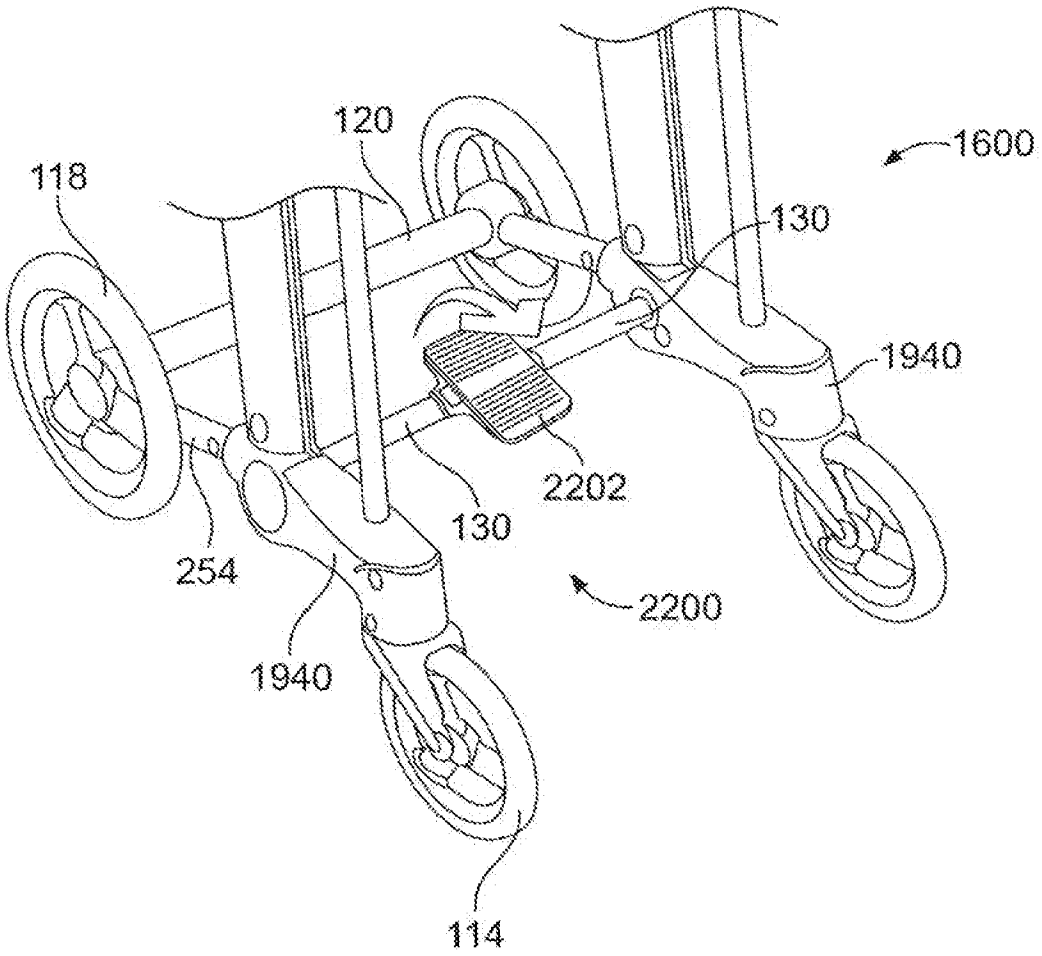

图 22A

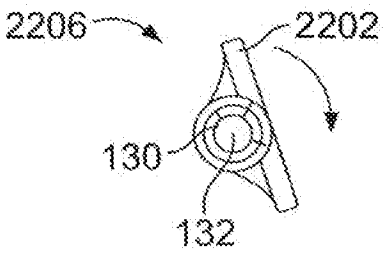

图 22B

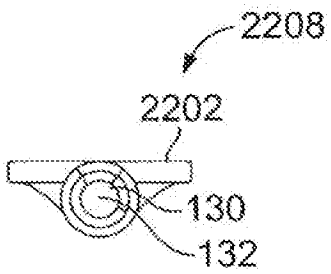

图 22C

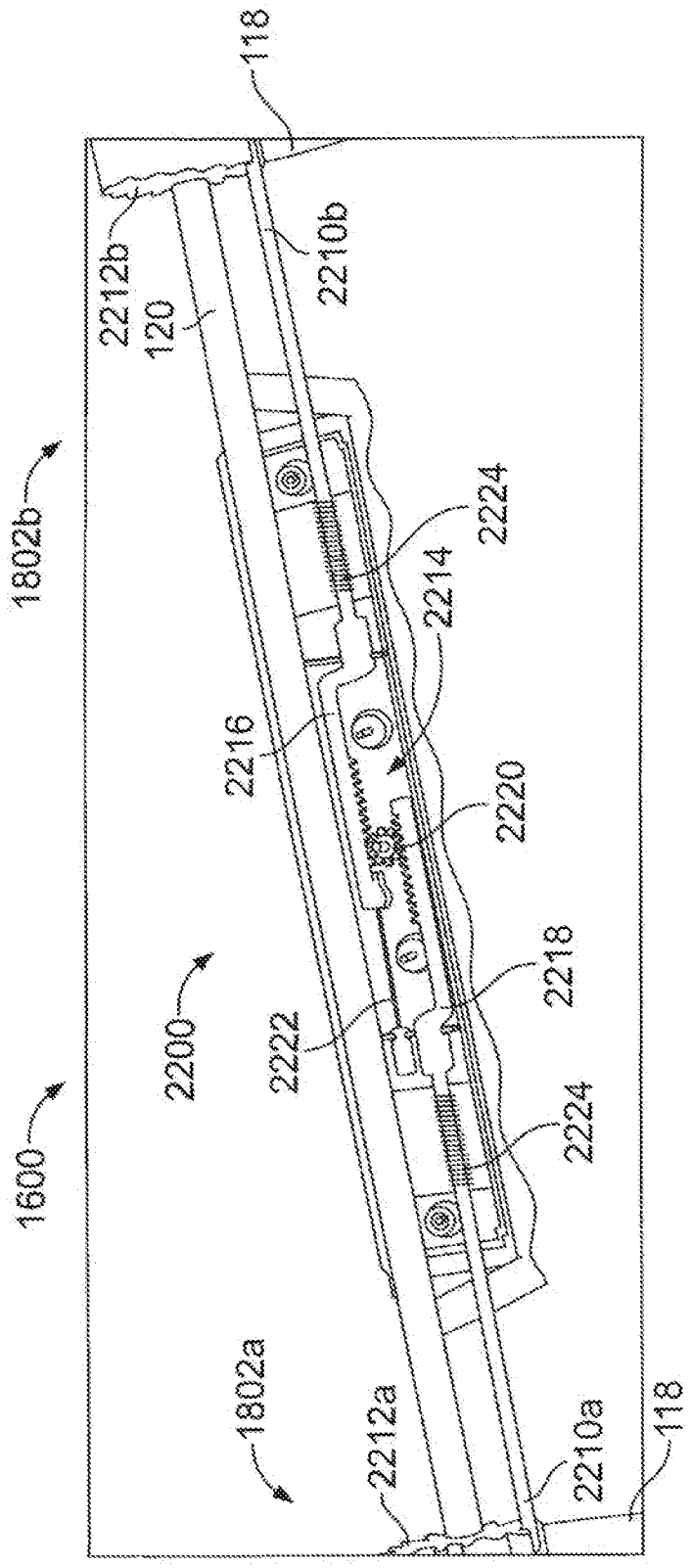
118
2212b
2210b
120
1802b
2224
2214
2216
2220
2218
2200
2222
2224
1600
1802a
2212a
2210a
118

图 22D

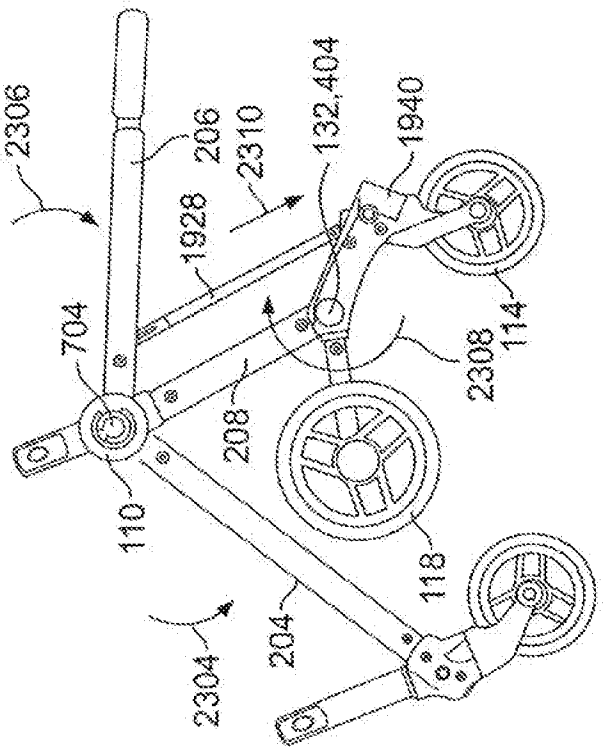
2306
206
2310
132,404
1940
1928
704
2308
114
208
110
118
204
2304

图 23

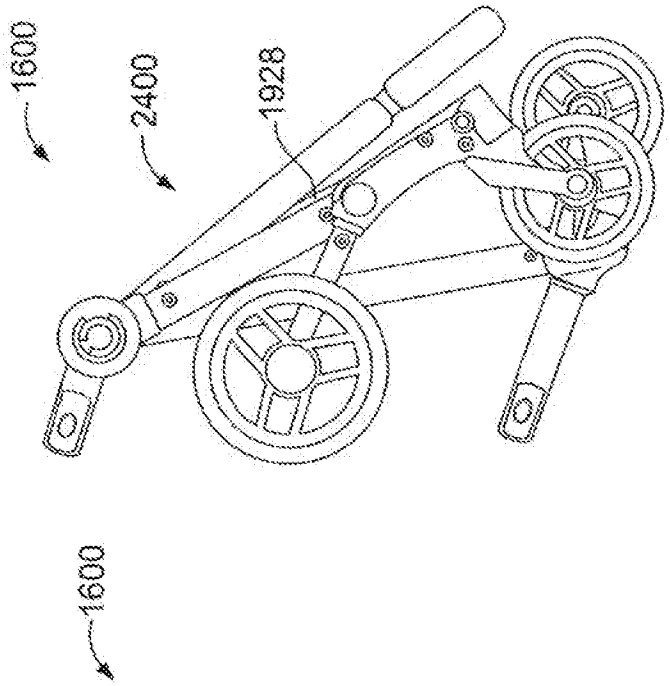
1600
2400
1928
1600

图 24

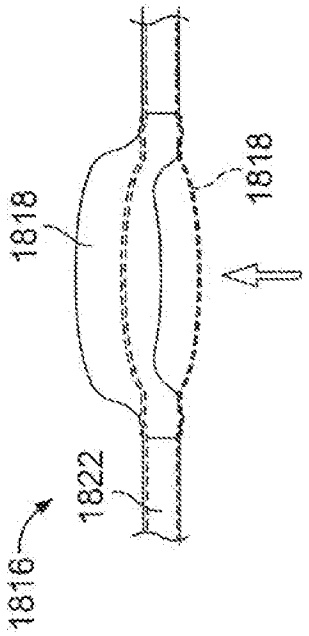
1818
1818
1822
1816

图 25A

图 25B

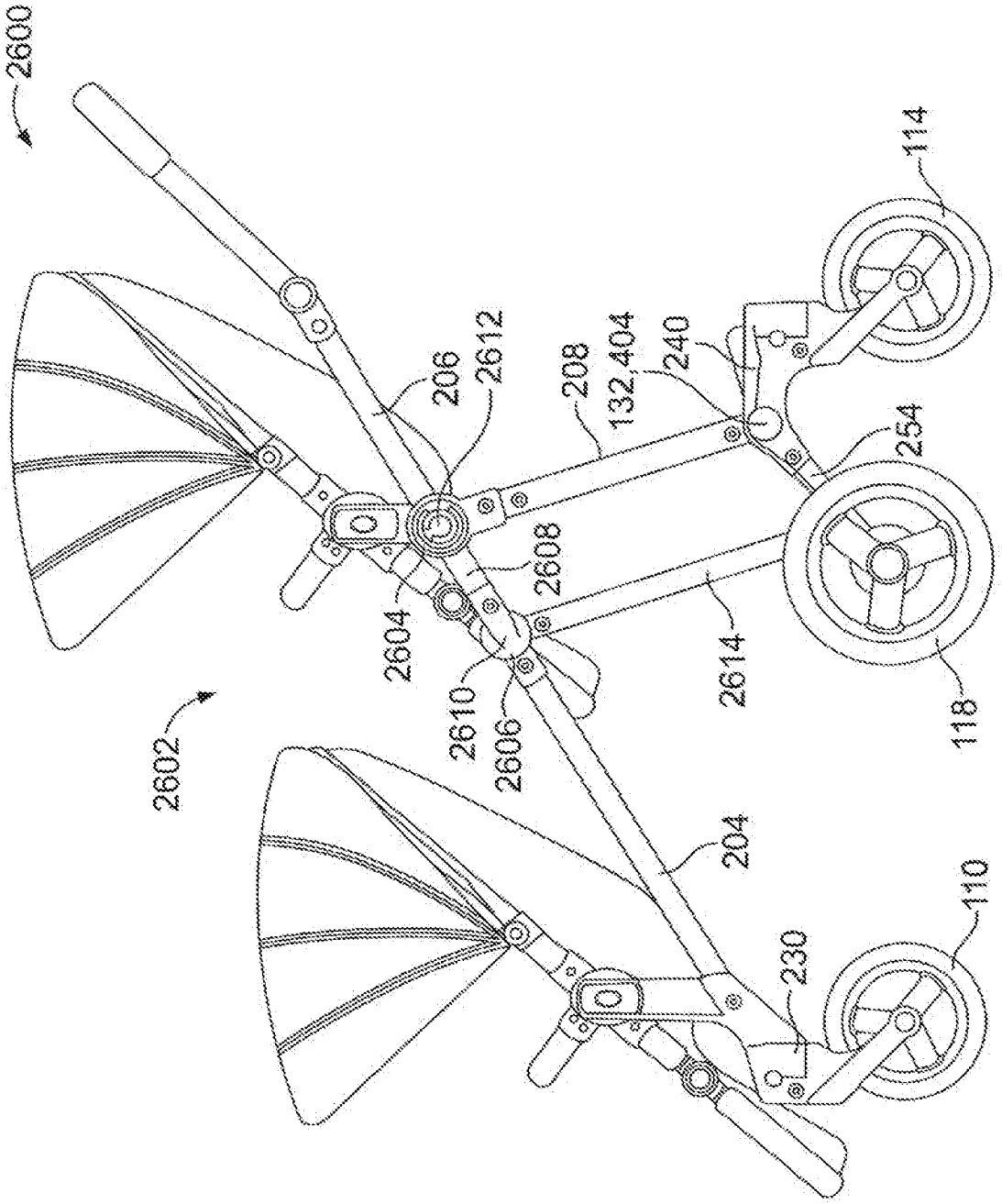
2600
114
206
2612
208
132,404
240
254
2608
2604
2610
2606
2614
118
2602
204
110
230

图 26

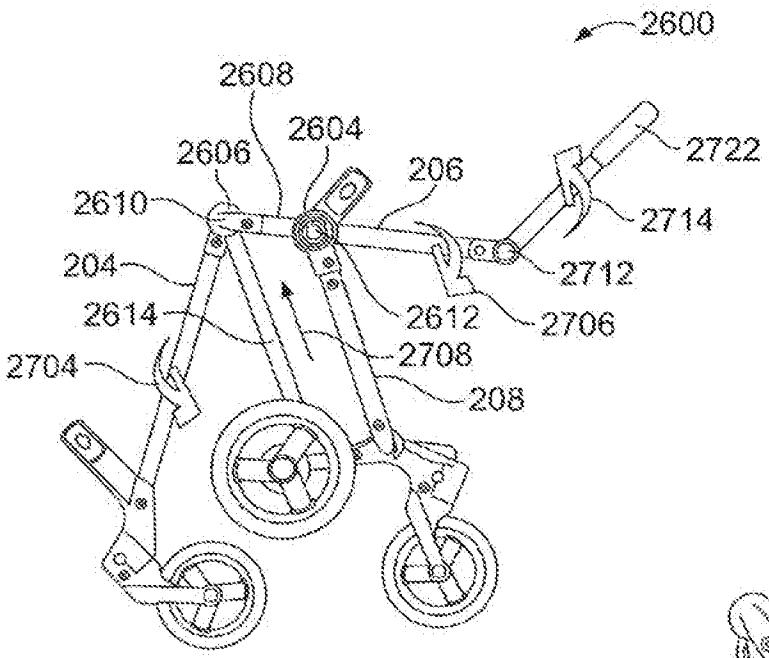
2600
2608
2604
2606
206
2722
2610
2714
204
2712
2614
2612
2706
2708
2704
208

图27

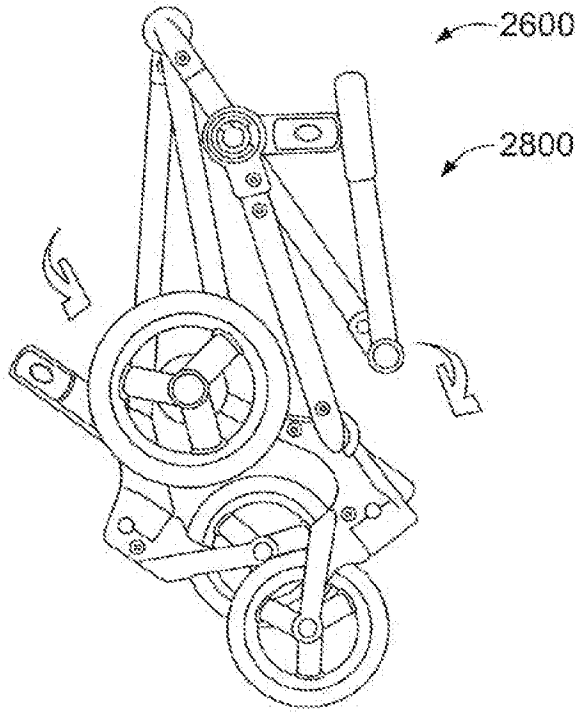
2600
2800

图28

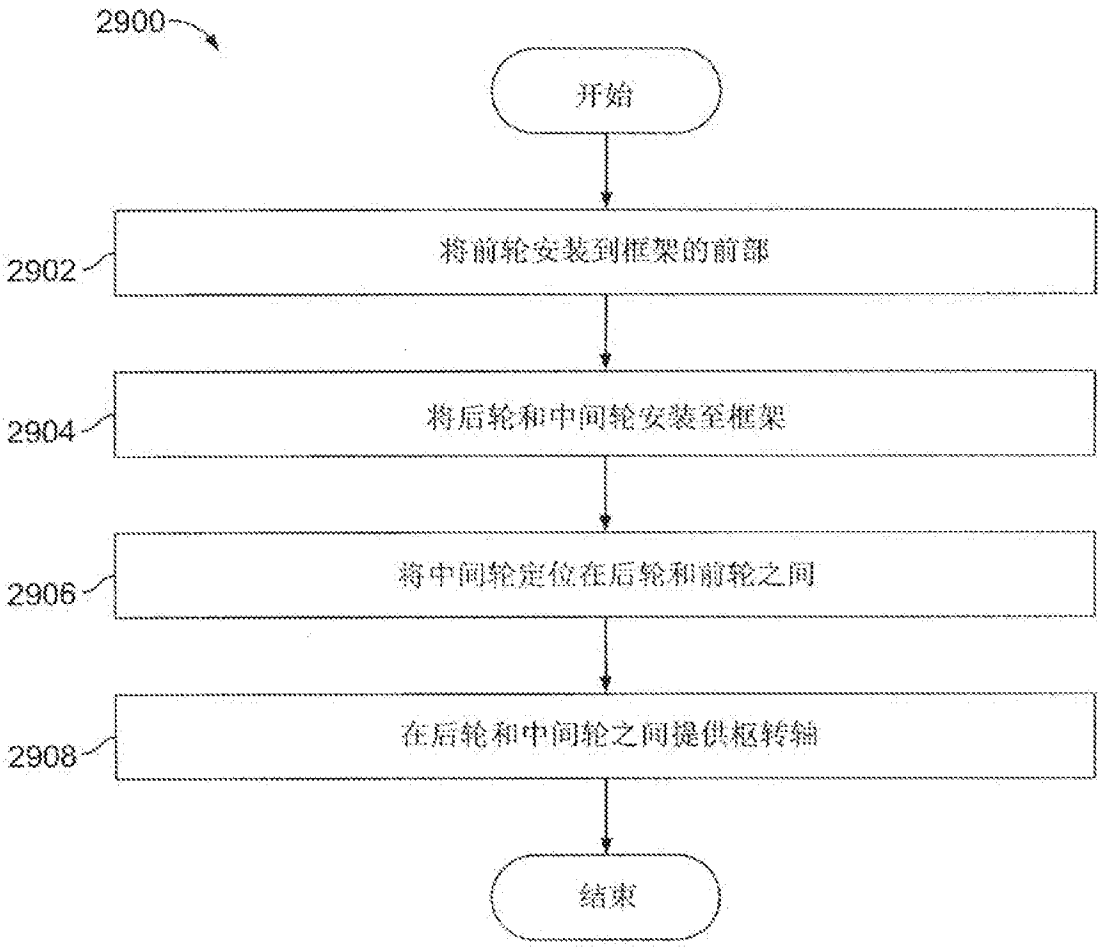
2900
开始
2902
将前轮安装到框架的前部
2904
将后轮和中间轮安装至框架
2906
将中间轮定位在后轮和前轮之间
2908
在后轮和中间轮之间提供枢转轴
结束

图 29

Espacenet

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Seat attachment for a stroller

Inventor(s): ZEHFUSS MARK ± (ZEHFUSS MARK)

Applicant(s): DYNAMIC BRANDS LLC ± (DYNAMIC BRANDS LLC)

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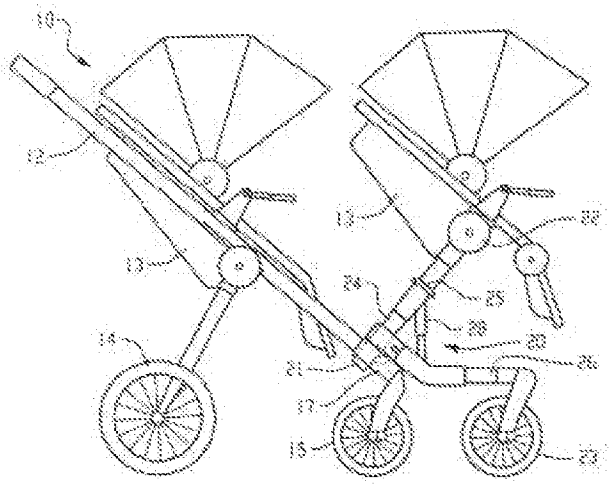
Abstract of CN103921830 (A)

The invention relates to a seat attachment for a stroller, single stroller and double strollers. Such a seat attachment may be used to reversibly convert a single stroller into a double stroller. More specifically, versions of the seat attachment relate to a seat attachment for a stroller capable of supporting a seat such as, but not limited to, a stroller seat, a baby seat, bassinet, a pram, a car seat, or a baby carrier, for example. The seat may be supported in front of a permanent seat of the stroller.



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(71)申请人 戴那米克品牌股份有限公司
地址 美国弗吉尼亚州

(72)发明人 马克·策富斯

(74)专利代理机构 北京律盟知识产权代理有限责任公司 11287
代理人 雷晓斐

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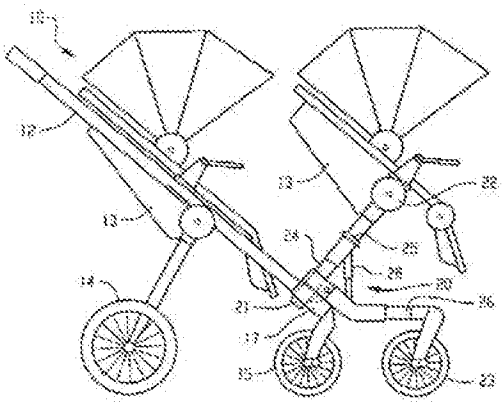
(54)发明名称

用于手推童车的座椅附接件

(57)摘要

本发明涉及一种用于手推童车、单人手推童车及双人手推童车的座椅附接件。此座椅附接件可用来将单人手推童车以可逆方式转换成双人手推童车。更具体来说，所述座椅附接件的版本涉及一种用于手推童车的座椅附接件，其能够支撑例如但不限于手推童车座椅、婴儿座椅、摇篮、婴儿车、汽车座椅或婴儿吊篮等的座椅。可将所述座椅支撑在所述手推童车的永久座椅前部。



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1. 一种用于手推童车的座椅附接件，其包括：

一个分离的左侧附接框架部件，其中所述左侧附接框架部件包括：

连接器部分，其能够以可逆方式连接到手推童车框架，及左侧座椅支撑元件，其能够将座椅支撑于前向或后向的位置中；以及

一个分离的右侧附接框架部件，其中所述右侧附接框架部件包括：

连接器部分，其能够以可逆方式连接到手推童车框架，及右侧座椅支撑元件，其能够将所述座椅支撑于位于所述左侧座椅支撑元件和所述右侧座椅支撑元件之间的前向或后向的位置中。

2. 根据权利要求 1 所述的用于手推童车的座椅附接件，其中所述座椅为婴儿座椅、汽车座椅、手推童车座椅、摇篮、婴儿吊篮、或婴儿车。

3. 根据权利要求 1 所述的用于手推童车的座椅附接件，其中所述左侧附接框架部件和所述右侧附接框架部件中的每一者具有第一端及第二端。

4. 根据权利要求 3 所述的用于手推童车的座椅附接件，其中所述第一端能够连接到手推童车框架。

5. 根据权利要求 4 所述的用于手推童车的座椅附接件，其中所述第二端连接到座椅附接部件。

6. 根据权利要求 1 所述的用于手推童车的座椅附接件，其进一步包括连接到所述左侧座椅支撑元件和所述右侧座椅支撑元件的手推童车座椅。

7. 根据权利要求 1 所述的用于手推童车的座椅附接件，其中两个连接器部分通过钮扣、搭扣件、摩擦配件、干涉配合、螺纹连接，锁定连接片，或键式连接中的至少一者以可逆方式连接到所述手推童车。

用于手推童车的座椅附接件

[0001] 本申请是申请号为 200980148829.3、申请日为 2009 年 12 月 4 日、发明名称为“用于手推童车的座椅附接件”的发明专利申请的分案申请。

技术领域

[0002] 本发明针对一种用于手推童车、单人手推童车及双人手推童车的座椅附接件。此座椅附接件可用来将单人手推童车转换成双人手推童车。更具体来说，本发明的实施例针对一种用于手推童车的座椅附接件，其能够支撑例如但不限于手推童车座椅、婴儿座椅、摇篮、婴儿车、汽车座椅或婴儿吊篮等的座椅。所述座椅附接件的实施例能够将单人手推童车以可逆方式转换成双人手推童车。

背景技术

[0003] 具有多个幼儿的父母可能很难在不同地方之间运输其孩子。儿童走路慢而容易分心，且因此可能在其父母正试图在有限量的时间内完成购物任务或运动一下时落后父母。作为响应，许多父母已购买双人手推童车，其允许父母或监护者同时推着两名儿童且因此允许其更高效地办杂事、散步或慢跑。如此，双人手推童车允许父母或监护者具有比其在仅单人手推童车的情况下将具有的更大的自由，尤其是在试图照管两个睡着的儿童时。

[0004] 虽然双人手推童车具有某些优点，但双人手推童车也具有缺点。双人手推童车大致大于单人手推童车，且因此较难以操纵通过门口及沿着商店的走道行进。通常，能够容纳两名儿童的益处大大地抵消了这些缺点。然而，当父母或监护者仅随身带一个孩子时，双人手推童车的益处便不能实现而缺点仍存在。

[0005] 因此，父母通常买两个或两个以上手推童车以在不同时间使用，单人手推童车用于其仅随身带一个孩子时的时间且双人手推童车用于其需要将容纳两个孩子的手推童车时的时间。此通常产生其自身的一组问题。必须储存多个手推童车且典型汽车的尾箱或运动型多用途车的后部中存在很少空间来用于折叠式双人手推童车及折叠式单人手推童车两者。

[0006] 手推童车制造商已尝试通过提供用于使第二个儿童站在单人手推童车的后部上的地方或为第二个儿童提供挂在单人手推童车的座椅下方且稍靠后的另一座位的附接件来解决此问题。此为儿童提供第二个座椅，但所述儿童被紧裹到前座椅的后部，此可能为不舒适的、减少座椅下方储存的容量且妨碍父母将手提袋挂在把手上。

[0007] 存在对可方便地转换成双人手推童车的单人手推童车的需要。还需要将单人手推童车转换成能够容纳两名儿童而不损失父母或监护者的方便性的全双人手推童车的转换套件。

发明内容

[0008] 手推童车通常为单人手推童车（具有一个座椅以用于运输一名儿童的手推童车）或还可为双人手推童车（具有两个座椅以用于运输两名儿童的手推童车）。本发明的实施

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例针对一种用于手推童车的座椅附接件，其包括：连接器部分，其能够直接连接到手推童车框架或连接到所述手推童车框架的附接框架部件；及座椅支撑元件，其能够支撑座椅。在某些实施例中，所述用于手推童车的附接件包括具有第一端及第二端的附接框架部件。所述第一端可能够将所述座椅附接件连接到手推童车框架且所述第二端可能够连接到所述座椅支撑元件。所述座椅支撑元件因此能够将座椅支撑在手推童车上。在更特定实施例中，可将所述座椅支撑在前向或后向位置中。

[0009] 另一实施例包括手推童车及用于所述手推童车的座椅附接件，其中所述手推童车包括连接到所述手推童车的框架的附接框架部件且所述用于手推童车的座椅附接件包括连接器部分。所述附接框架部件及所述连接器部分包括能够牢固地连接在一起的组件。在某些实施例中，所述附接框架部件及所述连接器部分包括能够牢固地且以可释放方式连接在一起的组件。以此方式，所述座椅附接件可附接到所述手推童车，且如上文所界定的座椅可连接到所述座椅附接件，因此将单人手推童车以可逆方式转换成双人手推童车。

[0010] 在另一实施例中，所述用于手推童车的座椅附接件进一步包括至少一个车轮。所述车轮可通过车轮支撑框架连接到所述座椅附接件，所述车轮支撑框架可刚性地附接到或可以枢转方式附接到所述座椅附接件。所述车轮支撑框架可连接到座椅附接件的任一区段，优选地所述车轮支撑框架以枢转方式连接到所述座椅附接件的后部部分在邻近于连接器部分的区域中或连接于接近附接部分的中间处。

[0011] 所述用于手推童车的座椅附接件的实施例可进一步包括折叠机构。所述折叠机构可包括以滑动方式连接到所述附接部分的滑动部件以及具有连接到所述滑动部件的第一端及连接到所述车轮支撑框架的第二端的折叠框架部件或斜撑。所述折叠机构允许所述车轮支撑框架从第一位置（使用中位置）枢转到第二位置（折叠位置）。所述用于手推童车的附接件还可包括锁定机构，其在使用中位置中将所述附接件紧固到手推童车且在处于折叠位置中时将所述手推童车解锁以允许所述附接件连接到所述手推童车或从所述手推童车拆卸。所述锁定机构可为附接到所述车轮支撑框架的小突出部，其啮合所述手推童车或所述手推童车附接部分中的对应孔口以将所述附接件紧固到所述手推童车。在折叠位置中，所述突出部不啮合在所述孔口中。

[0012] 另一方面针对一种双人手推童车。所述双人手推童车可包括框架，其中所述框架包括把手部分、前车轮支撑部分、后车轮支撑部分及折叠机构。所述双人手推童车的实施例包括手推童车框架，所述手推童车框架包括车轮、所述框架、第一座椅及连接到所述框架的连接器部分。所述双人手推童车可进一步包括座椅附接框架，所述座椅附接框架包括车轮、第二座椅及能够连接到手推童车框架的连接器部分的第二附接部分。所述第二附接部分可以可释放方式连接到所述连接器部分。此外，所述第二座椅可以可释放方式连接到所述座椅附接框架且能够将所述第二座椅支撑在前向或后向位置中。

[0013] 所述双人手推童车的另一实施例包括能够以可释放方式支撑第一儿童座椅的第一座椅附接件及能够以可释放方式支撑第二儿童座椅的第二座椅附接件。所述座椅附接件可包括用于将座椅支撑在两个侧上的两个座椅连接器部分。

[0014] 所述双人手推童车的又一实施例包括邻近于前车轮支撑部分的至少一个第一座椅附接件及邻近于每一折叠机构及/或把手部分的第二座椅附接件。所述第一座椅附接件可位于连接到所述车轮支撑部分的至少一个前车轮上面。

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[0015] 所述手推童车的又一实施例包括：框架；至少一个前车轮；至少一个后车轮；第一手推童车座椅，其具有永久地附接到所述框架的至少一个第一附接部分；及至少一个以可释放方式连接的第二座椅附接部分，其能够将第二座椅支撑在所述第一手推童车座椅的前部。如同在其它实施例中一样，所述座椅附接件可包括两个座椅连接器。任一个或两个座椅附接部分可为具有两个座椅连接器的单个部分或各自包括一座椅连接器的两个单独件。

[0016] 在以上实施例中的任一者中，手推童车、双人手推童车或附接件可包括以下特征中的一者或一者以上：用于以可拆卸方式接纳所述附接部分的套筒。所述座椅附接部分可包括突出部，其具有与所述套筒的互补形状以用于插入到所述套筒中。此外，所述第二座椅可与所述座椅附接件成整体。

[0017] 在各种实施例中呈现了手推童车、双人手推童车及附接件的方面，然而，所属领域的技术人员将理解各种实施例的组件的各种变化形式及可互换性，其打算包含在本发明的范围中。

附图说明

[0018] 图 1 展示单人手推童车的实施例；

[0019] 图 2 展示用以将单人手推童车转换成双人手推童车的座椅附接件的实施例；

[0020] 图 3 展示图 1 的单人手推童车附接到图 2 的座椅附接件的组合；

[0021] 图 4 展示能够将汽车座椅支撑在图 2 的附接件上的座椅附接件的实施例；

[0022] 图 5 展示图 1 的单人手推童车附接到呈三轮车样的骑乘装置形式的附接件的实施例的组合；且

[0023] 图 6A 展示用于将附件支撑在手推童车上的附件附接件；图 6B 展示用于附接到图 6A 的附件附接件的手提袋或手提包。

[0024] 图 7 展示用于支撑包括一个车轮的座椅的附接件。

[0025] 图 8 展示能够以可逆方式从单人手推童车转换成双人手推童车的手推童车的实施例，其包括不包括车轮的附接部分。

[0026] 图 9A、9B、9C、9D、9E 及 9F 展示图 8 中所示的手推童车的实施例的各种配置。

具体实施方式

[0027] 本发明涉及一种用于手推童车的附件、附接件或转换套件（下文中称“座椅附接件”）。如上文所论述，父母或监护者可能发现自己处于其中在一手推童车中运输两个儿童会更方便的情形中，但同时发现具有单人手推童车及双人手推童车两者是不方便的。所述座椅附接件的实施例解决此问题。在一个方面中，所述用于手推童车的座椅附接件的实施例能够将单人手推童车转换成双人手推童车。举例来说，所述座椅附接件可支撑例如但不限于手推童车座椅、婴儿座椅、摇篮、婴儿车、婴儿吊篮或汽车座椅的座椅。因此，父母或监护者不需要单人手推童车及双人手推童车两者。经配置以接纳用于将单人手推童车转换成双人手推童车的座椅附接件的手推童车为使用者提供方便性。可通过将所述座椅附接件附接到单人手推童车且接着附接第二座椅来将所述单人手推童车连接成双人手推童车。如此，所述用于将单人手推童车转换成双人手推童车的座椅附接件的实施例包括能够连接到手推童车框架的至少一个连接器部分及能够支撑座椅的座椅支撑元件。所述座椅附接件可

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任选地包括用于额外支撑及稳定性的至少一个车轮，然而，为更方便起见，所述附接件的实施例不包含车轮。在某些实施例中，车轮可使双人手推童车稳定，但在所述附接件的其它实施例中，所述车轮可能并非合意的或必需的。举例来说，所述附接件的额外实施例包括手推车样、四车轮货车样、三轮车样的附接件或可连接到手推童车的其它骑乘玩具。三轮车样的附接件将允许儿童在手推童车的前部骑乘或被推着。

[0028] 图 1 中展示单人手推童车 10 的实施例的侧视图。注意，图 1 仅展示单人手推童车 10 的一侧，然而，大多数组件包含位于所述单人手推童车的另一侧上但未展示于图 1 中的互补组件。单人手推童车 10 包括支撑座椅 13 的框架 12。框架 12 可任选地包含至少一个（优选地为两个）折叠机构 16，其允许将手推童车 10 折叠成用于储存或运输手推童车 10 的更方便大小。

[0029] 在此实施例中，将座椅 13 展示为典型的手推童车座椅，然而，其它类型的座椅可用于单人手推童车中。座椅 13 可永久地附加到框架 12 或以可释放方式连接使得其能够被拆卸并用不同座椅来替代。如本文中所使用，“以可释放方式连接”或“以可释放方式附接”意指所述连接并非永久连接且所述连接能够由手推童车的使用者连接及断开而不需要特殊工具或特殊技能。可释放连接包含（但不限于）钮扣、搭扣件、摩擦配件、干涉配合、螺纹连接、锁定连接片、键式连接、其它扣件等。在图 1 的手推童车 10 上，框架 12 支撑在一对后车轮 14 及一对前车轮 15 上。在此实施例中，后车轮 14 为固定的且不以所述框架为轴而旋转或枢转。单人手推童车 10 上的所述对前车轮 15 枢转以使得使单人手推童车 10 转动更容易且更方便。虽然在某些手推童车中枢转车轮可为优选的，但具有固定非枢转车轮的手推童车也为常见的。应注意，单人手推童车不需要成对的前车轮或后车轮且可用单个车轮来替代前对车轮 15 或后对车轮 14。按常规，许多单人手推童车（包含伞式手推童车、慢跑手推童车、全地形手推童车以及其它手推童车）可仅包含一个前车轮。本发明的座椅附接件的实施例可能够将任何样式的手推童车转换成双人手推童车，包含具有一个或两个前车轮的手推童车。

[0030] 手推童车 10 的实施例包括两个附接框架部件 17。连接器部分优选地位于手推童车的前部上以允许座椅附接件及座椅连接到手推童车 10 的前部。附接框架部件 17 允许座椅附接件（例如用于将单人手推童车 10 转换成如图 3 中所示的双人手推童车的座椅附接件）连接到手推童车。图 3 中仅展示一个座椅附接件，手推童车 10 将使用如图 3 中所展示的两个座椅附接件或包括两个座椅支撑元件的一个座椅附接件。手推童车 10 的实施例具有左侧及右侧附接框架部件 17。手推童车 10 的座椅附接件的实施例将包括能够在附接框架部件 17 处连接到手推童车框架的对应连接器部分。虽然关于单人手推童车描述了用于手推童车的座椅附接件，但所述附接件可类似地附接到双人手推童车。因此，所述座椅附接件的实施例可用于将双人手推童车转换成三人手推童车（如果需要的话）。

[0031] 图 2 中展示本发明的座椅附接件 20 的实施例。图 2 的座椅附接件呈解锁及折叠配置。座椅附接件 20 包括：能够连接到附接框架部件 17 的一对连接器部分 21，能够支撑座椅的两个座椅附接元件 22，及车轮 23。在此实施例中，所述连接器部分连接到座椅附接件 20 的后部，从而允许座椅附接件 20 连接到手推童车（例如图 1 中所示的手推童车 10）的前部。所述座椅附接件的其它实施例可包含一个以上车轮、一个连接器部分、一个座椅支撑元件或这些元件的组合。举例来说，在具有一个车轮的手推童车的实施例中，所述附接框

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架部件可位于前车轮的轮叉上。

[0032] 座椅附接件 20 包括将附接件 20 的车轮 23 连接到附接框架部件 24 的车轮支撑框架 26。每一附接框架部件 24 具有第一及第二端。所述第一端能够连接到手推童车框架且所述第二端连接到座椅支撑元件 22。座椅附接件 20 的实施例包括以枢转方式连接到两个附接框架部件 24 的车轮支撑框架 26。车轮支撑框架 26 或附接框架 24 可横跨手推童车在两个附接框架部件 17 之间的宽度。枢转连接 27 允许折叠并方便地储存或运输座椅附接件，但并非是本发明所必需的。所述枢转连接为任选的且提供更大方便性，然而，附接件的实施例可包括以可释放方式连接的车轮支撑框架或刚性框架，其可经并入以产生具有更大强度以供在其中（例如）可需要更强座椅附接件的情形中（例如在全地形或慢跑手推童车的情况下）使用的座椅附接件。可在附接框架上的任一点处连接所述车轮支撑框架，优选地在接近连接器部分 21 处或在接近附接框架 24 的中间处连接所述车轮支撑框架。

[0033] 举例来说，不具有车轮的座椅附接件的实施例可包含连接器部分 21 或附接框架部件 24 及座椅附接部件 22。在此实施例中，将不需要枢转连接 27、车轮支撑框架 26、滑动连接器 25 或车轮 23。

[0034] 座椅附接件 20 包括折叠机构，所述折叠机构包括连接到斜撑 28 的第一端的滑动连接器 25。斜撑 28 的第二端以枢转方式连接到车轮支撑框架 26。在此实施例中，可使滑动连接器 25 在附接框架部件 24 上于第一位置与第二位置之间移动。随着滑动连接器 25 移动，斜撑 28 将车轮支撑框架 26 从使用中位置推到储存位置。所述储存位置较紧凑，如图 2 中所示。另外，座椅附接件 20 的实施例包括能够将座椅附接件 20 紧固到手推童车（例如图 1 中所示的手推童车 10）的锁定机构 29。通过将滑动连接器 25 移动到其中使车轮支撑框架 26 及车轮 23 延展的使用中位置来啮合锁定机构 29。在用于手推童车 10 的座椅附接件 20 的实施例中，座椅附接件 20 的车轮以枢转方式连接到所述连接器部分，且当所述车轮处于使用中位置时，可释放连接被锁定，且当将车轮 23 移动到储存位置时，可释放连接被解锁，从而允许从手推童车 10 拆卸座椅附接件 20。可储存座椅附接件 20 且手推童车 10 可方便地用作单人手推童车。按设计，座椅附接件 20 可重新连接到手推童车 10 以用作双人手推童车。在本发明的任一实施例中，可将座椅附接部分在手推童车框架上紧固到适当位置中且锁定机构可与具有或不具有车轮的实施例一起使用。所述座椅附接件或手推童车框架可包括用于将手推童车与座椅附接件紧固在一起的锁定机构。所述锁定机构可为能够在使用期间将各组件紧固在一起的任何机构且可为（例如）摩擦锁定装置、螺纹连接、孔中栓塞 (peg in a hole) 或干涉锁定装置，例如孔或槽中销子。在图 2 中所示的实施例 20 中，在使附接件 20 从展开位置移动到折叠位置时，锁定机构 29 随车轮支撑框架 26 枢转。锁定机构 29 可滑动到图 1 中所示的手推童车 10 的附接框架部件中的孔或凹口中。如此，可通过将附接件 20 的附接部分 21 定位于手推童车 10 的附接部分 17 的槽 18 中而将附接件 20 附接到手推童车 10。可将滑动连接器 25 移动到使用中位置，移动车轮支撑框架且将锁定机构 29 定位到手推童车 10 的锁定槽 19 中。

[0035] 座椅附接件 20 的实施例的连接器部分 21 具有圆柱形形状。可将连接器部分 21 插入到图 1 的手推童车 10 的附接框架部件 17 的圆柱形凹部 18 中以紧固所述座椅附接件并将单人手推童车转换成双人手推童车，如图 3 中所示。座椅附接件的其它实施例可包含任何类型的连接器部分。所述连接器部分可具有实心或管状构造且可为任何横截面形状，

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举例来说，包含（但不限于）圆形、多边形、正方形、矩形及三角形。可利用其它附接机构将所述座椅附接件连接到手推童车，例如（但不限于）U 形托架、U 形螺栓、管夹、O 形托架、螺丝、螺栓或其它夹紧或附接构件。手推童车的附接框架部件具有互补及协作形状，其允许将连接器部分紧固到手推童车的附接部分。

[0036] 在图 3 中，展示图 2 的座椅附接件 20 连接到图 1 的单人手推童车 10，从而形成双人手推童车。将双人手推童车配置展示为两个手推童车座椅 13 呈直列式配置，但还可将其它配置（例如手推童车座椅及摇篮或婴儿车）支撑在所述双人手推童车上。此外，座椅附接件的座椅支撑元件可能够将前手推童车座椅支撑在前向或后向位置中。

[0037] 手推童车 10 的实施例仅作为一种类型的手推童车的实例而展示，所述手推童车的框架可为许多可能配置中的任一者。本发明的附件的实施例可经配置以用在手推童车的任何此种配置上。举例来说，婴儿手推童车的不同实施例可不包含两个前车轮，可不包含折叠机构或可只包含仅一个折叠机构。另外，婴儿手推童车可包含婴儿手推童车 10 中不包含的额外特征。举例来说，所述手推童车可任选地包括固定前车轮，完全不同的框架配置或位于手推童车的座椅底下的储存篮。

[0038] 座椅支撑部件可为能够将座椅支撑在座椅附接件上的任何配置。图 4 中展示供与汽车座椅或其它婴儿座椅一起使用的座椅支撑部件的另一实施例。图 4 的座椅支撑部件 40 的实施例包括主要支撑件 41。主要支撑件 41 包括用于支撑座椅的中心部分的支架。座椅的另一部分可搁靠在支撑杆 42 上。在此实施例中，支撑杆 42 可经调整以容纳不同形状及大小的座椅。支撑杆 42 可在孔口 43 内滑动且当处于支撑某一座椅的所要位置中时被锁定于适当位置中。因此，座椅被支撑在两个主要支撑件 41 及支撑杆 42 上。可通过将带 44 及 45 环绕在座椅上并借助带扣或其它紧固构件将所述带锁定于此位置中来进一步将所述座椅紧固在座椅附接部件 40 中。

[0039] 图 5 中展示用于手推童车的座椅附接件的另一实施例。组合 50 包括手推童车 10 及座椅附接件 51。座椅附接件 51 为三轮车样的附接件，其包括连接器部分 52、具有座椅支撑元件 56、座椅 57 及车轮 55 的框架 53。所述三轮车样的附接件可附接到手推童车 10 以允许在手推童车 10 中推着一名儿童而一名儿童骑乘座椅附接件 51。举例来说，所述座椅附接件还可为其它形状，例如汽车、卡车或动物形状。

[0040] 图 5 的手推童车 10 的实施例包括额外附件附接部分 58。附件附接部分 58 附接到手推童车 10 的框架部件。附件附接部分 58 的实施例展示于图 6A 上。此实施例特别适用于将如图 6B 中所示的手提袋或手提包 64 附接到手推童车 10。

[0041] 当使用手推童车时，父母或监护者通常携带其它物项，例如手提包、食品杂货手提袋、蜂窝电话、尿布、清洁湿巾或者其它个人或婴儿相关物项。一些手推童车具有用于放置此些物项的底部储存篮。然而，这些储存篮可能不方便接近或一些轻量手推童车不包含此些储存物。因此，手推童车的使用者可将手提包或购物手提袋挂在手推童车的把手上。此由于容易接近而为方便的，但把手上的手提袋的重量可导致手推童车不平衡且增加手推童车向后倾倒的趋势。挂在手推童车的把手上的沉重的手提袋可甚至在座椅上有儿童的情况下也导致手推童车向后倾斜。如果手推童车正面临上坡或不平坦的地形、正被向上推过路边或由幼小的儿童占用，那么问题会更糟。举例来说，可通过上文所描述的夹紧或附接方法中的任一者将附接部分附接到手推童车的框架。优选地，在接近手推童车 10 的重心处附接

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附件附接件 58 以避免产生手推童车的不平衡条件。图 6A 中展示附件附接件 58 的实施例。展示附件附接件 58 在接近折叠机构处连接到图 1 中的手推童车 10 的手推童车框架 12。所述附件的实施例包括用于连接到手推童车框架的第一端 61 及用于以可释放方式连接到所述附件的第二端 62。第一端 61 包括可连接到手推童车 10 的框架 12 的孔口 64。在某些实施例中，孔口 64 在一角度上 - 使得附件附接部分 58 的轴线为大致水平的。附件附接件 58 可任选地包括用于将附件附接到附件附接件 58 的肋状件。如图 6A 中所示的肋状件可用任何其它锁定元件或紧固构件替换，包含（例如）摩擦配件、旋紧式配件、干涉配件。

[0042] 图 6B 中展示用于附接到附件附接件 58 的附件的一个实例。所述附件为手提袋或手提包 64。所述附件包含能够紧固到附件附接件 58 上的附接部分 62 的附接部分 65。可通过将附接部分 65 紧固到附接部分 62 而将手提袋或手提包 64 紧固在手推童车 10 上。如所展示，附接部分 65 在附件附接件 58 的圆柱形附接部分 62 上滑动。附接部分 65 可包含接纳将手提袋或手提包 64 紧固到手推童车 10 的肋状件 63 的内部环形凹部。因此，如从侧面所观看，手提袋或手提包 64 被紧固到手推童车 10 在所述手推童车的中心部分中。因此，手提袋或手提包 64 被方便地紧固到手推童车 10，同时不引起手推童车 10 的不平衡条件。

[0043] 图 8 中展示手推童车 80 的另一实施例。可在附接件上不添加另一车轮的情况下容易地将手推童车 80 从包括一个座椅的单人手推童车转换成包括两个座椅的双人手推童车。手推童车 80 包括能够支撑手推童车座椅 86 的框架 81。在此实施例中，框架 81 包括前车轮支撑部分 81a、后车轮支撑部分 81b 及把手部分 81c。手推童车 80 的实施例的框架 81 进一步包括连接前车轮支撑部分 81a、后车轮支撑部分 81b 及把手部分 81c 的折叠机构 81d。折叠机构 81d 允许将手推童车折叠成较紧凑大小以便储存或运输。图 8A 展示呈折叠配置的手推童车 80。

[0044] 手推童车 80 进一步包括至少一个前车轮 82（可在图 8A 中看到手推童车 80 的两个前车轮 82）、至少一个后车轮 83（可在图 8A 中看到手推童车 80 的两个后车轮 83）、手推童车座椅 86 及能够将第二个座椅支撑在所述手推童车座椅的前部的座椅支撑部分 84。手推童车 80 可进一步包括储存篮 87。座椅支撑部分可具有能够牢固地将座椅支撑在手推童车上的任何设计。举例来说，座椅支撑部分 84 可类似于图 2 中所示的座椅支撑部分 20，但不具有车轮 23、斜撑 28、枢转连接 27 及 / 或车轮支撑框架 26。优选地，所述座椅支撑部分能够支撑座椅使得处于所述座椅中的儿童大致高于手推童车的框架。此提供对座椅的更容易接近、不阻挡对储存篮的接近、允许座椅的更通用配置、允许将更多种的座椅附接到所述框架且允许父母或其它监护者更容易地监视并看到每一座椅中的儿童。

[0045] 手推童车 80 包括手推童车座椅 86。手推童车座椅 86 位于邻近于把手部分 81c 处。手推童车座椅 86 可以固定方式附接到或以可拆卸方式附接到框架 81。在其中手推童车座椅 86 以可拆卸方式附接到框架 81 的手推童车 80 的实施例中，手推童车座椅 86 可被拆卸及重新放置成后向配置（参见图 9A）、由座椅支撑元件 84 上的幼儿提篮 91 或汽车座椅替换（参见图 9C）或者用座椅支撑元件 84 上的婴儿车 92 替换（参见图 9D）。手推童车 80 的实施例可包括邻近于把手部分 81c 的第二座椅支撑元件 89。包括第二座椅支撑元件 89 的手推童车 80 允许座椅被容易地拆卸并重新配置成不同定向或用不同样式的座椅替换。

[0046] 手推童车 80 的实施例包括第一座椅支撑元件 84。座椅支撑元件 84 连接到手推童车 80 的前车轮支撑框架 81a。座椅支撑元件 84 邻近于框架 81 的前车轮支撑部分 81a。

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所述座椅支撑元件能够将第二手推童车座椅 85 支撑在手推童车座椅 86 的前部。此为手推童车 80 的使用者提供方便性及多用性。座椅支撑元件可以固定方式附接到或以可拆卸方式附接到前车轮支撑部分 81a。前座椅 85 可大致定位于前车轮上方，使得手推童车保持稳定。优选地，所述座椅应经定位使得手推童车的重心在前车轮与后车轮之间。如果不，那么可在附接件上放置额外车轮，如先前所描述。座椅支撑元件 84 包括座椅连接器 88。座椅连接器 88 可为多用途的通用连接器，其允许在座椅支撑元件 84 上更换不同座椅。举例来说，任何样式的座椅可经配置以连接到所述座椅连接器，例如（但不限于）手推童车座椅、婴儿座椅、摇篮、婴儿车、婴儿吊篮或汽车座椅。

[0047] 所述手推童车附接件的实施例包括连接器部分及座椅支撑元件。所述连接器部分能够将所述座椅附接件连接到框架。

[0048] 在图 8 中所示的实施例中，手推童车 80 包括第一手推童车座椅 86 及第二手推童车座椅 85。展示手推童车座椅 86 呈前向配置且展示第二手推童车座椅 85 呈后向配置。座椅支撑元件 84 能够将座椅支撑在连接到车轮支撑部分 81a 的前车轮 82 上面。优选地，前座椅大致位于前车轮上方且后座椅大致位于后车轮上方。

[0049] 虽然在图 8 的侧视图中无法看到，但所述手推童车的典型实施例将包括两个座椅连接器部分。一个座椅连接器部分将支撑座椅的每一侧。所述连接器部分可为一件式或多个部分。

[0050] 图 9A 到图 9F 展示对于本发明的手推童车可能有的各种配置。这些配置不应被视为手推童车的所有可用配置且所属领域的技术人员基于本说明书及图式集将认识到许多额外可能性。依据前文将了解，虽然本文已出于说明的目的描述了本发明的特定实施例，但可做出各种修改，此并不背离本发明的精神及范围。因此，本发明不受除所附权利要求书以外的限制。

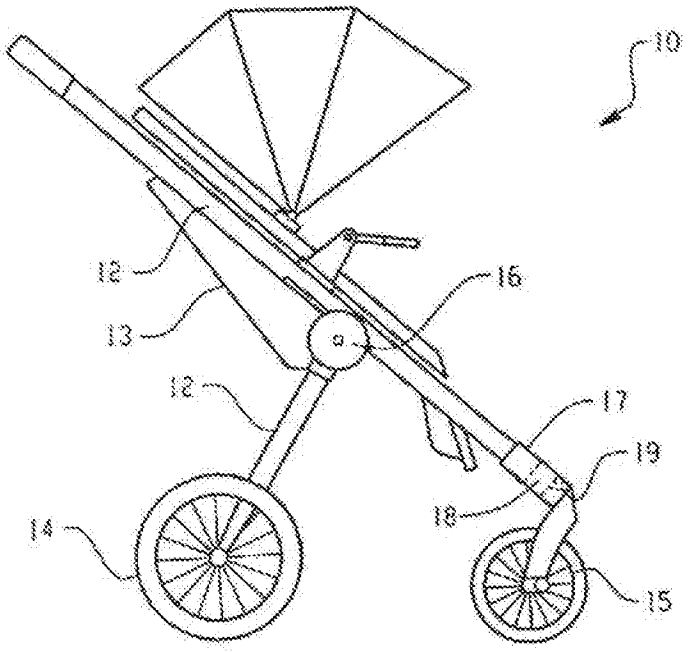


图 1

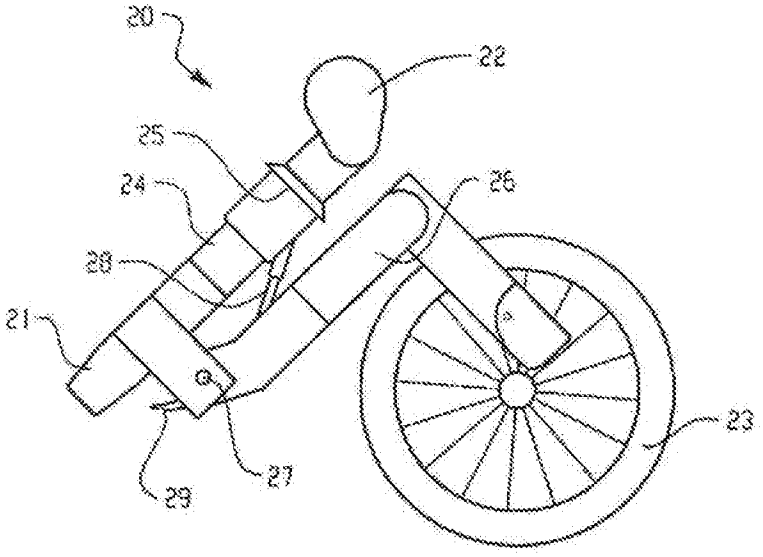


图 2

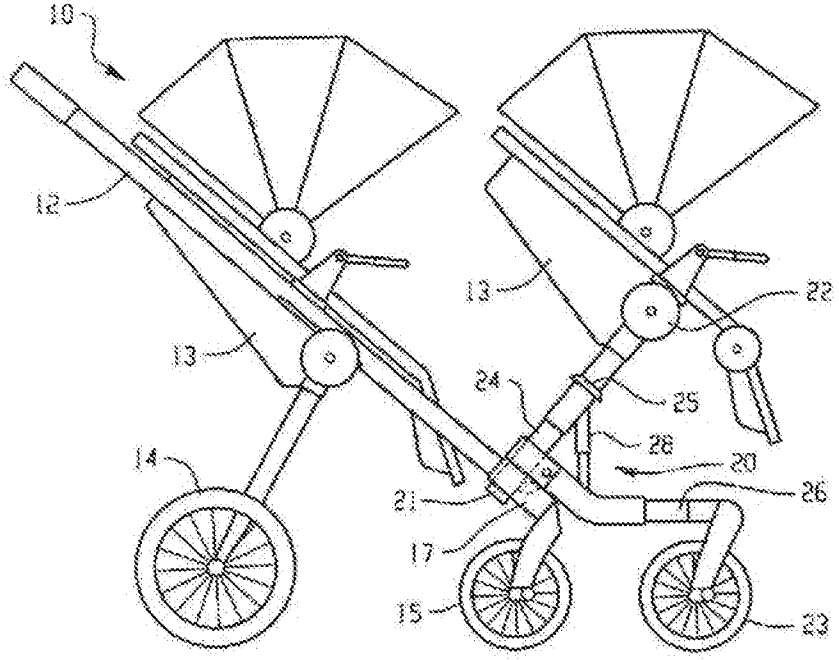


图 3

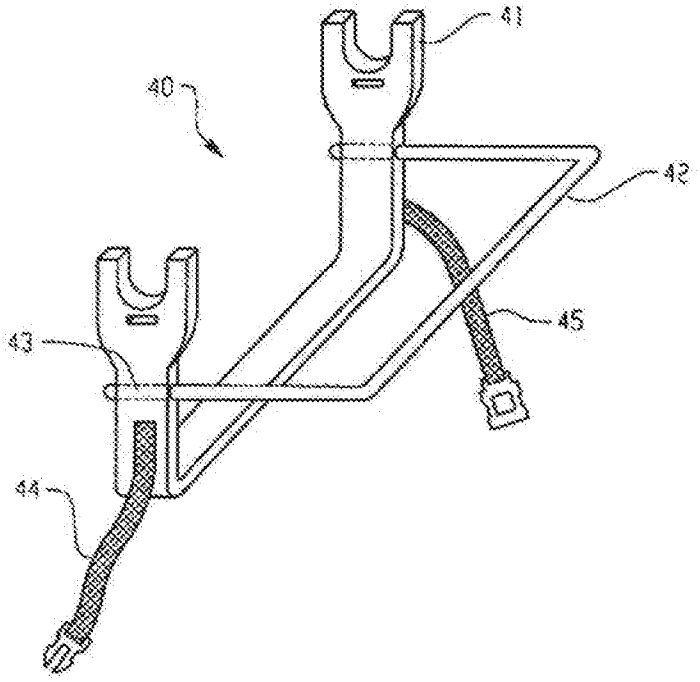


图 4

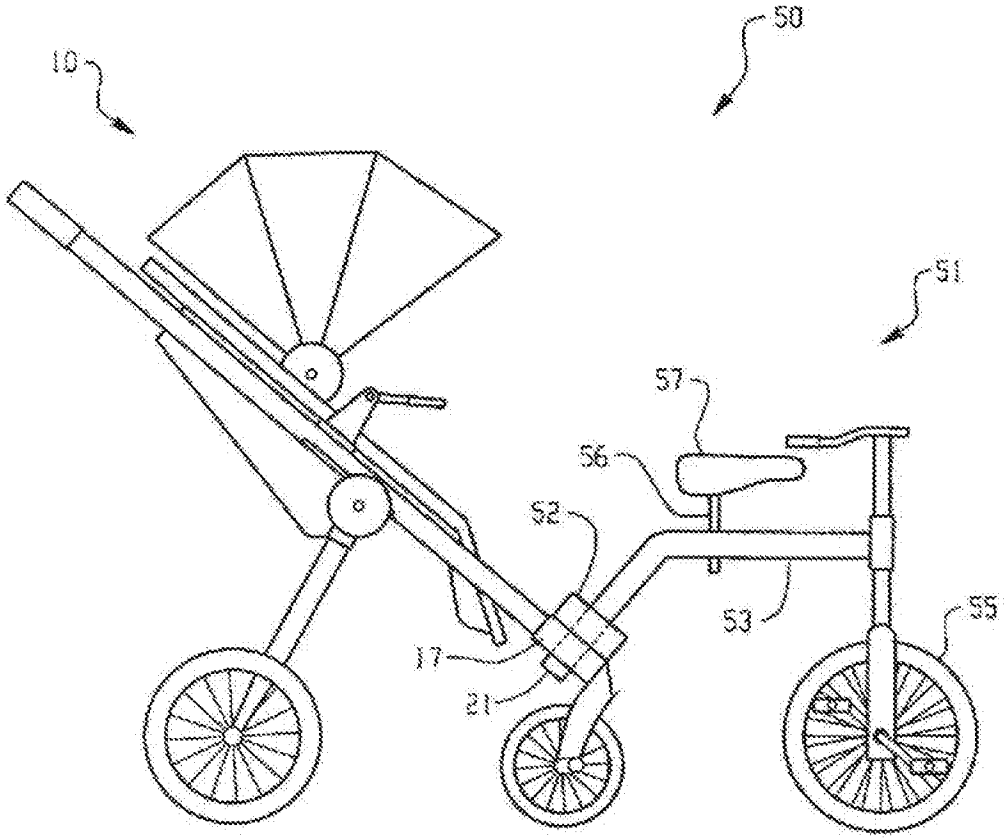


图 5

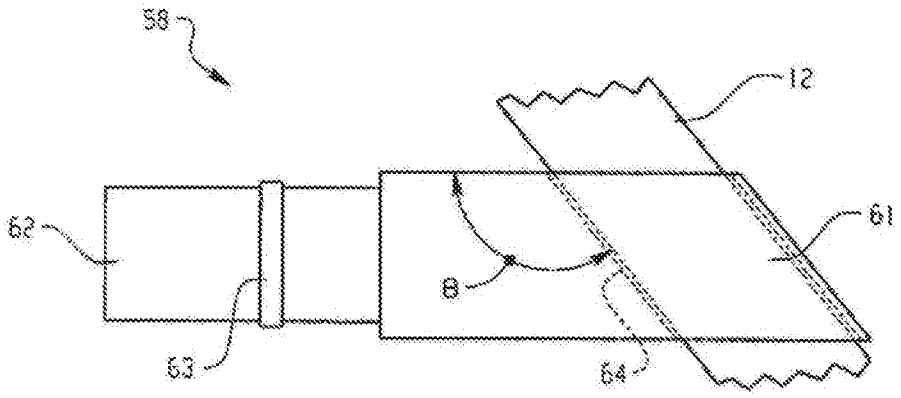


图 6A

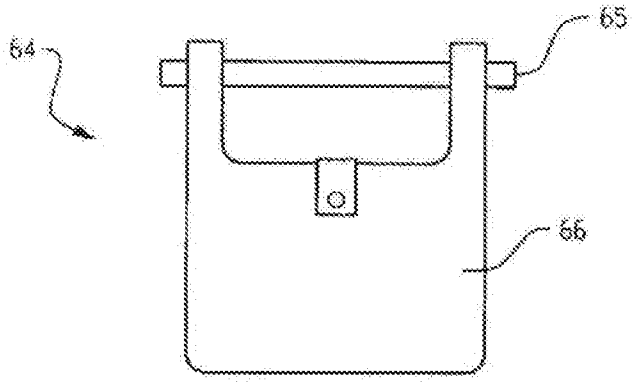


图 6B

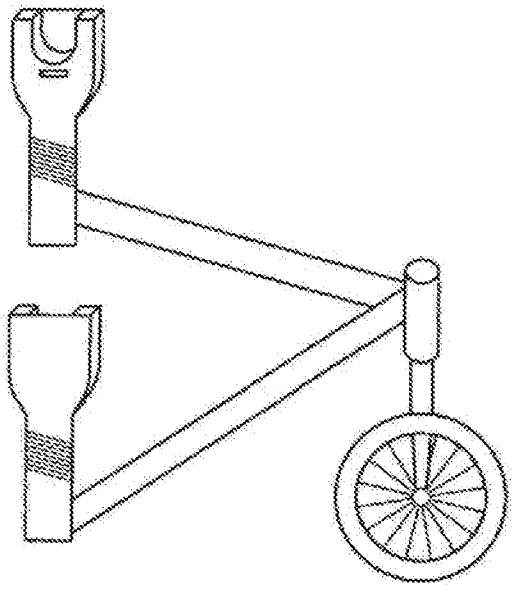


图 7

5/8

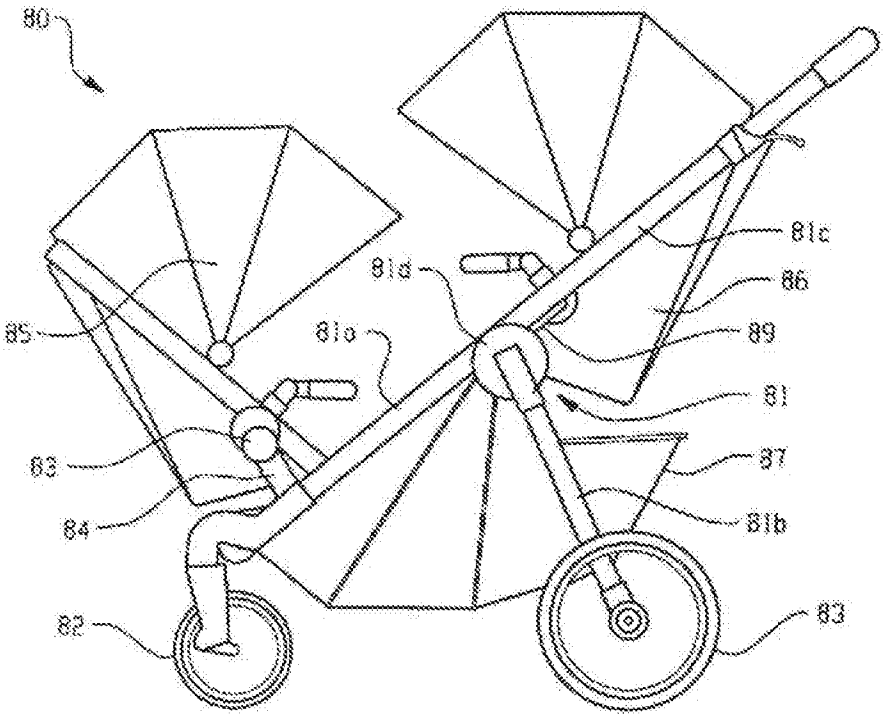
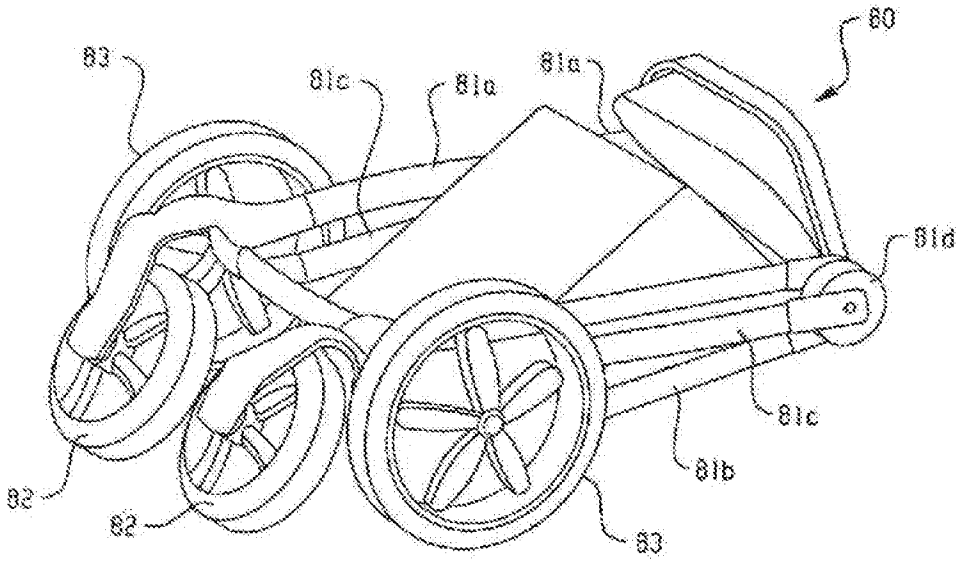

80
81c
81d
86
85
81a
89
81
83
87
84
81b
82
83

图 8


80
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81c
81a
81a
81d
81c
81b
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82
83

图 8A

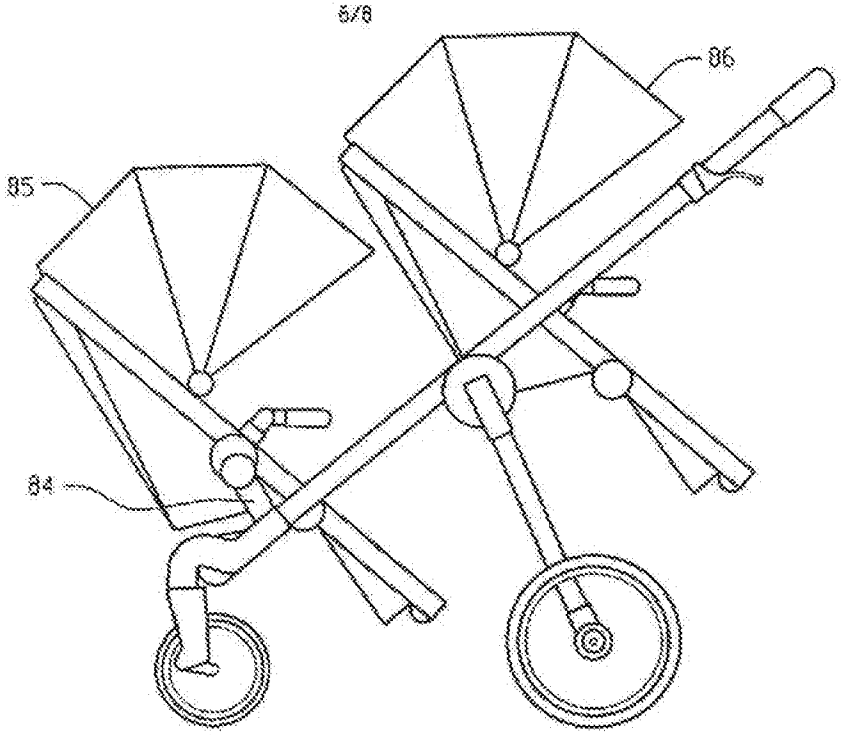

图 9A

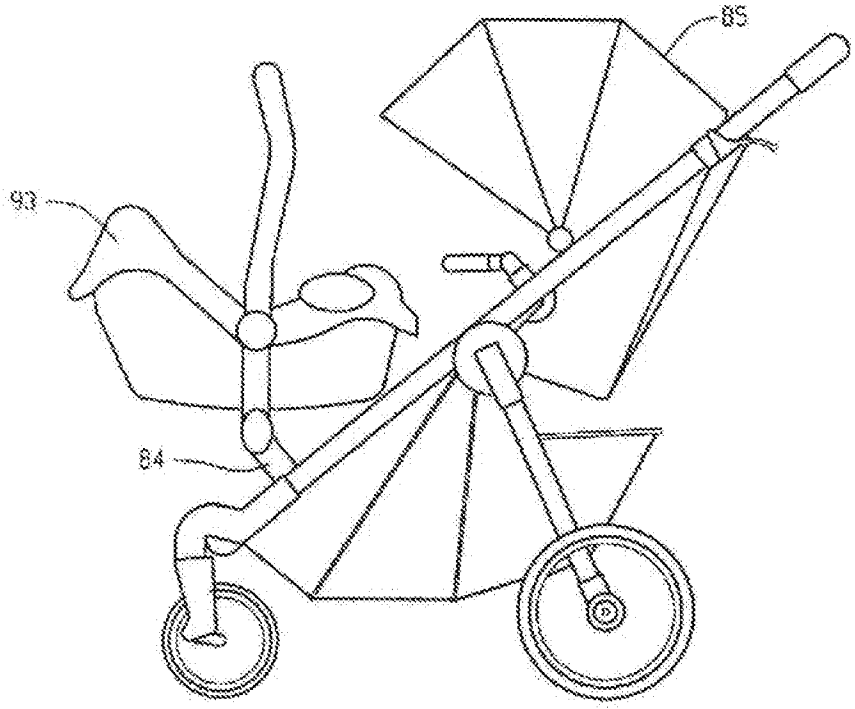

图 9B

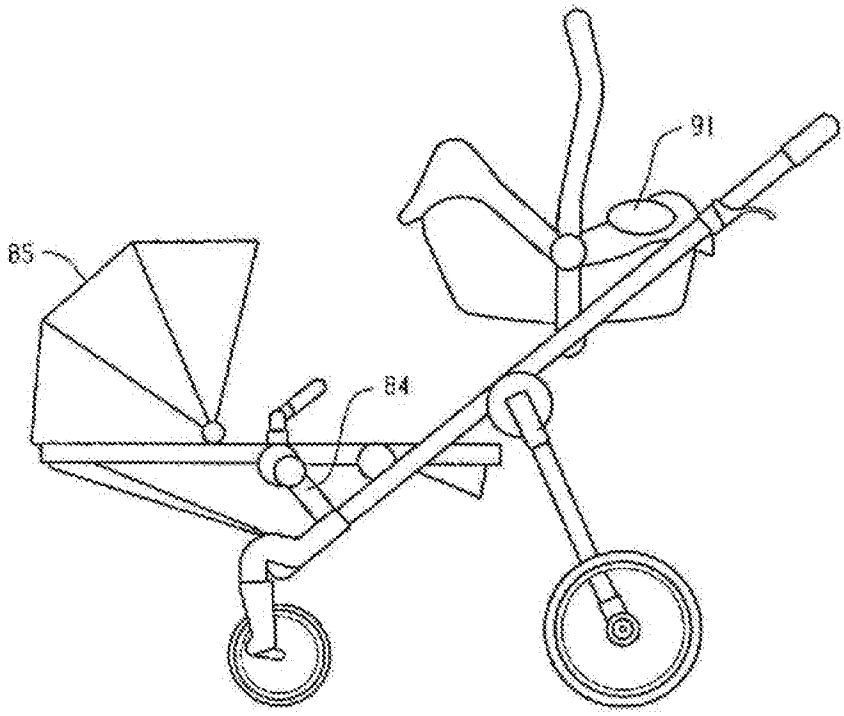

图 9C

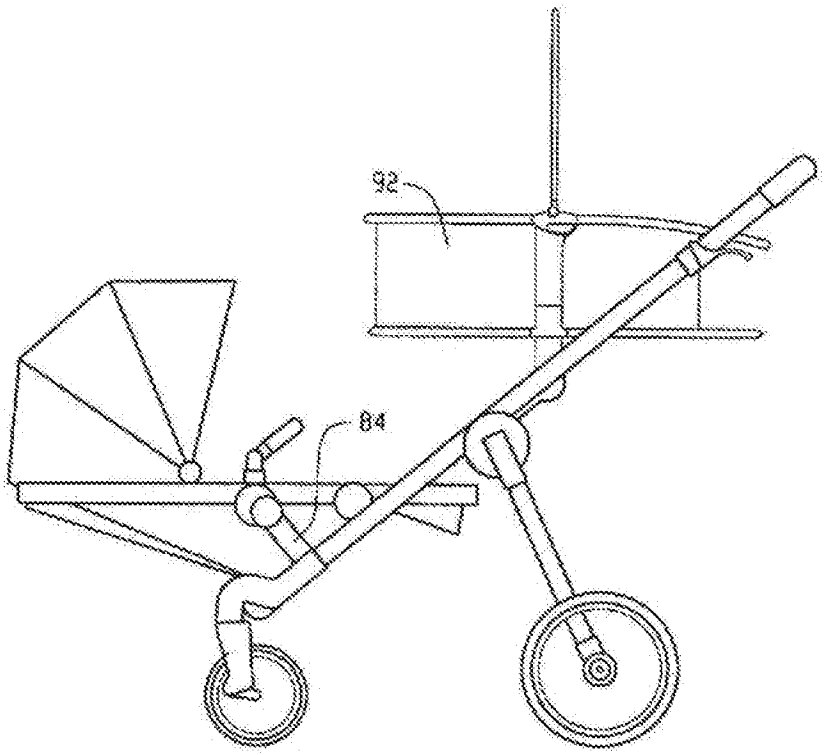

图 9D

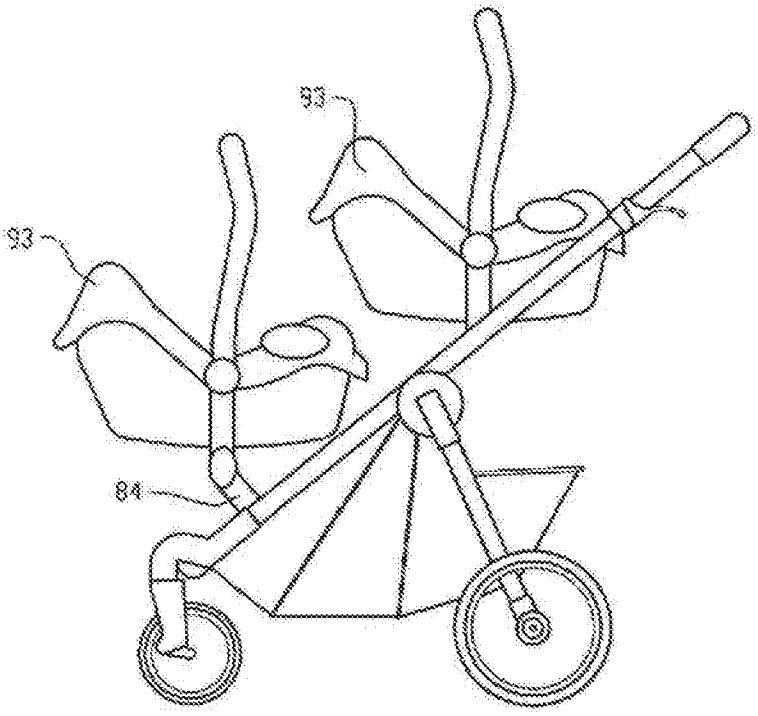

图 9B

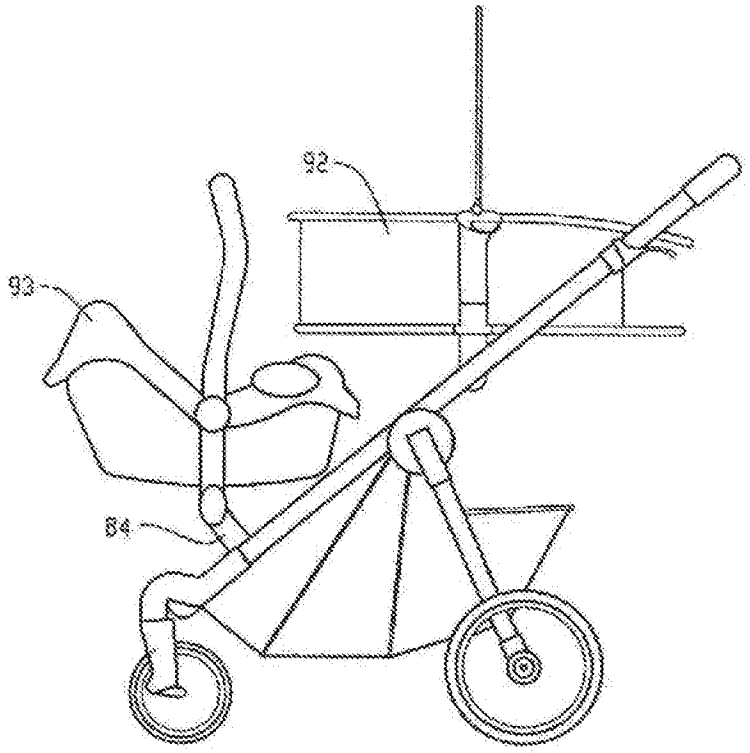

图 9F

Espacenet

Bibliographic data: CN201626448 (U) — 2010-11-10

Multifunctional baby carrier

Inventor(s): GE LUO ± (LUO GE)

Applicant(s): GE LUO ± (LUO GE)

Classification: **- international:** ***B62B7/04; B62B9/12***
- cooperative:

Application number: CN20102115279U 20100211

Priority number(s): CN20102115279U 20100211

Abstract of CN201626448 (U)

The utility model relates to a multifunctional baby carrier, which comprises a baby carrier body, a baby carrier frame and wheels. Lateral handrails are arranged on two sides of the baby carrier body; a detachable device is arranged on the lateral handrails, and comprises a receiving device arranged on the lateral handrails and a connecting seat capable of being mounted and demounted on the receiving device; the receiving device comprises grooves formed on the lateral handrails; a cross rod is fixed in the grooves in the transverse direction; the connecting seat comprises a connecting seat casing, in which a fixed hook capable of being buckled in the cross rod is arranged; a spring is arranged between the fixed hook and the connecting seat casing, and is connected with a button; and the connecting seat is fixed on an automobile seat or a cradle. The utility model has the advantages that the detachable device is arranged on the lateral handrails of the baby carrier, so that the automobile seat or the cradle can be conveniently mounted or demounted to greatly facilitate users; and moreover, the structure is simple, and both the mounting and the demounting are very simple.

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(12)实用新型专利

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(22)申请日 2010.02.11

(73)专利权人 罗革
地址 315316 浙江省慈溪市观海卫镇工业园东区慈溪市福贝贝儿童用品有限公司

(72)发明人 罗革

(51)Int.Cl.
B62B 7/04(2006.01)
B62B 9/12(2006.01)

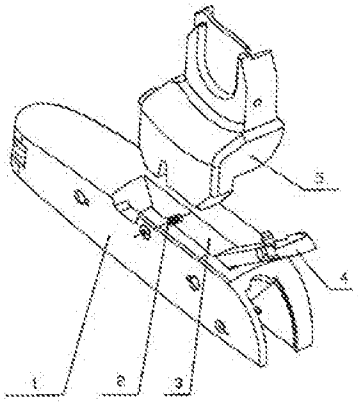
权利要求书 1 页 说明书 2 页 附图 3 页

(54)实用新型名称

一种多功能童车

(57)摘要

本实用新型涉及一种多功能童车，包括车身、车架与车轮，车身两侧设有侧扶手，所述的侧扶手上设置可拆卸装置，可拆卸装置包括设置在侧扶手上的接收装置和可装卸在接收装置上的连接座，所述的接收装置包括设置在侧扶手上的凹槽，所述的凹槽内横向方向上固定有横杆，所述的连接座包括连接座壳体，壳体内设置有能扣入横杆的固定钩，固定钩与连接座壳体之间设置弹簧，弹簧连接按钮，且连接座固定在汽车座椅或摇篮上。本实用新型在童车的侧扶手上设置可拆卸装置，使得汽车座椅或者摇篮可以方便地安装或拿下，大大方便了用户，且本实用新型结构简单，安装和拆卸都很简单。



CN 201626448 U

1. 一种多功能童车，包括车身、车架与车轮，车身两侧设有侧扶手，其特征在于：所述的侧扶手上设置可拆卸装置，所述的可拆卸装置包括设置在侧扶手上的接收装置和可装卸在接收装置上的连接座，所述的接收装置包括设置在侧扶手上的凹槽，所述的凹槽内横向方向上固定有横杆，所述的连接座包括连接座壳体，壳体内设置有能扣入横杆的固定钩，固定钩与连接座壳体之间设置弹簧，弹簧连接按钮，且所述的连接座固定在汽车座椅或摇篮上。

一种多功能童车

（一）技术领域

[0001] 本实用新型涉及一种童车，尤其是涉及一种能放置多种部件的多功能童车。

（二）背景技术

[0002] 目前市场上的童车一般不具备儿童汽车安全座椅功能，如专利号为 03225254.4 的中国实用新型专利一种两用童车，其结构包括可折叠主体，连接在主体下端的四个可折叠车轮，主体装设有汽车安全带卡扣机构，在儿童乘坐位置有用于缚紧乘员的安全带。完全打开时，与普通童车无异，四个车轮收折后，可放在汽车座椅上，扣上汽车安全带作为汽车安全座椅使用。虽然，该款童车实现双重功能，但是毕竟童车与汽车座椅在要求上差别较大，折叠后的童车作为汽车座椅在安全性和舒适性上大打折扣。

（三）发明内容

[0003] 为了克服现有技术中的不足，本实用新型提供一种汽车座椅或提篮可拆卸地安装在童车上的多功能童车，结构简单，使用方便。

[0004] 本实用新型解决其技术问题的技术方案是：

[0005] 一种多功能童车，包括车身、车架与车轮，车身两侧设有侧扶手，所述的侧扶手上设置可拆卸装置，所述的可拆卸装置包括设置在侧扶手上的接收装置和可装卸在接收装置上的连接座，所述的接收装置包括设置在侧扶手上的凹槽，所述的凹槽内横向方向上固定有横杆，所述的连接座包括连接座壳体，壳体内设置有能扣入横杆的固定钩，固定钩与连接座壳体之间设置弹簧，弹簧连接按钮，且连接座固定在汽车座椅或提篮上。

[0006] 在童车的侧扶手上设置凹槽，凹槽内设置横杆，按下按钮，连接座通过固定钩锁定横杆，由于连接座固定在汽车座椅或提篮上，则汽车座椅或提篮就安装在童车上了。在拆卸时，只要按下按钮，固定钩从横杆中脱离就可以了，这时候，将汽车座椅安装在车上，或者可以手提提篮。在童车的侧扶手上设置可拆卸装置，使得汽车座椅或者提篮可以方便地安装或拿下，大大方便了用户。

[0007] 本实用新型的有益效果在于：本实用新型在童车的侧扶手上设置可拆卸装置，使得汽车座椅或者提篮可以方便地安装或拿下，大大方便了用户，且本实用新型结构简单，安装和拆卸都很简单。

（四）附图说明

[0008] 图 1 是本实用新型可拆卸装置的结构示意图；

[0009] 图 2 是本实用新型连接座的爆炸结构示意图；

[0010] 图 3 是本实用新型的结构示意图。

（五）具体实施方式

[0011] 下面结合附图和具体实施方式对本实用新型作进一步详细说明。

[0012] 如图 3 所示，一种多功能童车，包括车身、车架以及车轮，车架的两侧设有侧扶手 1，如图 1 所示，侧扶手上表面上设有凹槽 3，凹槽横向宽度方向悬空固定有一横杆 2，凹槽与横杆组成接收装置，侧扶手上还连接有能翻转的扶手盖 4，能盖住在凹槽上。如图 1、图 2 所示，另设有连接座 5，连接座 5 固定在汽车座椅或提篮 9 上，连接座可方便安装在接收装置上，连接座与接收装置组成侧扶手的可拆卸装置，连接座包括壳体 6，壳体背面设有连接座盖 7，壳体 6 内设置固定钩 8，且固定钩钩体能够伸出连接座，固定钩 8 与座壳体之间设置弹簧，弹簧连接按钮。按下按钮，将固定钩锁定横杆上，然后释放按钮，则汽车座椅和提篮 9 就连接在童车上了，如图 3 所示，而需要拆卸时，只需要将固定钩脱离就好了，这样，汽车座椅就可以方便地安装在汽车上，或者轻松地提提篮了。

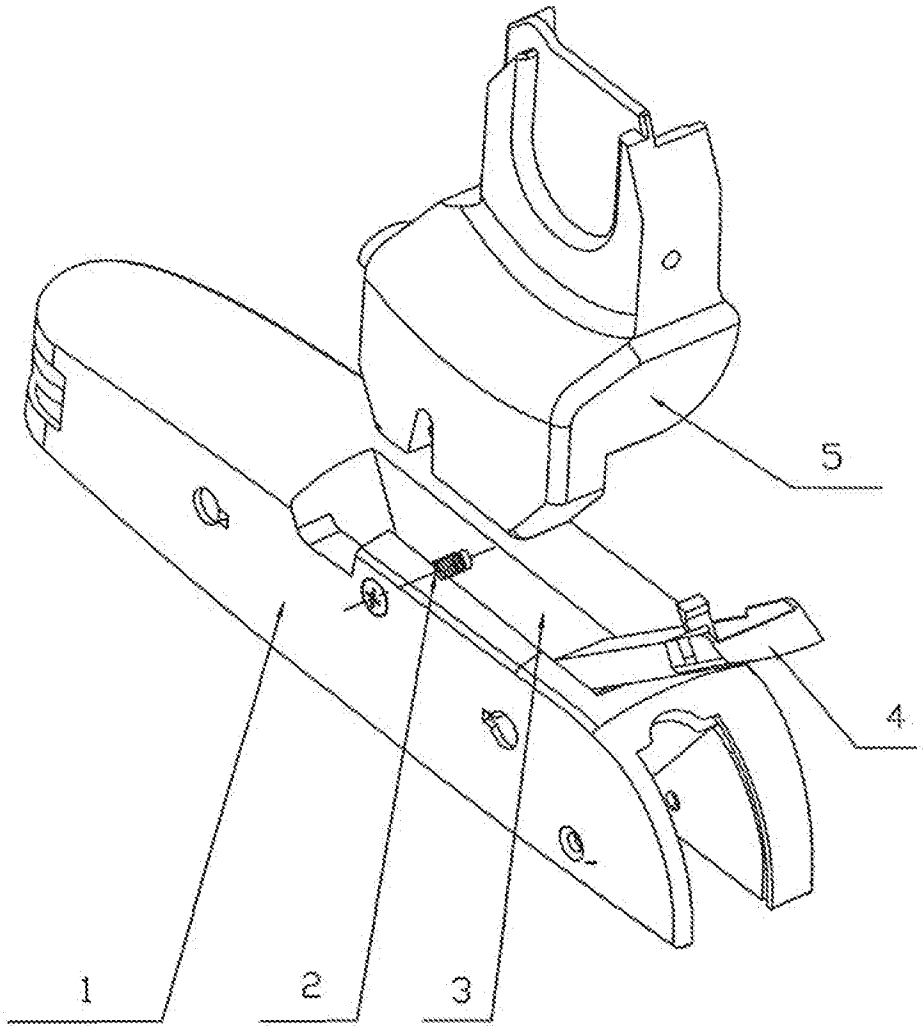


图 1

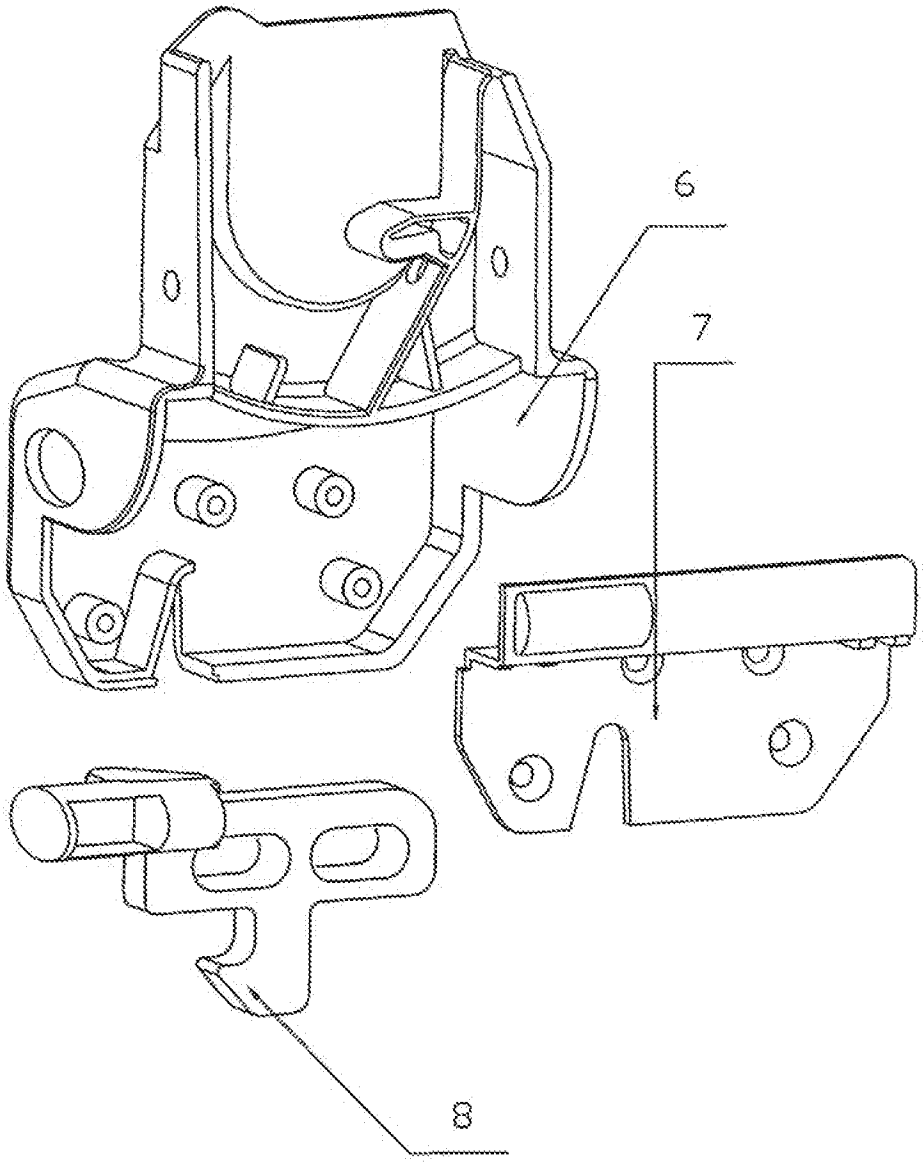


图 2

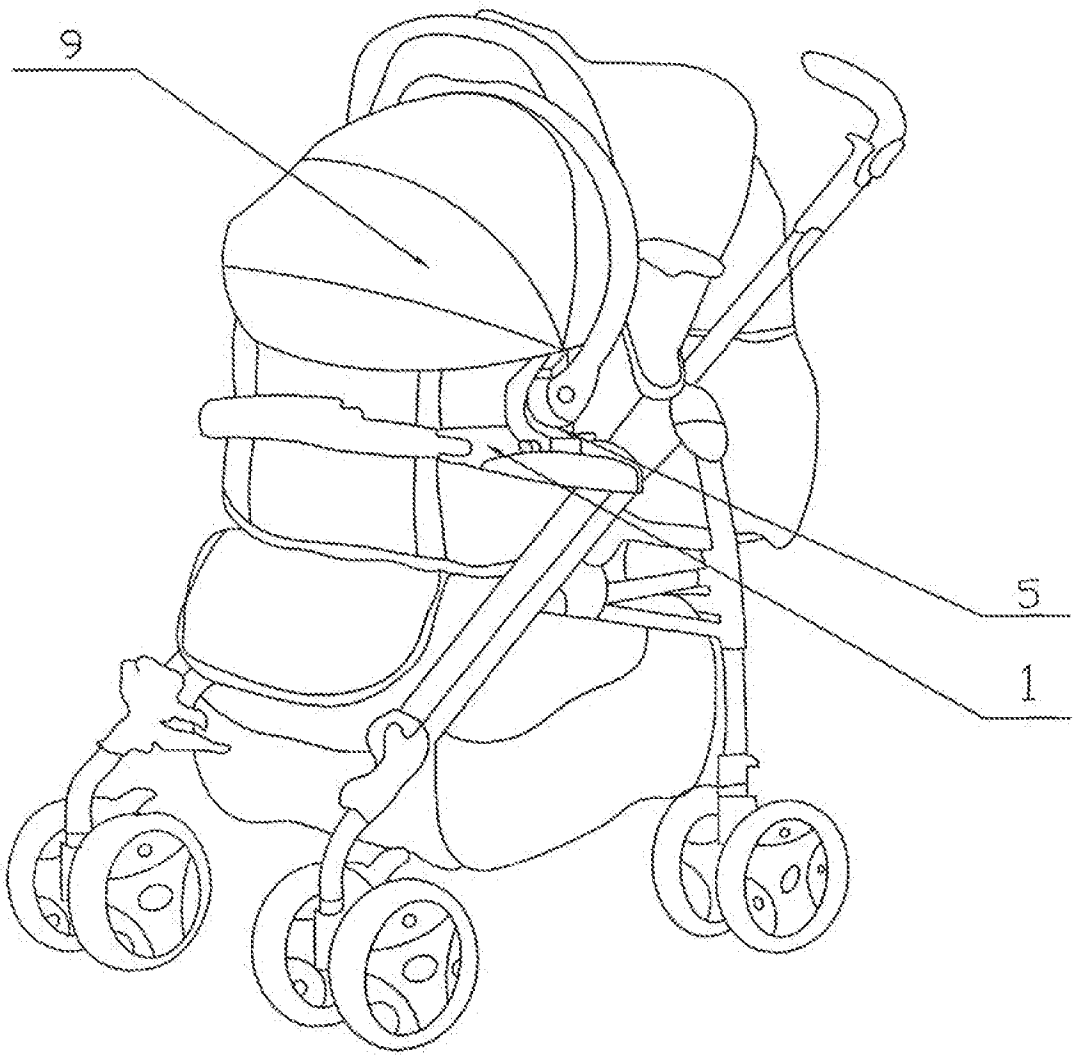


图 3

Espacenet

Bibliographic data: CN201646823 (U) — 2010-11-24

Baby trolley capable of change direction of sitting bag

Inventor(s):	JIANZHAO GUO ± (GUO JIANZHAO)	
Applicant(s):	GOODBABY CHILD PRODUCTS CO LTD ± (GOODBABY CHILD PRODUCTS CO., LTD)	
Classification:	**- international:** **- cooperative:**	***B62B9/12***
Application number:	CN2010261383U 20100111	
Priority number (s):	CN2010261383U 20100111	

Abstract of CN201646823 (U)

The utility model relates to a baby trolley capable of change the direction of a sitting bag, which comprises a vehicle frame of the trolley and a sitting bag framework arranged in the vehicle frame of the trolley, wherein connecting elements which are detachably and fixedly matched and connected are respectively arranged in corresponding positions of the vehicle frame of the trolley and the sitting bag framework, the sitting bag framework is provided with a first position or a second positioning which is fixedly matched and connected with the vehicle frame of the trolley, and the first position horizontally rotates 180 degrees to be overlapped with the second position correspondingly to the vehicle frame of the trolley. Compared with the prior art, the utility model has the advantages that the sitting bag part in the baby trolley of the utility model can be singly dismounted for changing the direction, the nursing of babies can be convenient, the structure is simple, and the use is convenient.

(19)中华人民共和国国家知识产权局

(12)实用新型专利

(10)授权公告号 CN 201646823 U
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(73)专利权人 好孩子儿童用品有限公司
地址 215331 江苏省昆山市陆家镇杨溪东路20号

(72)发明人 郭剑钊

(74)专利代理机构 苏州创元专利商标事务所有限公司 32103
代理人 孙仿卫

(51)Int.Cl.
B62B 9/12(2006.01)

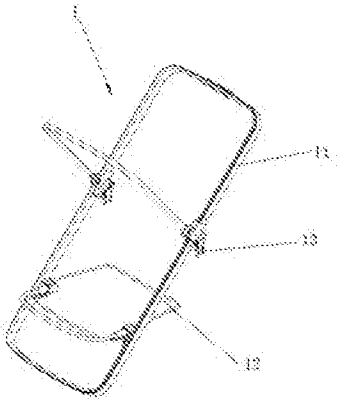
权利要求书 1 页 说明书 2 页 附图 3 页

(54)实用新型名称

一种可坐兜换向的儿童推车

(57)摘要

本实用新型涉及一种可坐兜换向的儿童推车，其包括推车车架、设置在推车车架内的坐兜框架，所述推车车架和坐兜框架的相应位置上各自设有相互可拆卸地配合固定连接的连接件，所述的坐兜框架具有与推车车架配合固定连接的第一位置或第二位置；相对于所述推车车架，所述的第一位置水平旋转180度后与所述第二位置重合。本实用新型与现有技术相比具有下列优点：本实用新型儿童推车中的坐兜部分可以单独拆卸下来进行换向，方便护理幼儿，结构简单使用方便。



CN 201646823 U

1. 一种儿童推车，其包括推车车架、设置在推车车架内的坐兜框架，其特征在于：所述推车车架和坐兜框架的相应位置上各自设有相互可拆卸地配合固定连接的连接件，所述的坐兜框架具有与推车车架配合固定连接的第一位置或第二位置；

相对于所述推车车架，所述的第一位置水平旋转 180 度后与所述第二位置重合。

2. 根据权利要求 1 所述的推车，其特征在于：所述的配合固定连接为卡扣连接方式。

3. 根据权利要求 2 所述的推车，其特征在于：所述的推车车架上的两相对侧部对称地设有卡槽，所述的坐兜框架的围框管上的相应位置设有与各卡槽配合固定连接的插件。

4. 根据权利要求 3 所述的推车，其特征在于：所述的卡槽位于所述推车车架的推把杆与前轮支架的连接处，所述的插件位于所述坐兜框架的上围框和下围框的连接处。

5. 根据权利要求 2 或 3 所述的推车，其特征在于：所述插件的前后侧对称地设有弹性突起；相应地，所述卡槽的前后侧壁对称地开设有与弹性突起配合卡扣孔。

一种可坐兜换向的儿童推车

技术领域

[0001] 本实用新型涉及一种儿童推车。

背景技术

[0002] 儿童推车一般大体上包括推车车架、设置在推车车架内的坐兜框架，现有技术中，坐兜框架与推车车架的两相对内侧固定连接。

[0003] 然后这样的结构设置不便于护理幼儿，例如不方便照顾观看，有时车向前推行时，幼儿无法避免日晒。

发明内容

[0004] 为了克服现有技术的不足，本实用新型提供了其包括推车车架、设置在推车车架内的坐兜框架，其中，所述推车车架和坐兜框架的相应位置上各自设有相互可拆卸地配合固定连接的连接件，所述的坐兜框架具有与推车车架配合固定连接的第一位置或第二位置；相对于所述推车车架，所述的第一位置水平旋转 180 度后与所述第二位置重合。

[0005] 优选的，所述的配合固定连接为卡扣连接方式。

[0006] 进一步优选的，所述的推车车架上的两相对侧部对称地设有卡槽，所述的坐兜框架的围框管上的相应位置设有与各卡槽配合固定连接的插件。

[0007] 再优选的，所述的卡槽位于所述推车车架的推把杆与前轮支架的连接处，所述的插件位于所述坐兜框架的上围框和下围框的连接处。

[0008] 优选的，所述卡槽的前后侧壁对称地开设有卡扣孔；相应地，所述插件的前后侧设有与卡扣孔配合的弹性突起。

[0009] 由于上述技术方案运用，本实用新型与现有技术相比具有下列优点：本实用新型儿童推车中的坐兜部分可以单独拆卸下来进行换向，方便护理幼儿，结构简单使用方便。

附图说明

[0010] 附图 1 为本实用新型儿童推车中的坐兜框架的立体图；

[0011] 附图 2 为附图 1 所示坐兜框架的侧视图；

[0012] 附图 3 为本实用新型的儿童推车的装配后立体图；

[0013] 其中：1、坐兜框架；11、上围框；12、下围框；13、插件；131、弹性突起；2、推车车架；21、推把杆；22、前轮支架；23、卡槽。

具体实施方式

[0014] 下面结合附图、详细说明本实用新型优选的实施方式：

[0015] 图 3 所示为一种儿童推车，其包括推车车架 2、设置在推车车架内的坐兜框架 1。

[0016] 推车车架 2 和坐兜框架 1 的相应位置上各自设有相互可拆卸地配合固定连接的连接件，坐兜框架 1 具有与推车车架配合固定连接的第一位置（图 3 所示位置）或第二位置；

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相对于推车车架 2，第一位置水平旋转 180 度后与第二位置重合，即第二位置为第一位置换向后的位置。

[0017] 推车车架 2 和坐兜框架 1 的可拆卸地配合固定连接为卡扣连接方式。

[0018] 参见图 3，推车车架 2 的两相对内侧部对称地各设有一个卡槽 23，卡槽 23 具体位于推把杆 21 与前轮支架 22 的连接处，两个卡槽 23 结构相同。卡槽 23 的前后侧壁对称地开设有卡扣孔（图中未示出）。

[0019] 参见图 1、2 坐兜框架 1 的围框管上设有两个插件 13，插件 13 具体位于上围框 11 和下围框 12 的连接处。两个插件 13 的结构相同。插件 13 的前后侧对称地设有弹性突起 131。弹性突起 131 与卡扣孔的位置向对应。

[0020] 参见图 1、2、3，卡槽 23 与插件 13 之间为卡扣连接。插件 13 插入卡槽 23 内，弹性突起 131 滑入卡扣孔内，从而将坐兜固定安装到推车车架 2 上；按压弹性突起 131 的同时向上顶推（或拔出）插件 13，弹性突起 131 脱离卡扣孔，从而将坐兜从推车车架上拆卸下来。

[0021] 将坐兜拆卸下来后，可将其换向（推车车架 2 相对静止时，将坐兜框架 1 绕重垂线旋转 180 度，将图 3 的第一位置变换为第二位置），两个插件 13 的位置互换后再插入相应的卡槽 23 中，从而实现换向后的坐兜框架 1 与推车车架 2 固定。

[0022] 本实用新型的儿童推车并不局限于上述的实施例，凡根据本实用新型的精神实质所作的等效变化或修饰，都应涵盖在本实用新型的保护范围内。

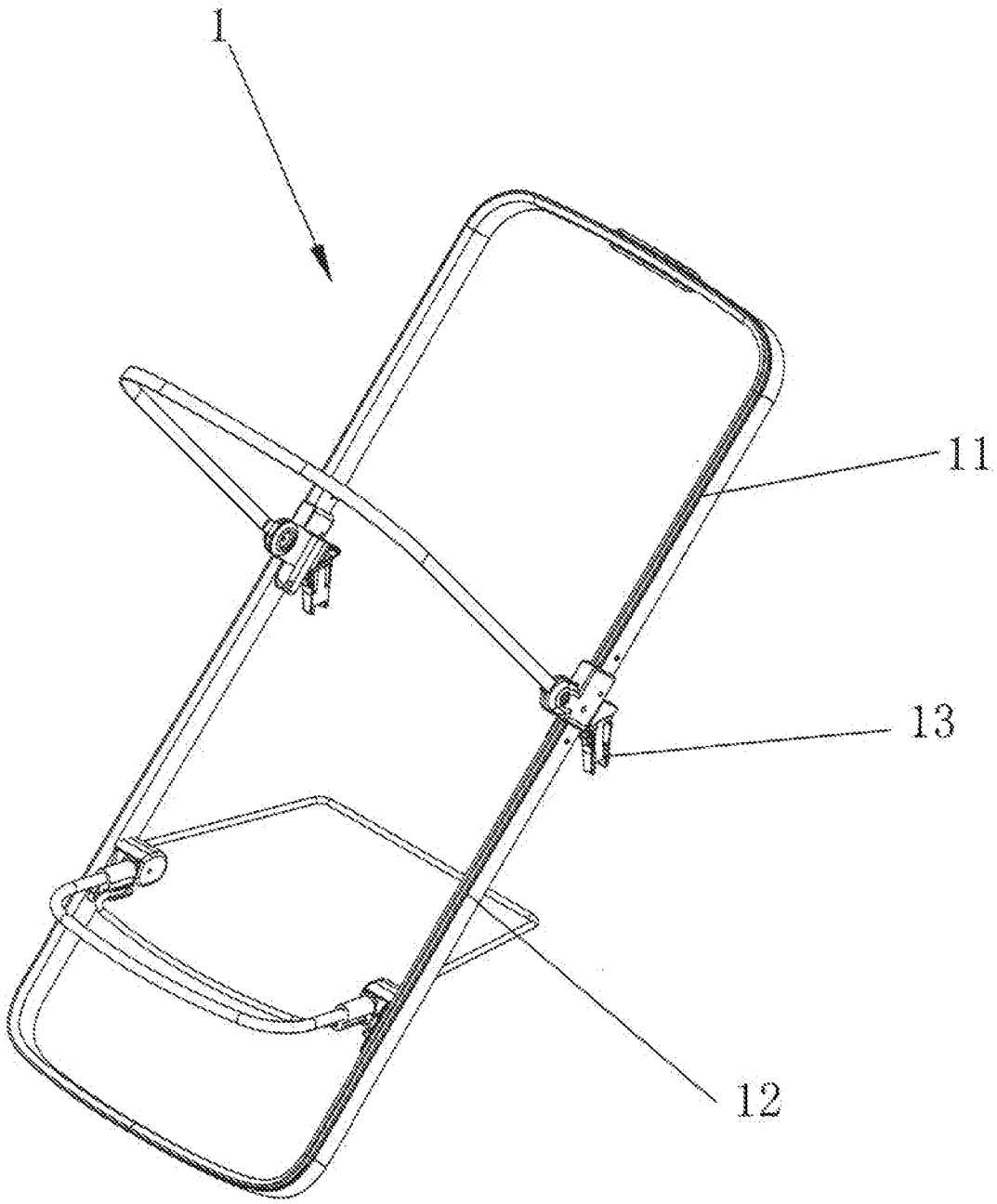

图 1

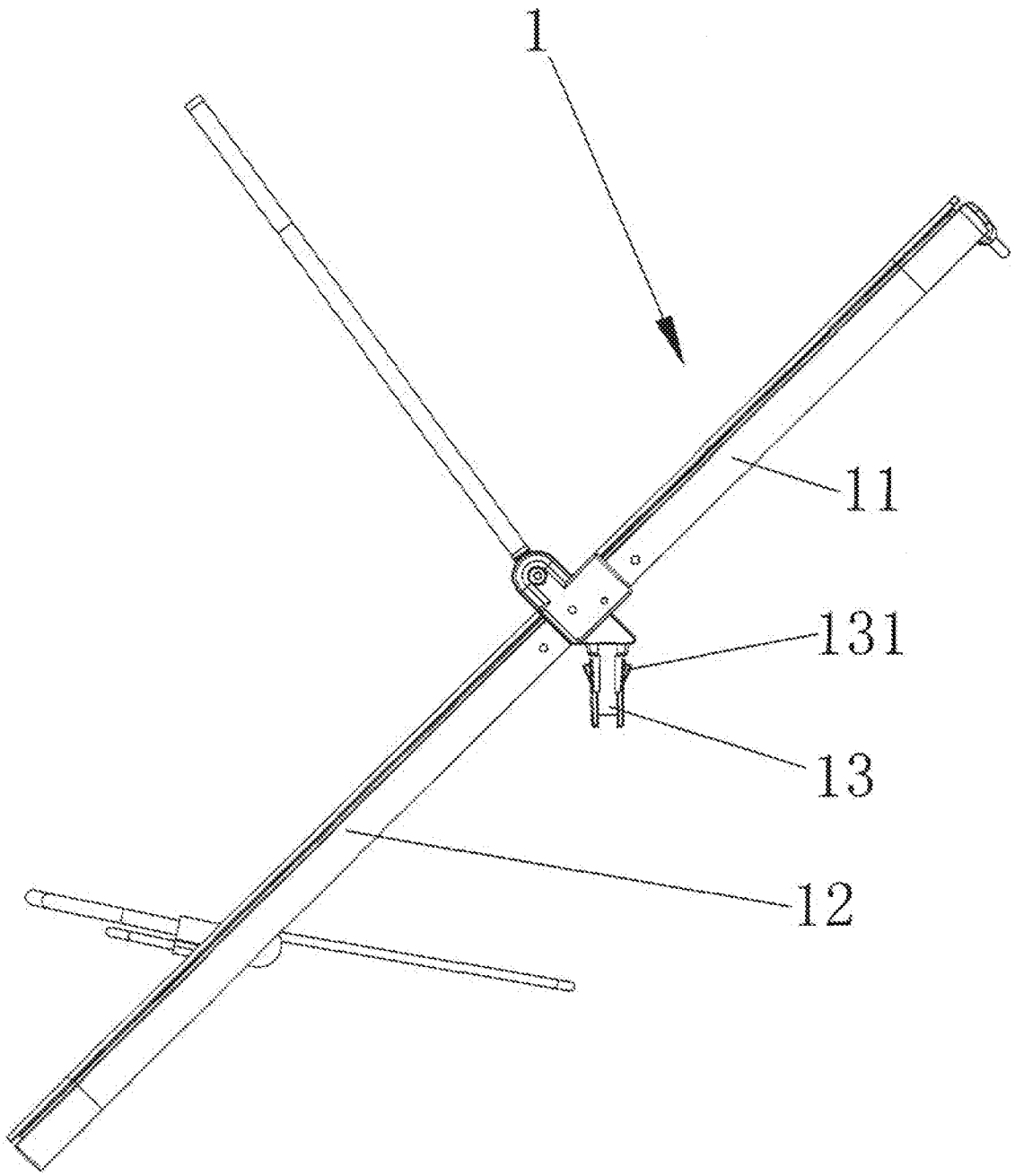

图 2

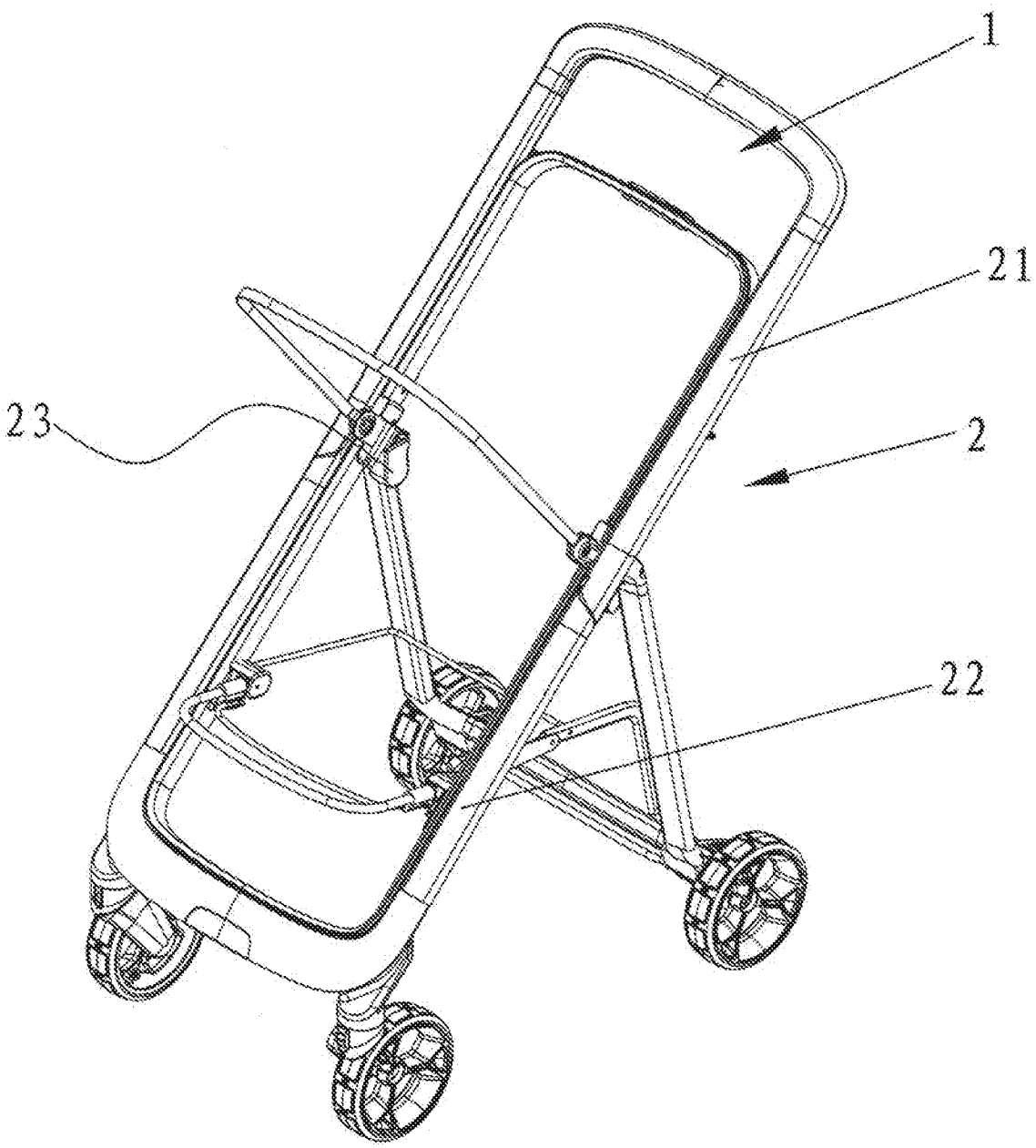

图 3

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Intès, Didier Gérard André
Cabinet Beau de Loménie
158 rue de l'Université
75340 Paris Cedex 07
FRANCE

ORDRE RE 15625
28 AOUT 2017
Cabinet Beau de Loménie

Date
29.08.17

Reference	Application No./Patent No.
3H319420/3.VIG	17161947.1 - 1760
Applicant/Proprietor	
Baby Jogger, LLC	

Communication

The extended European search report is enclosed.

The extended European search report includes, pursuant to Rule 62 EPC, the European search report (R. 61 EPC) or the partial European search report/ declaration of no search (R. 63 EPC) and the European search opinion.

Copies of documents cited in the European search report are attached.

☑ 0 additional set(s) of copies of such documents is (are) enclosed as well.

The following have been approved:

☑ Abstract ☑ Title

☐ The Abstract was modified and the definitive text is attached to this communication.

The following figure(s) will be published together with the abstract: 8A

Refund of search fee
If applicable under Article 9 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.

Should you wish to further prosecute this application in the examination phase, your attention is drawn to the provisions of Rule 70a EPC. An invitation to respond to the extended European search report will be issued once the date of publication of the European search report has been mentioned in the European Patent Bulletin (R. 69(1), R. 70(2) EPC).

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EUROPEAN SEARCH REPORT

Application Number
EP 17 16 1947

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	US 6 286 844 B1 (CONE II RICHARD E [US] ET AL) 11 September 2001 (2001-09-11) * the whole document *	1,2,4-6, 13,14 3,7-12, 15	INV. B62B7/00
X	US 2014/191483 A1 (ROLICKI PETER [US] ET AL) 10 July 2014 (2014-07-10) * paragraph [0071]; figure 10 *	1,8-10, 13,15	
X	WO 2014/042524 A1 (WF INTERNAT HOLDING B V [NL]) 20 March 2014 (2014-03-20) * figure 6 *	1,13	
A	US 2016/046315 A1 (ZEHFUSS MARK [US] ET AL) 18 February 2016 (2016-02-18) * the whole document *	1-15	

TECHNICAL FIELDS SEARCHED (IPC)
B62B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	22 August 2017	Lindner, Volker

CATEGORY OF CITED DOCUMENTS
X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

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

EP 17 16 1947

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
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22-08-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6286844 B1	11-09-2001	US 6286844 B1	11-09-2001
		US 2001013689 A1	16-08-2001
US 2014191483 A1	10-07-2014	CN 105835933 A	10-08-2016
		US 2014191483 A1	10-07-2014
		US 2015021872 A1	22-01-2015
		US 2016159385 A1	09-06-2016
WO 2014042524 A1	20-03-2014	EP 2895378 A1	22-07-2015
		NL 2009449 C	12-03-2014
		WO 2014042524 A1	20-03-2014
US 2016046315 A1	18-02-2016	US 2016046315 A1	18-02-2016
		WO 2016025690 A1	18-02-2016

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

Information on Search Strategy - Pilot phase (see OJ 2015, A86)
The type of information contained in this sheet may change during the pilot for improving the usefulness of this new service.

Application Number
EP 17 16 1947

TITLE: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

APPLICANT: Baby Jogger, LLC

IPC CLASSIFICATION: B62B7/00

EXAMINER: Lindner, Volker

CONSULTED DATABASES: WPI

CLASSIFICATION SYMBOLS DEFINING EXTENT OF THE SEARCH:

IPC:

CPC: B62B7/008, B62B9/028

FI/F-TERMS:

KEYWORDS OR OTHER ELEMENTS FEATURING THE INVENTION:
A stroller (10), comprising:
a stroller frame (12);
a plurality of wheels (14, 15) coupled to the stroller frame (12);
a first seat coupled to the stroller frame (12);
a first seat attachment housing (1105) disposed along a first portion of the stroller frame (12);
a second seat attachment housing (1110) disposed along a second portion of the stroller frame (12);
a first removable seat attachment adapter (84) configured to be removably coupled to the first seat attachment housing (1105); and
a second removable seat attachment adapter (89) configured to be removably coupled to the second seat attachment housing (1110).

EPO FORM P04A42

The examination is being carried out on the **following application documents**

Description, Pages

1-20 as originally filed

Claims, Numbers

1-15 as originally filed

Drawings, Sheets

1/18-18/18 as originally filed

1 The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1 US 6 286 844 B1 (CONE II RICHARD E [US] ET AL) 11 September 2001 (2001-09-11)

D2 US 2014/191483 A1 (ROLICKI PETER [US] ET AL) 10 July 2014 (2014-07-10)

D3 WO 2014/042524 A1 (WF INTERNAT HOLDING B V [NL]) 20 March 2014 (2014-03-20)

2 The present application does not meet the requirements of Article 52(1) EPC, because **the subject-matter of claims 1, 2, 4-6, 13 and 14 is not new in the sense of Article 54(1) and (2) EPC.**

2.1 **Claims 1 and 13**

The document D1 discloses (the references in parentheses applying to this document):
A stroller (14) comprising: a stroller frame (14,16,68); a plurality of wheels (74) coupled to the stroller frame; a first seat (12) coupled to the stroller frame; a first seat attachment housing (16) disposed along a first portion of

the stroller frame; a second seat attachment housing (16) disposed along a second portion of the stroller frame; a first removable seat attachment adapter (46,124) configured to be removably coupled to the first seat attachment housing; and a second removable seat attachment adapter (46,124) configured to be removably coupled to the second seat attachment housing.

A method of attaching a second stroller seat to a stroller (14) comprising: providing a stroller (14) comprising: a stroller frame (14,16,68); a plurality of wheels (74) coupled to the stroller frame (14,16,68); a first stroller seat coupled to the stroller frame (14,16,68);
a first seat attachment housing (16) disposed along a first portion of the stroller frame (14,16,68); a second seat attachment housing (16) disposed along a second portion of the stroller frame (14,16,68); a first removable seat attachment adapter; and a second removable seat attachment adapter; wherein each of the first and the second removable seat attachment adapters comprise a first end and a second end, the second end comprising a seat connector; inserting the first end of the first removable seat attachment adapter into first seat attachment housing (16); inserting the first end of the second removable seat attachment adapter into the second seat attachment housing (16); and coupling the second stroller seat to the seat connector of each of the first removable seat attachment adapter (16) and the second removable seat attachment adapter (16).

The subject-matter of claims 1 and 13 is therefore not new (Article 54(1) and (2) EPC).

2.2 Documents D2 and D3 disclose also the subject matter of claims 1 and 13:

D2: frame (102); a plurality of wheels (110), first seat (106), first seat attachment housing (1002), second seat attachment housing (1002), first and second adapters (108)
D3: frame (12); a plurality of wheels (30), first seat (22), first seat attachment housing (64), second seat attachment housing (66), first and second adapters (40)

2.3 **Claims 2, 4-6, 13 and 14**

The document D1 discloses also (the references in parentheses applying to this document):

A stroller, wherein each of the first seat attachment housing and the second seat attachment housing comprise: an adapter receiving cavity (90) configured to receive at least a portion of a respective one of the first and the second removable seat attachment adapters; and a door (102,104) disposed adjacent a top side of the respective seat attachment housing and configured to move from a closed configuration, preventing access to the adapter receiving cavity from the top side of the respective seat attachment adapter, to an open configuration allowing access to the adapter receiving cavity from the top side of the respective seat attachment adapter, wherein the door is rotatably coupled to the respective seat attachment housing and wherein the door is configured to rotate from the closed configuration to the open configuration (Fig.1-13), further comprising a hinge (88, 92) having a first portion coupled to the door and a second portion coupled to the respective seat attachment housing (Fig.1-13), wherein the hinge rotatably couples the door to the respective seat attachment housing (Fig.1-13), wherein the adapter receiving cavity comprises: a first open end; and a distal second open end (Fig.1-13); wherein the adapter receiving cavity provides a through hole through the respective first or second seat attachment housing,

Methode, wherein the stroller (14) further comprises a first door (102,104) disposed adjacent a top side of the first seat attachment housing (16) and a second door (102,104) disposed adjacent a top side of the second seat attachment housing (16), the method further comprising:
adjusting the first door (102,104) from a closed configuration, preventing access to first seat attachment housing (16), to an open configuration, allowing access to the first seat attachment housing (16), prior to inserting the first end of the first removable seat attachment adapter into first seat attachment housing (16);
adjusting the second door (102,104) from the closed configuration to the open configuration prior to inserting the first end of the second removable seat attachment adapter into the second seat attachment housing (16).

The subject-matter of claims 2, 4-6, 13 and 14 is therefore not new (Article 54(1) and (2) EPC).

3 A latching mechanism is well known and disclosed in D2 (see figure 10 and [0071]), the features of claim 8-10 and 15 are merely one of several straight-forward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed.

Thus the present application does not meet the criteria of an inventive, because **the subject-matter of claims 8-10 and 15 does not involve an inventive step.**

4 In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC, the applicant should clearly identify the amendments made, irrespective of whether they concern amendments by addition, replacement or deletion, and indicate the passages of the application as filed on which these amendments are based (see Guidelines F-III, 2.6).

If the applicant considers it appropriate, these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

5 To meet the requirements of Rule 42(1)(b) EPC, the document D1 should be identified in the description and its relevant contents should be indicated. The applicant should ensure that it is clear from the description which features of the subject-matter of the independent claim is known from the document D1.

6 The combination of the features of dependent claim 3 is neither known from, nor rendered obvious by, the available prior art. A new independent claim may be drafted to include these features, bearing in mind that the features known in combination in D1 should be placed in the preamble of such a claim in accordance with Rule 43(1) EPC.

7 In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC, the applicant should clearly identify the amendments made, irrespective of whether they concern amendments by addition, replacement or deletion, and indicate the passages

of the application as filed on which these amendments are based (see Guidelines E-II, 1).

8 To meet the requirements of Rule 42(1)(b) EPC, the document D1 should be identified in the description and its relevant contents should be indicated. The applicant should ensure that it is clear from the description which features of the subject-matter of the independent claim is known from the document D1.

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European Patent Office
Office européen des brevets

European Patent Office
80298 MUNICH
GERMANY
Tel: +49 89 2399 0
Fax: +49 89 2399 4465

Haley, Stephen
Gill Jennings & Every LLP
The Broadgate Tower
20 Primrose Street
London EC2A 2ES
ROYAUME-UNI

Formalities Officer
Name: Rocchi, Sabrina
Tel: +49 89 2399 - 2106
or call
+31 (0)70 340 45 00

Substantive Examiner
Name: Gineste, Bertrand
Tel: +49 89 2399 - 5718

Application No.	Ref.	Date
09 831 215.0 - 1760	MJB08641EP	13.01.2016
Applicant: Baby Jogger, LLC		

Communication pursuant to Article 94(3) EPC

The examination of the above-identified application has revealed that it does not meet the requirements of the European Patent Convention for the reasons enclosed herewith. If the deficiencies indicated are not rectified the application may be refused pursuant to Article 97(2) EPC.

You are invited to file your observations and insofar as the deficiencies are such as to be rectifiable, to correct the indicated deficiencies within a period

of 4 months

from the notification of this communication, this period being computed in accordance with Rules 126(2) and 131(2) and (4) EPC. One set of amendments to the description, claims and drawings is to be filed within the said period on separate sheets (R. 50(1) EPC).

If filing amendments, you must identify them and indicate the basis for them in the application as filed. Failure to meet either requirement may lead to a communication from the Examining Division requesting that you correct this deficiency (R. 137(4) EPC).

Failure to comply with this invitation in due time will result in the application being deemed to be withdrawn (Art. 94(4) EPC).

Registered letter
EPO Form 2001 12.10CSX

Gineste, Bertrand
Primary Examiner
For the Examining Division

Enclosure(s): 3 page/s reasons (Form 2906)

The examination is being carried out on the **following application documents**

Description, Pages

1, 3-12	as published	
2, 13	filed in electronic form on	11-06-2014

Claims, Numbers

1-15	filed in electronic form on	11-06-2014

Drawings, Sheets

1/8-8/8	as published

Reference is made to the following document; the numbering will be adhered to in the rest of the procedure.

D1 ES 2 253 093 A1 (PLAY SA [ES]) 16 May 2006 (2006-05-16)

The arguments of the applicant in his letter dated 10.06.2014 have been duly acknowledged.

1 Amendments filed

The newly filed documents do not meet the requirements of Article 123(2) EPC in that some amendments are not based on the original application documents for the following reasons:

1.1 Claims 1 and 11

1.1.1 The feature of claims 1 and 11 relating to "**separate** left and right attachment frame members" does not have any basis in the application as originally filed which merely discloses a seat attachment provided with left and right attachment frame members (see [0031] of the original description), each of these frame members being removably connected to the stroller frame (12) in a front portion of the stroller (10) adjacent to the corresponding left and right front wheels (see [0029] of the original description).

1.1.2 The original description and the original drawings remains silent with regard to a **potential separation** between left and right attachment frame members (24). According to paragraph [0029] of the original description: "Only one seat attachment is shown in Figure 3, the stroller 10 would use two seat

attachments as shown in Figure 3 or one seat attachment comprising two seat support elements.". This means that seat 13 can be attached to stroller 10:

- either by a single seat attachment 20 comprising two seat support elements 22 or
- by left and right seat attachments 20, each comprising a seat support element 22.

A seat attached to stroller 10 by **separate** left and right seat attachments 20, i.e. by **separate** left and right frame members 24 is not disclosed in paragraph [0029] of the original description.

1.1.3 Each of attachment frame members 24 is removably connected to the corresponding side of stroller frame 10, both sides of the stroller frame being usually not separable as mentioned by the applicant in his letter dated 10.06.2014, page 3, last paragraph. Thus, there is no reason why left and right attachment frame members should be separable.

Besides, paragraph [0031] of the original description discloses two attachment frame members, wherein wheel support frame 26 connecting seat attachment wheel 23 to attachment support frame 24 is pivotally connected to both attachment frame members (24). Wheel support frame 26 seems therefore to connect left and right attachment frame members.

Also according to paragraph [0031], "attachment frame member 24 may span the width of the stroller between the two attachment frame members 17". It seems therefore that left and right attachment frame members seem to be fixedly connected to each other.

The separation mentioned in claim 1 can therefore not be considered as implicit to a person skilled in the art.

1.1.4 The information concerning the separation of the left and right attachment frame members present in claim 1 is therefore not directly and unambiguously derivable from that previously presented by the original application, even when account is taken of matter which is implicit to a person skilled in the art.

1.1.5 Thus the addition of this feature introduces subject-matter which extends beyond the content of the application as filed, contrary to Article 123(2) EPC (see the Guidelines for Examination in the EPO H-IV; 2).

2 Further prosecution

2.1 Claims 1 and 11 have been drafted as separate independent claims.

Under Article 84 in combination with Rule 43(2) EPC, an application may contain more than one independent claim in a particular category only if the subject-matter claimed falls within one or more of the exceptional situations set out in paragraph (a), (b) or (c) of Rule 43(2) EPC. This is not the case in the present application, however, for the following reason: it seems that the stroller according to claim 1 comprises all of the features of the seat attachment according to claim 11, i.e. that the stroller according to claim 1 could be rewritten as dependent on the seat attachment according to claim 11.

3 Miscellaneous

3.1 The applicant is invited to file new claims which take account of the above comments.

3.2 When filing amended claims the applicant should at the same time bring the description into conformity with the amended claims. Care should be taken during revision, especially of the introductory portion and any statements of problem or advantage, not to add subject-matter which extends beyond the content of the application as originally filed (Article 123(2) EPC).

3.3 The applicant is invited to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion and to indicate the passages of the application as filed on which these amendments are based (see article 123(2) EPC as well as the Guidelines for Examination in the EPO H-III; 2.1 and 2.2). The applicant is reminded that the European Patent Office no longer accepts handwritten amendments as set out in the Official Journal, OJ EPO 2013, 603 ("Notice from the European Patent Office dated 8 November 2013 concerning application of Rules 49 and 50 EPC to handwritten amendments").

Espacenet

Bibliographic data: ES2253093 (A1) — 2006-05-16

Small double infantile car has two small car units each of which may be utilized separate from other since car units are removably attached by connectors

Inventor(s): JANE STOPP JOAQUIM [ES] ± (JANE STOPP JOAQUIM)

Applicant(s): PLAY SA [ES] ± (PLAY, S.A)

Classification: - international: ***B62B9/12***
- cooperative: **B62B7/008**; **B62B7/142**; **B62B7/145**; **B62B9/102**; **B62B9/12**; B62B2207/02 more

Application number: ES20040001973 20040806

Priority number(s): ES20040001973 20040806

Also published as: ES2253093 (B1)

Abstract of ES2253093 (A1)

The car is comprised of two small car units joined together by removable connectors. The removable connectors include a pair of sockets in the front part of one car unit and a pair of steel rods in the rear part of the other car unit. The steel rods are removably insertable into the sockets such that each car unit may be utilized separate from the other.

(19) OFICINA ESPAÑOLA DE PATENTES Y MARCAS

ESPAÑA

(11) Número de publicación: **2 253 093**

(21) Número de solicitud: 200401973

(51) Int. Cl.
B62B 9/12 (2006.01)

(12) SOLICITUD DE PATENTE A1

(22) Fecha de presentación: **06.08.2004**

(43) Fecha de publicación de la solicitud: **16.05.2006**

(43) Fecha de publicación del folleto de la solicitud: **16.05.2006**

(71) Solicitante/s: **PLAY, S.A.**
Polígono Industrial Riera de Caldes
Rda. Boada Vell, 6
08184 Palau de Plegamans, Barcelona, ES

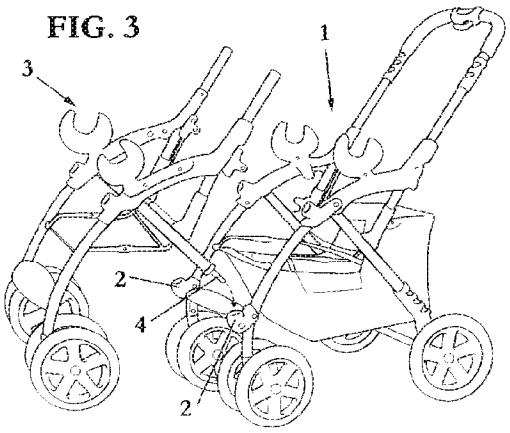
(72) Inventor/es: **Jane Stopp, Joaquim**

(74) Agente: **Ponti Sales, Adelaida**

(54) Título: **Cochecito infantil doble.**

(57) Resumen:
Cochecito infantil doble.
El cochecito comprende un primer cochecito infantil (1) y un segundo cochecito infantil (3) unidos entre sí, y se caracteriza por el hecho de que los dos cochecitos están unidos mediante medios de acoplamiento amovibles (2, 4). Dichos medios de acoplamiento amovibles comprenden un par de casquillos (2) previstos en la parte delantera de dicho primer cochecito infantil (1), donde se alojan un par de varillas (4) previstas en la parte posterior del segundo cochecito infantil (3). Se consigue un cochecito infantil doble que también se puede utilizar de manera individual.

FIG. 3



ES 2 253 093 A1

DESCRIPCIÓN

Cochecito infantil doble.

La presente invención se refiere a un cochecito infantil doble, que puede utilizarse para llevar dos niños a la vez, o de manera independiente.

Antecedentes de la invención

En la actualidad existen cochecitos infantiles dobles, que habitualmente se utilizan para llevar gemelos, aunque también se pueden usar para llevar niños de diferentes edades.

Estos cochecitos dobles comprenden dos cochecitos infantiles unidos a través de una única estructura, de manera que no se pueden separar.

Esta imposibilidad de separar los cochecitos presenta varios inconvenientes. En primer lugar, no se pueden utilizar los cochecitos por separado, lo que implica que si se han de llevar los dos niños por separado es necesario un cochecito independiente. En segundo lugar, si los niños son de diferente edad, cuando el mayor ya no necesita un cochecito infantil, únicamente se dispone de un cochecito infantil doble, no pudiéndose utilizar de manera individual.

Por lo tanto, es evidente la necesidad de un cochecito infantil que se pueda utilizar como cochecito infantil doble para dos niños a la vez y, al mismo tiempo, si se desea, utilizarlo como dos cochecitos infantiles independientes.

Descripción de la invención

Con el cochecito infantil de la invención se consiguen resolver los inconvenientes citados, presentando otras ventajas que se describirán.

El cochecito infantil doble de la presente invención comprende un primer cochecito infantil y un segundo cochecito infantil unidos entre sí, y se caracteriza por el hecho de que los dos cochecitos infantiles están unidos mediante medios de acoplamiento amovibles.

Gracias a esta característica, el cochecito infantil de la presente invención se puede utilizar con ambos cochecitos unidos o separados, según se desee.

Según una realización preferida, dichos medios de acoplamiento amovibles comprenden un par de casquillos previstos en la parte delantera de dicho primer cochecito infantil, donde se alojan un par de varillas previstas en la parte posterior del segundo cochecito infantil.

De esta manera, el acoplamiento y desacoplamiento de los dos cochecitos puede realizarse cómoda y rápidamente en el momento que se desee utilizar dichos cochecitos unidos o por separado.

Preferentemente, el segundo cochecito infantil comprende un par de ruedas montadas de manera amovible, estando dichas ruedas amovibles de dicho segundo cochecito montadas en dichas varillas.

Ventajosamente, dicho segundo cochecito comprende un manillar montado de manera amovible.

Breve descripción de los dibujos

Para mejor comprensión de cuanto se ha expuesto se acompañan unos dibujos en los que, esquemáticamente y tan sólo a título de ejemplo no limitativo, se representa un caso práctico de realización.

La figura 1 es una vista en perspectiva del primer cochecito de la presente invención;

La figura 2 es una vista en perspectiva del segundo cochecito de la presente invención;

La figura 3 es una vista en perspectiva de los dos cochecitos justo antes de su unión;

La figura 4 es una vista en perspectiva de cochecito doble de la presente invención; y

Las figuras 5 y 6 son vistas en perspectiva de dos cochecitos dobles según dos realizaciones alternativas.

Descripción de una realización preferida

En la figura 1 se ha representado un primer cochecito infantil 1, cuya única diferencia respecto a un cochecito infantil convencional es la presencia de medios de acoplamiento en su parte delantera. En concreto dichos medios de acoplamiento son un par de casquillos 2, cuya función se describirá posteriormente.

El resto del cochecito infantil no se describe, ya que es convencional y no forma parte de la presente invención.

En la figura 2 se ha representado un segundo cochecito infantil 3 que puede acoplarse al primer cochecito infantil 1 citado anteriormente. En este caso, la diferencia entre este segundo cochecito 3 y uno convencional es que comprende medios de acoplamiento en su parte trasera, en concreto un par de varillas 4, que se alojan en los casquillos 2 citados anteriormente cuando se utilizan ambos cochecitos 1, 3 acoplados entre sí, o en las que se colocan las ruedas traseras 5 del segundo cochecito 3, las cuales están montadas de manera amovible.

Además, el manillar 6 también está montado de manera amovible, pudiéndose retirar cuando se utilice el cochecito doble 1, 3.

Como es evidente, los dos cochecitos 1, 3 representados en las figuras 1 y 2 pueden utilizarse de manera independiente. Si se desea utilizarlos conjuntamente, simplemente se han de retirar las ruedas traseras 5 y el manillar 6 del segundo cochecito 3, introduciéndose las varillas 4 en los correspondientes casquillos 2, tal como se muestra en la figura 3. Aunque no se ha representado en las figuras, es evidente que los casquillos 2 comprenden algún sistema de retención para evitar que las varillas 4 se salgan accidentalmente.

Una vez realizada esta operación, el cochecito infantil doble de la presente invención queda tal como se ha representado en la figura 4, listo para utilizarse con dos niños.

Para volver a utilizar los dos cochecitos 1, 3 de manera independiente simplemente hay que realizar la operación inversa a la descrita anteriormente.

En las figuras 5 y 6 se han representado dos ejemplos de utilización del cochecito doble de la presente invención.

En la figura 5, se ha representado el cochecito doble con un asiento trasero 8 y un capazo delantero 7, mientras que en la figura 6 se ha representado con dos asientos 8. Como es sobradamente conocido, el capazo 7 es adecuado para bebés que han de ir echados, mientras que el asiento 8 es adecuado para niños que pueden permanecer sentados.

Es evidente que las combinaciones representadas en las figuras 5 y 6 son solamente a modo de ejemplo, pudiéndose utilizar cualquier combinación adecuada además de las representadas.

A pesar de que se ha hecho referencia a una realización concreta de la invención, es evidente para un experto en la materia que el coche infantil descrito es susceptible de numerosas variaciones y modifica-

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ciones, y que todos los detalles mencionados pueden ser substituidos por otros técnicamente equivalentes, sin apartarse del ámbito de protección definido por las reivindicaciones adjuntas.

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REIVINDICACIONES

1. Cochecito infantil doble, que comprende un primer cochecito infantil (1) y un segundo cochecito infantil (3) unidos entre sí, **caracterizado** por el hecho de que los dos cochecitos están unidos mediante medios de acoplamiento amovibles (2, 4).

2. Cochecito infantil doble según la reivindicación 1, **caracterizado** por el hecho de que dichos medios de acoplamiento amovibles comprenden un par de casquillos (2) previstos en la parte delantera de dicho primer cochecito infantil (1), donde se alojan un par de varillas (4) previstas en la parte posterior del segundo cochecito infantil (3).

3. Cochecito infantil doble según la reivindicación 1 ó 2, **caracterizado** por el hecho de que el segundo cochecito infantil (3) comprende un par de ruedas (5) montadas de manera amovible.

4. Cochecito infantil doble según las reivindicaciones 2 y 3, **caracterizado** por el hecho de que dichas ruedas amovibles (5) de dicho segundo cochecito están montadas en dichas varillas (4).

5. Coche infantil doble según la reivindicación 1, **caracterizado** por el hecho de que dicho segundo cochecito (3) comprende un manillar (6) montado de manera amovible.

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FIG. 1

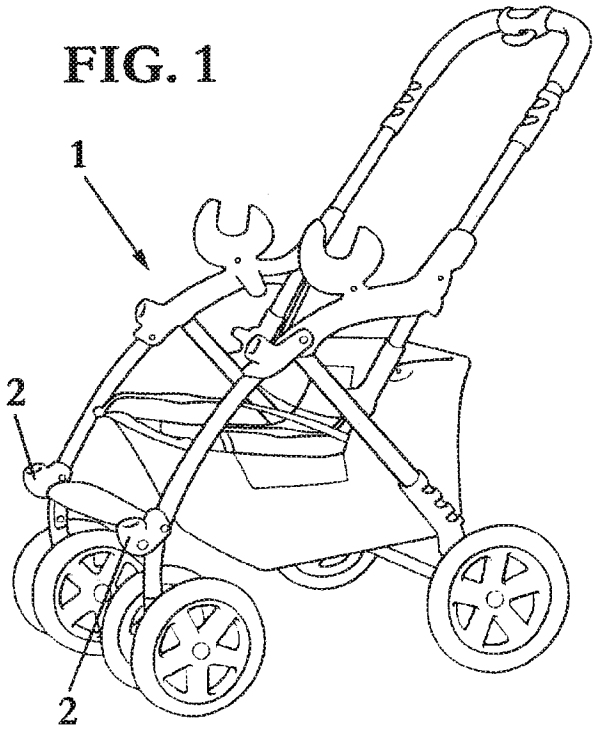
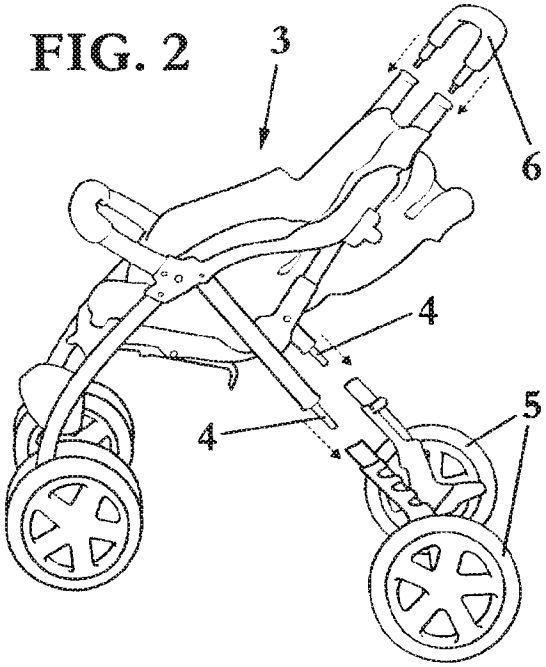


FIG. 2



UPPABABY ET AL. EX. 1019

FIG. 3

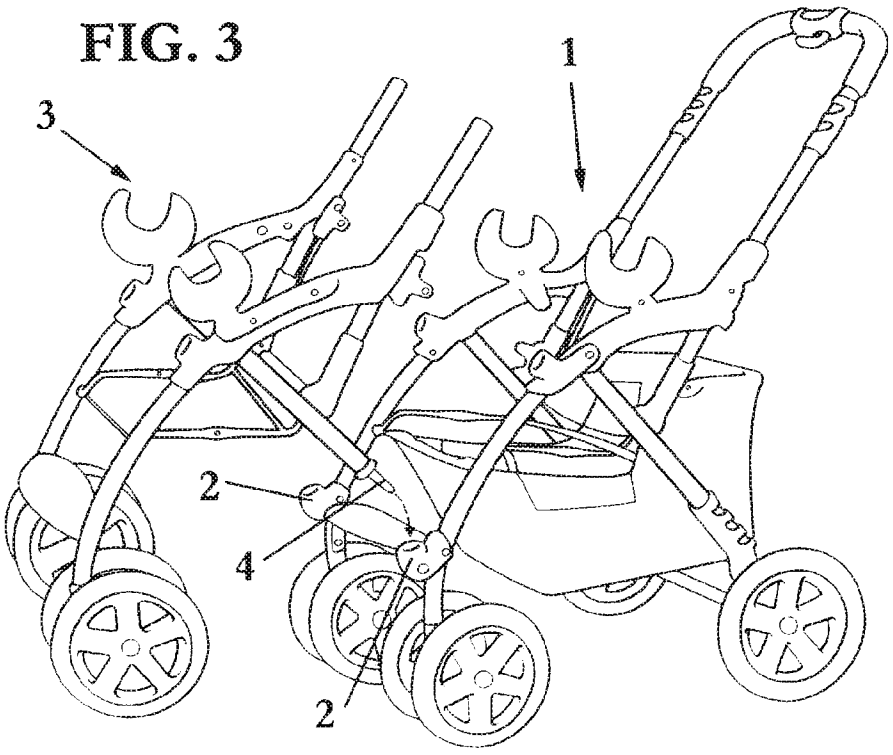


FIG. 4

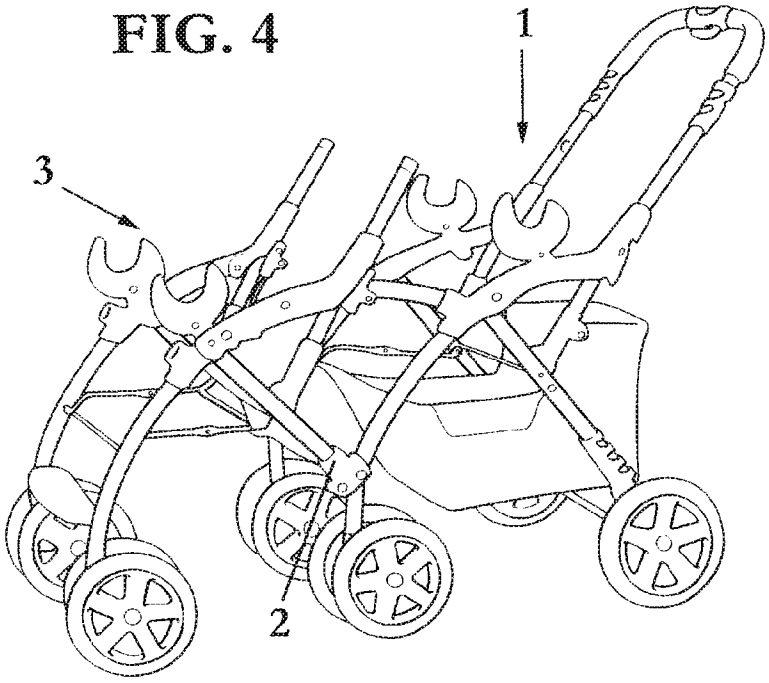


FIG. 5

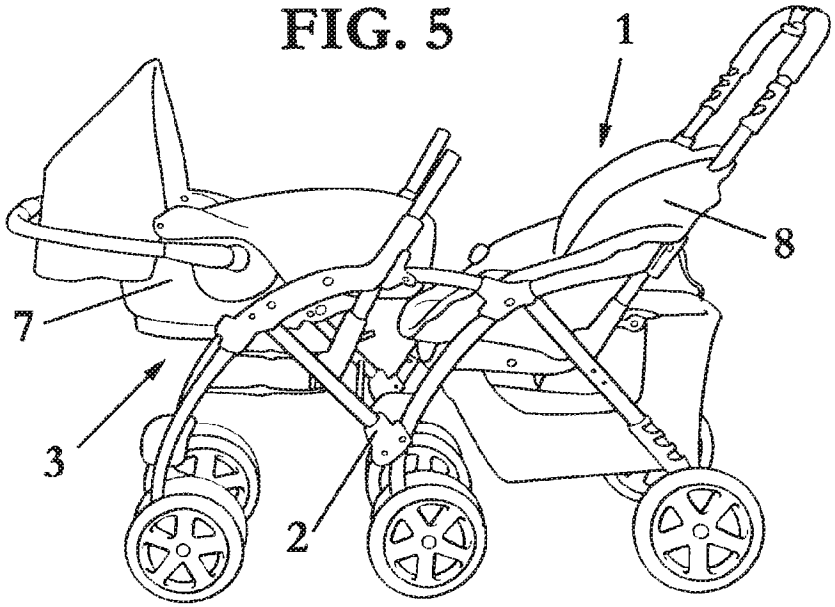
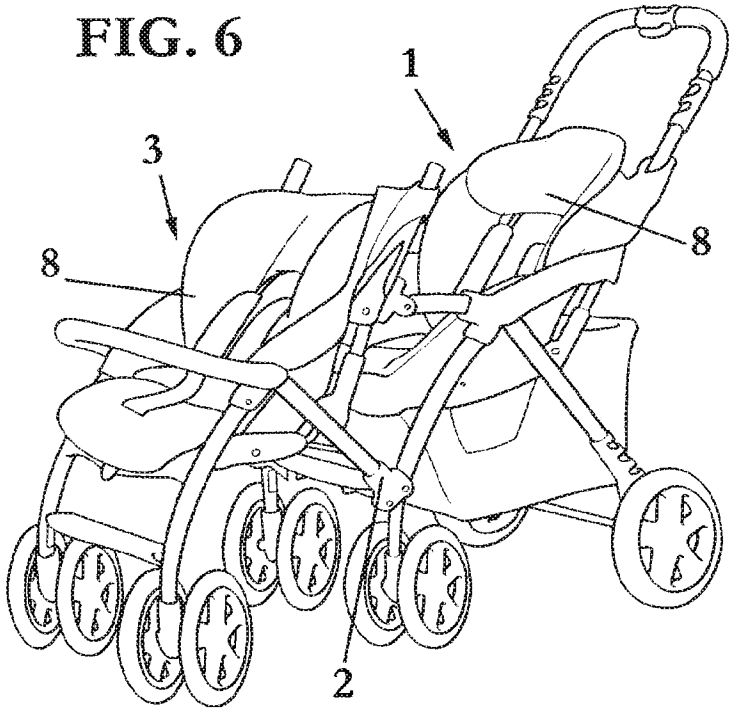


FIG. 6



UPPABABY ET AL. EX. 1019

OFICINA ESPAÑOLA DE PATENTES Y MARCAS

ESPAÑA

(11) ES 2 253 093

(21) Nº de solicitud: 200401973

(22) Fecha de presentación de la solicitud: **06.08.2004**

(32) Fecha de prioridad:

INFORME SOBRE EL ESTADO DE LA TÉCNICA

(51) **Int. Cl.:** ***B62B 9/12*** (2006.01)

DOCUMENTOS RELEVANTES

Categoría	Documentos citados	Reivindicaciones afectadas
X	GB 2368824 A (LACKEY) 15.05.2002, página 8, línea 29 - página 12, línea 20; figuras 4,5,7.	1,5
A		2
X	US 5522121 A (FRAYND) 04.06.1996, columna 1, líneas 30-37; figura 1.	1
A	US 6449801 B1 (DURRIN) 17.09.2002, columna 1, línea 50 - columna 2, línea 62; figuras 3,4.	3,4

Categoría de los documentos citados

X: de particular relevancia
Y: de particular relevancia combinado con otro/s de la misma categoría
A: refleja el estado de la técnica
O: referido a divulgación no escrita
P: publicado entre la fecha de prioridad y la de presentación de la solicitud
E: documento anterior, pero publicado después de la fecha de presentación de la solicitud

El presente informe ha sido realizado

☒ para todas las reivindicaciones ☐ para las reivindicaciones nº:

Fecha de realización del informe	Examinador	Página
20.04.2006	O. Fraile Paredes	1/1

Europäisches Patentamt
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Office européen des brevets

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 09 83 1215

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	ES 2 253 093 A1 (PLAY SA [ES]) 16 May 2006 (2006-05-16) * the whole document *	1-14	INV. B62B7/00 B62B9/28 B62K13/00
X	GB 2 309 203 A (JANE SA [ES]) 23 July 1997 (1997-07-23) * the whole document *	1,2,4-13	ADD. B62B7/14 B62B3/00
X	WO 2008/135974 A2 (KATZ GEVA [IL]; LAZAROVICH ORON [IL]) 13 November 2008 (2008-11-13) * the whole document *	1-14	

TECHNICAL FIELDS SEARCHED (IPC)

B62B
B62K

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search	Date of completion of the search	Examiner
Munich	4 November 2013	Gineste, Bertrand

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

3

EPO FORM 1503 03.82 (P04C04)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 09 83 1215

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.

04-11-2013

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
ES 2253093 A1	16-05-2006	NONE	
GB 2309203 A	23-07-1997	DE 29700497 U1	13-03-1997
		ES 1033012 U	16-07-1996
		FR 2743539 A3	18-07-1997
		GB 2309203 A	23-07-1997
		PT 9347 T	29-08-1997
WO 2008135974 A2	13-11-2008	AU 2008246981 A1	13-11-2008
		CA 2712277 A1	13-11-2008
		EP 2170674 A2	07-04-2010
		IL 183033 A	31-10-2012
		US 2010301585 A1	02-12-2010
		WO 2008135974 A2	13-11-2008

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

The examination is being carried out on the **following application documents**

Description, Pages

1-13 as published

Claims, Numbers

1-14 filed with entry into the regional phase before the EPO

Drawings, Sheets

1/8-8/8 as published

Reference is made to the following documents; the numbering will be adhered to in the rest of the procedure.

D1 ES 2 253 093 A1 (PLAY SA [ES]) 16 May 2006 (2006-05-16)

D2 GB 2 309 203 A (JANE SA [ES]) 23 July 1997 (1997-07-23)

D3 WO 2008/135974 A2 (KATZ GEVA [IL]; LAZAROVICH ORON [IL]) 13 November 2008 (2008-11-13)

1 Amendments filed

The newly filed documents do not meet the requirements of Article 123(2) EPC in that some amendments are not based on the original application documents for the following reasons:

1.1 Claim 1

1.1.1 Claim 1 as filed with entry into the regional phase before the EPO (thereafter named claim 1) is a combination of claims 28 and 1 as published with the international patent application WO 2010/065884.

1.1.2 According to the wording of claim 1, the second seat support element seems to be part of the attachment frame member whereas according to claim 1 as published, this second seat support element is part of the seat attachment not of the attachment frame member.

1.1.3 Thus this amendment introduces subject-matter which extends beyond the content of the application as filed, contrary to Article 123(2) EPC (see the Guidelines for Examination in the EPO H-IV; 2.2 and 2.4.4).

1.1.4 To overcome this objection, a new claim 1 could read:

A stroller comprising:

- a frame comprising a first seat support element;
- a first seat removably connected to the first seat support element;
- at east one front wheel and at east one rear wheel and
- a seat attachment comprising:
  - an attachment frame member comprising a connector portion capable of connecting to the stroller frame in a front portion of the stroller adjacent to the front wheel and
  - a second seat support element capable of supporting a second seat ~~to the stroller frame~~.

1.1.5 In order not to delay further the search and the examination of the current European patent application, the present opinion will be based on this new claim 1.

2 Concerning the claims

2.1 Clarity

2.1.1 Claim 1

2.1.1.1 The application does not meet the requirements of Article 84 EPC, because claims 3, 6, 8, 10, 11 and 14 are not clear.

2.1.1.2 Claim 3 is indeed defined by "a wheel support frame connecting the wheel to ..." but it is not clear from the wording of claim 3 to which wheel (front wheel, rear wheel or the **seat attachment** wheel defined in claim 2) the wheel support frame member is connected. In order to overcome this unclarity, the term wheel in claims 2 and 3 could be replaced by the term **seat attachment** wheel.

2.1.1.3 The term "the seat attachment member" used in claim 6 is not previously defined. This term could be replaced by "the second seat support element" as explained in [0031]

2.1.1.4 The term "the seat attachment" of claims 10 and 11 is not previously defined unless claim 9 is dependent on new claim 1.

2.1.1.5 The term "the attachment frame" of claims 2, 8 and 14 is not previously defined. This wording could be replaced by "seat attachment"

2.2 Novelty

2.2.1 New claim 1

2.2.1.1 Document D1 discloses (the references in parentheses applying to this document) a:
stroller (1) comprising:

- a frame comprising a first seat support element (see column 2, lines 61 to 24);
- a first seat (8) removably connected to the first seat support element;
- at east one front wheel and at east one rear wheel (see figure 1) and
- a seat attachment (3) comprising:
  - an attachment frame member comprising a connector portion (4) capable of connecting to the stroller frame in a front portion of the stroller adjacent to the front wheel and
  - a second seat support element capable of supporting a second seat (see column 2, lines 61 to 24) ~~to the stroller frame~~.

2.2.1.2 Thus, it appears that the stroller of claim 1 is not new as required by Articles 52(1) and 54(1)(2) EPC. Therefore claim 1 is not allowable.

2.2.1.3 For the sake of completeness it is pointed out that the objection of lack of novelty of the stroller of claim 1 set above could also have been substantiated with documents D2 (see the whole document) and D3 (see the whole document).

2.2.2 Claims 2 to 14

2.2.2.1 Document D1 (see the whole document) discloses also all of the additional features of claims 2 to 11, 13 and 14

2.2.2.2 Document D2 (see the whole document) discloses also all of the additional features of claims 2 to 4 to 13.

2.2.2.3 Document D3 (see the whole document) discloses also all of the additional features of claims 2 to 14.

2.2.2.4 Thus, it appears that the stroller of claims 2 to 14 is not new as required by Articles 52(1) and 54(1)(2) EPC. Therefore claims 2 to 14 are not allowable.

2.3 Industrial applicability

The stroller of claims 1 to 14 can be made in an industry, it is therefore considered industrially applicable as required by Article 57 EPC.

3 Further prosecution

3.1 At present it is not apparent which part of the application could serve as basis for a new, allowable claim 1. Should the Applicant nevertheless regard some particular matter as patentable, he should substantiate this in detail by indicating in his letter of reply any difference vis à vis the state of the art and the significance thereof. He should also file a claim including such particular matter.

3.2 The new independent claim should be drafted in the two-part form specified in Rule 43(1) of the EPC (see Guidelines for Examination in the EPO F-IV; 2.2) in which the features known from document D1 are part of the preamble. The characterising portion should contain the essential features for which, in combination with the features of the preamble, protection is sought, i.e. the features which the invention adds to the prior art and which distinguish it clearly from the prior art.

3.3 Reference numerals should be added after the technical features of the claims. This should be done in both parts of claims having the two-part form as specified in Rule 43(1) EPC (see Rule 43(7) and in the Guidelines for Examination in the EPO F-IV; 4.19).

4 Concerning the description

4.1 To meet the requirements of Rule 42(1)(b) EPC, document D1 should be identified in the description and the relevant background art disclosed therein should be briefly discussed (see the Guidelines for Examination in the EPO F-II; 4.3).

4.2 The description should be rendered consistent with the new claims. The technical problem solved by the claimed invention and its solution having regard to document D1 should be specified (see Rule 42(1)c) EPC and Guidelines for Examination in the EPO F-II; 4.6).

4.3 The vague statement in the description paragraph [0049] implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity of the claims (Article 84 EPC) when used to interpret them (see the Guidelines for Examination in the EPO, F-IV; 4.4). This statement should therefore be amended by adding a reference to the claims to remove this inconsistency.

5 Miscellaneous

5.1 The applicant is invited to file new claims which take account of the above comments.

5.2 When filing amended claims the applicant should at the same time bring the description into conformity with the amended claims. Care should be taken during revision, especially of the introductory portion and any statements of problem or advantage, not to add subject-matter which extends beyond the content of the application as originally filed (Article 123(2) EPC).

5.3 In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC, the applicant should clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and indicate the passages of the application as filed on which these amendments are based (see Guidelines for Examination in the EPO H-III; 2.2).

5.4 If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

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(51) INT CL[6]
B62B 7/04 // B62B 9/12

(52) UK CL (Edition O)
B7B BTX1 B406 B407

(56) Documents Cited
FR 002615155 A1 US 5033761 A US 4753453 A
US 4728112 A US 4542915 A

(58) Field of Search
UK CL (Edition O) B7B BTF1 BTX1
INT CL[6] B62B 7/00 7/04 9/00 9/10 9/12 9/28
Online: WPI

(71) Applicant(s)
Jané S A

(Incorporated in Spain)

Mercaders S/No, Poligono Industrial Riera De Caldes, E-08184 Palau De Plegamans (Barcelona), Spain

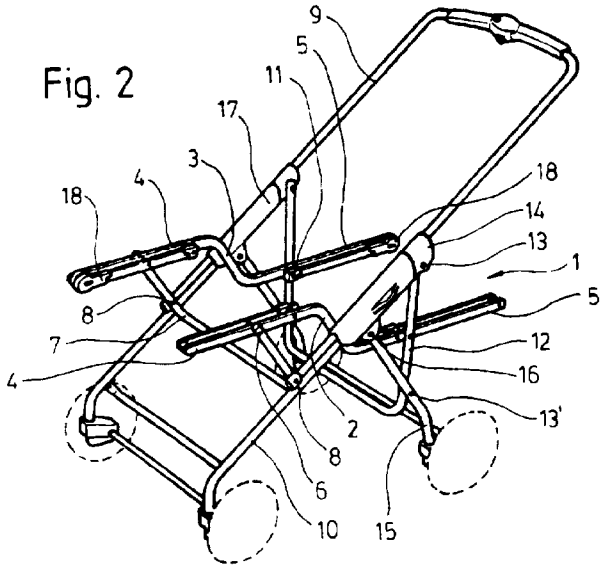
(72) Inventor(s)
Ramon Jane Cabagnero

(74) Agent and/or Address for Service
R R Prentice & Co
The Hop Exchange, 24 Southwark Street, LONDON, SE1 1TY, United Kingdom

(54) Compact two seater pushchair

(57) A two-seater pushchair comprises a foldable frame 1 upon which can be mounted two seats (figures 3 and 4) or a seat and a carry cot (figure 5), which frame has two side bars 2, 3 each having an upper portion 4 for mounting one seat/carry cot and a lower portion 5 at a different level for mounting the other seat/carry cot. The seats can be mounted variously to face one another or otherwise (figures 3 to 5). The portions may include devices 18 for locking the seats and/or carry cot in place. The upper portions and lower portions of the side bars may be linked by respective U-shaped supports 7 and 12. A backrest (R figure 3) and legrest (P figure 3) of the seat(s) may recline and a hood (T figures 3A and 5) may be provided on the seat(s)/carry cot.

Fig. 2



GB 2 309 203 A

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Fig. 1

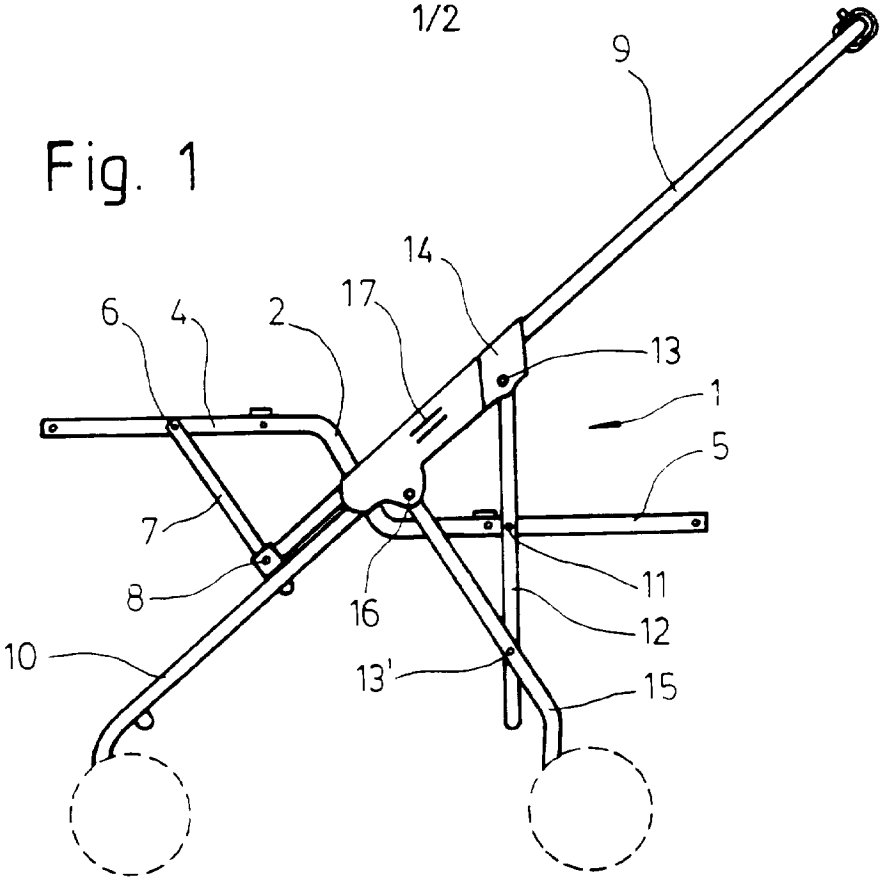
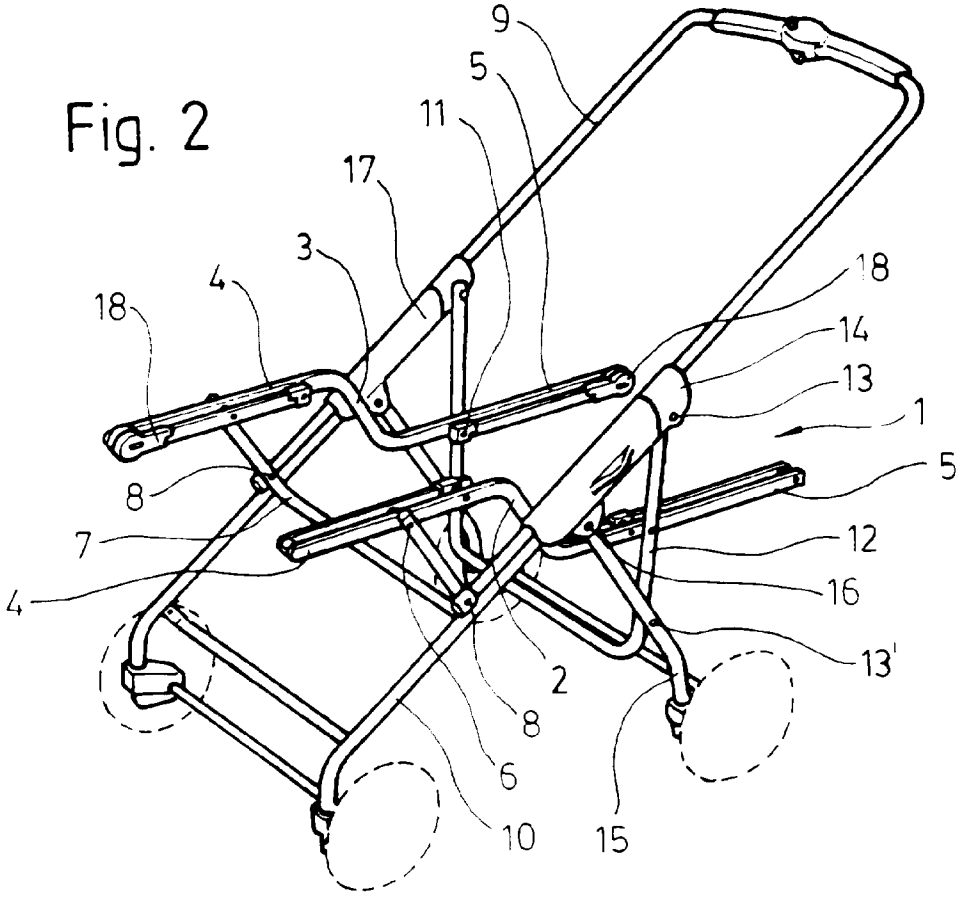


Fig. 2



UPPABABY ET AL. EX. 1019

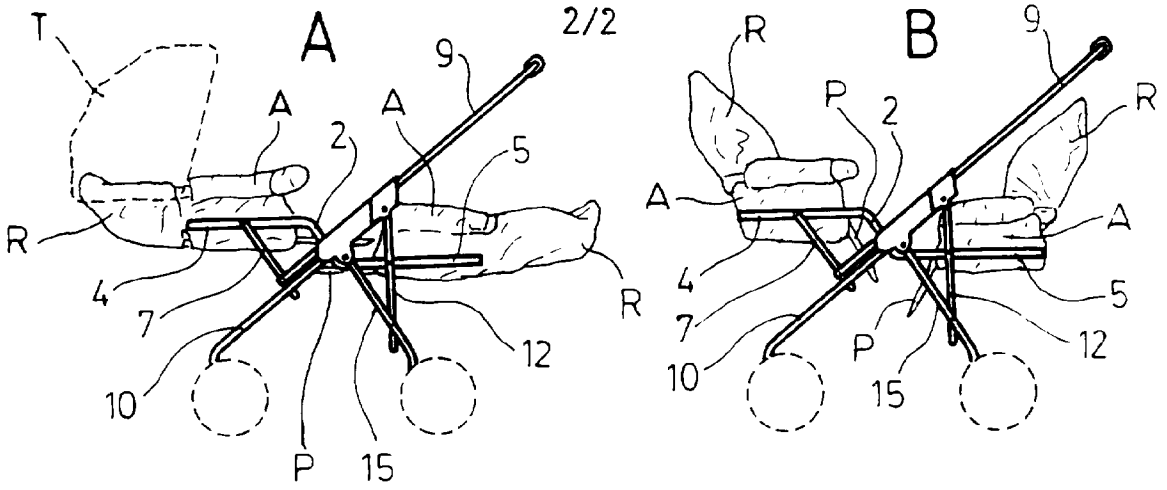


Fig. 3

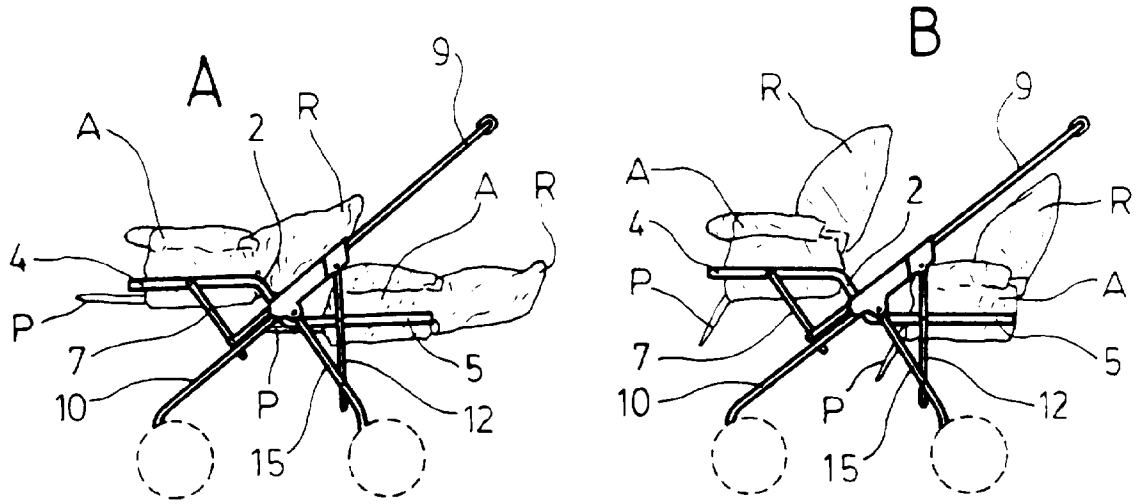


Fig. 4

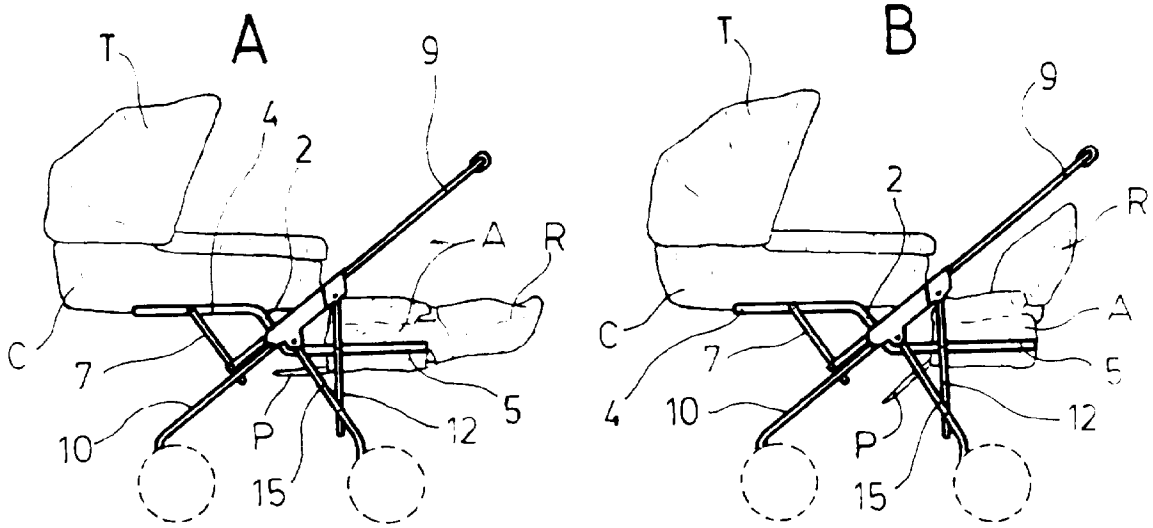


Fig. 5

UPPABABY ET AL. EX. 1019

Two-seater children's pram-pushchair

This invention refers to a two-seater children's pram-pushchair.

Different models of two-seater children's pram-pushchairs are already known, created for twins, usually comprising a frame with four or six sets of wheels upon which one double-width seat or two single seats or two carry-cots are assembled side by side. These seats or carry-cots are usually placed looking forwards or backwards.

The problem with these pram-pushchairs is their width which hinders their passing through normal-width doors. To solve this problem, there are also two-seater pushchairs whose width is similar to that of conventional pram-pushchairs, where the seats are arranged one behind the other. In this case the pushchair is particularly long, making it difficult to fold up and with its not fitting into a car boot. In order to reduce this length in as far as possible, in some cases the matter of the child's comfort has been simplified using seats in which the child cannot lie flat.

The object of this invention is to achieve a two-seater children's pram-pushchair in which the children can lie down without the device being excessively long and of a normal width, with the additional advantage that the children can sit one in front of the other or looking at each other, and with its even being possible to use one seat and one carry-cot for transporting two children of different ages.

For this purpose, the common feature is that the chassis of the pram-pushchair has two side bars, each one of them formed by two stretches on different levels, with the two seats or one seat and one carry-cot being coupled freely on the higher stretches of the two bars and on the lower of them respectively.

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The two stretches of the two side bars on the different levels include a device to lock and unlock the fixture of the seats and carry-cot assembled on them.

These and other features are better understood from the detailed description that follows, to facilitate which two sheets of drawings are attached where a practical case of the embodiment mentioned is shown; this is provided merely as a non-restrictive example of the scope of this present invention.

In the drawings :

Figure 1 shows the side elevation of the frame of the pushchair in question.

Figure 2 shows a perspective view of that frame, and

Figures 3, 4 and 5 represent, schematically, some of the different positions of the seats and carry-cot.

According to the drawings, the pram-pushchair includes a foldable frame -1- presenting, characteristically, two side bars -2- and -3- each one of which formed by facing stretches -4- and -5- on different levels. Of these, stretches -4-, which are higher, are the front ones whereas stretches -5-, which are lower, are the rear ones.

In this case, the side bars are coupled by means of joints to the frame of the pram-pushchair. Thus, the higher front stretches -4- are jointed at an intermediate point -6- at the ends of the branches of a first U-shaped support -7- which is jointed underneath by points -8- to the ends of the branches of the handle in an inverted U-shape -9-, sliding along those branches along the front feet -10- of the frame when the pram-pushchair is folded up.

Meanwhile, the lower rear stretches -5- of the side bars -2- and -3- are jointed at an intermediate point -11- to an intermediate point of the branches of a second support in a U-shape -12- ; at the higher end -13- these

BAD ORIGINAL

are jointed to different brackets -14- coupled to the front feet -10- and underneath -13- they are jointed to the rear feet -15- ; these, at their higher end -16- are jointed to different brackets -17- linked to the brackets of the handle -9-.

The stretches -4- and -5- of the side bars are equipped with devices -18- to lock and unlock the fixtures of the corresponding seats -A- comprising a jointed back-rest -R- and leg-rest -P- and a carry-cot -C-; the seats and the carry-cot can be equipped with a hood -T-.

This structure and design of the side bars -2- and -3- make it possible to arrange the seats in front of each other and lying down (figure 3-A) or in front of each other and with the back-rest raised and the leg-rest lowered (figure 3-B), or to have one seat behind the other lying down (Figure 4-A) or with the back-rest raised and the leg-rest lowered (figure 4-B). It is also possible to arrange a carry-cot and a lying seat (Figure 5-A) or with the seat with the back-rest raised and the leg-rest lowered (Figure 5-B). Logically, other combinations can also be made such as for example one seat looking forwards and other looking backwards.

It is to be understood that the frame -1- may present a different structure to the one that is shown here as the essential factor of this pram-pushchair is the coupling of the side bars with its facing stretches on different levels of the frame.

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CLAIMS

1.Two-seater children's pram-pushchair comprising a foldable frame upon which the seats are assembled, characterized in that the frame has two side bars, each one of them formed by facing stretches on different levels, coupling fixedly on the higher stretches of the two bars and on the lower stretches thereof the corresponding seats or one seat and one carry-cot, where the seats can be arranged facing one another or otherwise.

2. Two-seater children's pram-pushchair, according to Claim 1, characterized in that the two stretches on different levels of the two side bars include devices for locking and unlocking the coupling of the seats and carry-cot assembled on them.

3. Two-seater children's pram-pushchair, according to Claim 1, characterized in that the front stretches of the side bars are linked by a joint at an intermediate point of the higher ends of the branches of the first support in a U-shape, articulated underneath the frame of the pram-pushchair.

4. Two-seater children's pram-pushchair, according to claim 1, characterized in that the rear stretches of the side bars are linked in a jointed way on an intermediate point of the branches of a second U-shapep support above and below the frame of the pram-pushchair.

5. Two-seater children's pram-pushchair, substantially as described herein with reference to the drawings.

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Amendments to the claims have been filed as follows

CLAIMS

1. A two-seater children's pram-pushchair comprising a foldable frame adapted to receive two seats, wherein the frame has two side bars, each one of which has two parts located at different heights, the two seats or one seat and one carry-cot being detachably mountable on the upper and lower parts of the side bars in such a manner as to face one another or be located one behind the other.

2. A two-seater children's pram-pushchair according to claim 1, wherein the said two parts of each of the side bars include devices for locking and unlocking the seats or carry-cot detachably mounted on said parts.

3. A two-seater children's pram-pushchair according to claim 1 or claim 2, wherein the upper parts of the side bars are located towards the front and are articulatedly linked at an intermediate point by a U-shaped joint which is articulated at a lower point to the frame of the pram-pushchair.

4. A two-seater children's pram-pushchair according to any one of the preceding claims, wherein the lower parts of the side bars are located towards the rear and are linked at an intermediate point by a second U-shaped joint which is articulatedly located at its upper point and at its lower point to the frame of the pram-pushchair.

5. A two-seater children's pram pushchair substantially as described herein with reference to the drawings.

The Patent Office

-6-

Application No: GB 9626714.1
Claims searched: 1 to 5

Examiner: Karl Whitfield
Date of search: 12 March 1997

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): B7B (BTF1, BTX1)

Int Cl (Ed.6): B62B 7/00, 7/04, 9/00, 9/10, 9/12, 9/28

Other: Online database: Derwent World Patents Index accessed via Questel

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X	US 4728112	(WYNENS) see especially figures 1 & 3	1 at least
X	US 4753453	(SCHILBACH) see especially figures 5-8	1 at least
X	US 4542915	(WHEELER et al) see especially 2	1 at least
X	FR 2615155 A1	(BOIDIN) see especially figures 1 & 2	1 at least
A	US 5033761	(KELLY) see especially figures 2-4	

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

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference DYN005.PCT	**FOR FURTHER ACTION**	See item 4 below
International application No. PCT/US2009/066817	International filing date *(day/month/year)* 04 December 2009 (04.12.2009)	Priority date *(day/month/year)* 04 December 2008 (04.12.2008)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DYNAMIC BRANDS, LLC		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44*bis*.3(c) and 93*bis*.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44*bis* .2).

	Date of issuance of this report 07 June 2011 (07.06.2011)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Beate Giffo-Schmitt e-mail: pt03.pct@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: BERNARD PIKE
TROUTMAN SANDERS LLP
600 PEACHTREE STREET, N.E., SUITE 5200
PATENT & TRADEMARK DEPARTMENT
ATLANTA, GA 30308-2216

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	29 JAN 2010

Applicant's or agent's file reference	FOR FURTHER ACTION
DYN005.PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2009/066817	04 December 2009	12 April 2009

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - B62B 7/00 (2010.01)
USPC - 280/642

Applicant DYNAMIC BRANDS, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	20 January 2010	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2009)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

Form PCT/ISA/237 (Box No. I) (July 2009)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	6, 7, 9, 10, 15-27, 32	YES
	Claims	1-5, 8, 11-14, 28-31, 33, 34	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-34	NO
Industrial applicability (IA)	Claims	1-34	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-5, 8 and 11-14 lack novelty under PCT Article 33(2) as being anticipated by Jones et al.
Referring to claims 1-5, 8 and 11-14, Jones et al disclose [Cl. 1] a seat attachment (see Fig. 1) for a stroller (10), comprising: an attachment frame member (2, 4, 8) comprising a connector portion (14) capable of connecting to a stroller frame (12); and a seat support element (20) capable of supporting a seat (22); [Cl. 2] comprising: a wheel (6); [Cl. 3] further comprising a wheel support frame (30) connecting the wheel (6) to the attachment frame member (2, 4, 8); [Cl. 4] wherein the wheel support frame (30) is pivotally connected to the attachment frame member (2, 4, 8); [Cl. 5] wherein the wheel support frame (30) is pivotally connected near the middle of the attachment frame member (2, 4, 8) (30 is pivotally connected to the middle portions of the sides of platform member 2 when viewed from the side, see Fig. 2); [Cl. 8] wherein the wheel support frame (30) is capable of pivoting from a first position to a second position (30 appears to be a 360 degree pivotable caster wheel); [Cl. 11] wherein the attachment frame member (2, 4, 8) has a first end (8) and a second end (4); [Cl. 12] wherein the first end (8) is capable of connecting to a stroller frame (12); [Cl. 13] wherein the second end (4) is connected to the seat attachment member (20); [Cl. 14] wherein the seat support element (20) is capable of supporting a seat (22) in either a forward (see Fig. 1) or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2).

Claims 28-31, 33 and 34 lack novelty under PCT Article 33(2) as being anticipated by Maciejczyk.
Referring to claims 28-31, 33 and 34, Maciejczyk discloses [Cl. 28] a stroller (200), comprising: a frame (230, 240); at least one front wheel (210); at least one rear wheel (220) ; a stroller seat (260); and a seat attachment portion (100) capable of supporting a second seat (110) in front of the stroller seat (260); [Cl. 29] wherein the seat attachment portion (100) comprises two seat connectors (120, 130); [Cl. 30] wherein the seat attachment portion (100) is removably connected to the frame (230, 240); [Cl. 31] wherein the seat attachment portion (100) comprises two portions (120, 130) each comprising one seat connector (seat 110 would be supported by two attachment portions 100, one on each side of the stroller); [Cl. 33] wherein the second seat (110) is a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well); [Cl. 34] wherein the second seat (110) is integral to the seat attachment portion (100) (Figs. 2 and 3 show the seat be connected directly to first support element 120).

Claims 6, 7, 9, 10 and 15 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Maciejczyk.
Referring to claims 6, 7, 9, 10 and 15, Jones et al disclose the seat attachment for stroller of claims 1, 5 and 8 and [Cl. 15] wherein the seat support element (20) is capable of supporting the seat (22) in either a forward or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2), but fails to disclose [Cl. 6] further comprising a folding mechanism; [Cl. 7] wherein the folding mechanism comprises a sliding connector slidingly connected to the attachment frame member and a strut having a first end connected to the sliding member and a second end connected to the wheel support frame; [Cl. 9] wherein the first position is a locked and in-use position and the second position is an unlocked and folded position; [Cl. 10] wherein the seat is a baby seat, a car seat, a stroller seat, a bassinet, or a pram; [Cl. 15] further comprising a stroller seat,
However, Maciejczyk disclose a stroller seat attachment [Cl. 6] further comprising a folding mechanism (500) (see Figs. 8 and 9); [Cl. 7] wherein the folding mechanism (500) comprises a sliding connector (523) slidingly connected to the attachment frame member (230) and a strut (530) having a first end (531) connected to the sliding member (523) and a second end (540) connected to the wheel support frame (230) (both ends of strut 530 are connected to wheel support frame 230 either directly or indirectly, see Fig.s 8 and 9); [Cl. 9] wherein the first position (see Fig. 8) is a locked and in-use position (a child could be placed in seat) and the second position (see Fig. 9) is an unlocked and folded position; [Cl. 10] wherein the seat (110) is a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well); [Cl. 15] further comprising a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well).
It would have been obvious to a person of ordinary skill at the time of the invention to use the seat attachment for a stroller of Jones et al and the folding mechanism and the stroller seat of Maciejczyk in order to provide a reliable means of being able to easily collapse a stroller with an attached seat so the stroller can easily be collapsed to place in the trunk of a car but still be able to safely secure the additional child when in use.

Continued on Supplemental Box

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:
Box V

Claims 16-23 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Huang.
Referring to claims 16-23, Jones et al disclose [Cl. 16] a stroller (10), comprising: a stroller frame (12) comprising wheels (see Fig. 6), a frame (12), a first seat (not labeled, see Fig. 6) and an attachment frame member (8) connected to the frame (12); a seat attachment (2, 4) comprising a wheel (6), a second seat (22), and a connector portion (14) capable of connecting to the attachment frame member (12); [Cl. 17] wherein the connector portion (14) is capable of being releasably connected to the attachment frame member (8) (attachment structure 107 may be attached or directly connected to arm 8, Para [0048]); [Cl. 18] wherein the second seat (22) is releasably connected to the seat support element (20); [Cl. 19] wherein the seat support element (20) is capable of supporting the second seat (22)in either a forward (see Fig. 1) or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2); [Cl. 20] stroller (10), comprising: a first seat attachment (2, 4, 8) capable of removably supporting a child seat (22); and a second seat attachment (12) capable of supporting a child seat (stroller seat is supported by frame member 12); [Cl. 21] wherein each seat attachment (8) comprises two seat connector portions (14); [Cl. 22] wherein the child seat (stroller seat is supported by frame member 12) is one of a stroller seat (see Fig. 6); [CL. 23] comprising a frame (12), wherein the frame (12) comprises a handle portion (11), a front wheel support portion (see Fig. 11e) and a back wheel support portion (see Fig. 11e); but fails to disclose [Cl. 16] a double stroller; [Cl. 20] a double stroller.
However, Huang discloses a locking device for a front seat of a double stroller wherein [Cl. 16] a double stroller (see Fig. 1); [Cl. 20] a double stroller (see Fig. 1).
It would have been obvious to a person of ordinary skill at the time of the invention to use the seat attachment for a stroller of Jones et al and the double stroller of Huang in order to provide a reliable means of being able to safely transport more than 2 children by adding a additional seat to a double stroller.

Claims 24-27 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Huang in view of Maciejczyk.
Referring to claims 24-27, Jones et al and Huang disclose the double stroller of claim 23, [Cl. 26] wherein the second seat attachment (22 of Jones et al) is adjacent to the handle portion (11 of Jones et al); but fails to disclose [Cl. 24] wherein a first seat attachment is adjacent to the front wheel support portion; [Cl. 25] wherein the first seat attachment is above at least one front wheel connected to the wheel support portion; [Cl. 27], further comprising a folding mechanism that connects the handle portion, the front wheel support portion, and the back wheel support portion.
However, Maciejczyk disclose a stroller seat attachment [Cl. 24] wherein a first seat attachment (100) is adjacent to the front wheel support portion (230); [Cl. 25] wherein the first seat attachment (100) is above at least one front wheel (210) connected to the wheel support portion (230); [Cl. 27], further comprising a folding mechanism (500) that connects the handle portion (210), the front wheel support portion (230), and the back wheel support portion (240) (mounting arrangement 500 is connected to portion 230 which is connected to handle portion 210 and back wheel support 240).
It would have been obvious to a person of ordinary skill at the time of the invention to use the double stroller of Jones et al and Huang and the seat attachment is placed on the front portion of the stroller in order to provide a reliable means of being able to safely transport more than 2 children by adding a additional seat to a double stroller, without the additional seat interfering with the person pushing the stroller.

Claim 32 lack an inventive step under PCT Article 33(3) as being obvious over Maciejczyk in view of Haeggberg.
Referring to claim 32, Maciejczyk discloses the stroller of claim 30, but fails to disclose [Cl. 32] wherein the frame comprises a sleeve for removably connecting the seat attachment portion to the frame.
However, Haeggberg discloses a stroller trailer [Cl. 32] wherein the frame (2) comprises a sleeve (18) for removably connecting the seat attachment portion (35) to the frame (2) (see Fig. 6a, holders 34 act as a sleeve for ball 35 of seat attachment portion).
It would have been obvious to a person of ordinary skill at the time of the invention to use the stroller of Maciejczyk and the sleeve attachment means of Haeggberg in order to provide a reliable means of attaching the seat attachment to the stroller that would require minimum effort to securely attach the additional seat.

Claims 1-34 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DYN005.PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2009/066817	International filing date *(day/month/year)* 04 December 2009	(Earliest) Priority Date *(day/month/year)* 12 April 2009
Applicant DYNAMIC BRANDS, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 9 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 3

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/066817

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B62B 7/00 (2010.01)
USPC - 280/642
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(8) - B62B 7/00; B62D 7/14, 63/00 (2010.01)
USPC - 280/642, 32.7, 47.131, 647, 648, 656, 657

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2007/0114738 A1 (JONES et al) 24 May 2007 (24.05.2007) entire document	1-5, 8, 11-14 --- 6, 7, 9, 10, 15-27
X -- Y	US 2007/0001429 A1 (MACIEJCZYK) 04 January 2007 (04.01.2007) entire document	28-31, 33, 34 --- 6, 7, 9, 10, 15, 24-27, 32
Y	US 5,338,096 A (HUANG) 16 August 1994 (16.08.1994) entire document	16-27
Y	US 2003/0025304 A1 (HAEGGBERG) 06 February 2003 (06.02.2003) entire document	32

☐ Further documents are listed in the continuation of Box C. ☐

* 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	Date of mailing of the international search report
20 August 2010	29 JAN 2010
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: BERNARD PIKE
TROUTMAN SANDERS LLP
600 PEACHTREE STREET, N.E., SUITE 5200
PATENT & TRADEMARK DEPARTMENT
ATLANTA, GA 30308-2216

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	29 JAN 2010
Applicant's or agent's file reference: DYN005.PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2009/066817	04 December 2009	12 April 2009

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - B62B 7/00 (2010.01)
USPC - 280/642

Applicant DYNAMIC BRANDS, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	20 January 2010	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2009)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	6, 7, 9, 10, 15-27, 32	YES
	Claims	1-5, 8, 11-14, 28-31, 33, 34	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-34	NO
Industrial applicability (IA)	Claims	1-34	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-5, 8 and 11-14 lack novelty under PCT Article 33(2) as being anticipated by Jones et al.
Referring to claims 1-5, 8 and 11-14, Jones et al disclose [Cl. 1] a seat attachment (see Fig. 1) for a stroller (10), comprising: an attachment frame member (2, 4, 8) comprising a connector portion (14) capable of connecting to a stroller frame (12); and a seat support element (20) capable of supporting a seat (22); [Cl. 2] comprising: a wheel (6); [Cl. 3] further comprising a wheel support frame (30) connecting the wheel (6) to the attachment frame member (2, 4, 8); [Cl. 4] wherein the wheel support frame (30) is pivotally connected to the attachment frame member (2, 4, 8); [Cl. 5] wherein the wheel support frame (30) is pivotally connected near the middle of the attachment frame member (2, 4, 8) (30 is pivotally connected to the middle portions of the sides of platform member 2 when viewed from the side, see Fig. 2); [Cl. 8] wherein the wheel support frame (30) is capable of pivoting from a first position to a second position (30 appears to be a 360 degree pivotable caster wheel); [Cl. 11] wherein the attachment frame member (2, 4, 8) has a first end (8) and a second end (4); [Cl. 12] wherein the first end (8) is capable of connecting to a stroller frame (12); [Cl. 13] wherein the second end (4) is connected to the seat attachment member (20); [Cl. 14] wherein the seat support element (20) is capable of supporting a seat (22) in either a forward (see Fig. 1) or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2).

Claims 28-31, 33 and 34 lack novelty under PCT Article 33(2) as being anticipated by Maciejczyk.
Referring to claims 28-31, 33 and 34, Maciejczyk discloses [Cl. 28] a stroller (200), comprising: a frame (230, 240); at least one front wheel (210); at least one rear wheel (220) ; a stroller seat (260); and a seat attachment portion (100) capable of supporting a second seat (110) in front of the stroller seat (260); [Cl. 29] wherein the seat attachment portion (100) comprises two seat connectors (120, 130); [Cl. 30] wherein the seat attachment portion (100) is removably connected to the frame (230, 240); [Cl. 31] wherein the seat attachment portion (100) comprises two portions (120, 130) each comprising one seat connector (seat 110 would be supported by two attachment portions 100, one on each side of the stroller); [Cl. 33] wherein the second seat (110) is a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well); [Cl. 34] wherein the second seat (110) is integral to the seat attachment portion (100) (Figs. 2 and 3 show the seat be connected directly to first support element 120).

Claims 6, 7, 9, 10 and 15 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Maciejczyk.
Referring to claims 6, 7, 9, 10 and 15, Jones et al disclose the seat attachment for stroller of claims 1, 5 and 8 and [Cl. 15] wherein the seat support element (20) is capable of supporting the seat (22) in either a forward or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2), but fails to disclose [Cl. 6] further comprising a folding mechanism; [Cl. 7] wherein the folding mechanism comprises a sliding connector slidingly connected to the attachment frame member and a strut having a first end connected to the sliding member and a second end connected to the wheel support frame; [Cl. 9] wherein the first position is a locked and in-use position and the second position is an unlocked and folded position; [Cl. 10] wherein the seat is a baby seat, a car seat, a stroller seat, a bassinet, or a pram; [Cl. 15] further comprising a stroller seat.
However, Maciejczyk disclose a stroller seat attachment [Cl. 6] further comprising a folding mechanism (500) (see Figs. 8 and 9); [Cl. 7] wherein the folding mechanism (500) comprises a sliding connector (523) slidingly connected to the attachment frame member (230) and a strut (530) having a first end (531) connected to the sliding member (523) and a second end (540) connected to the wheel support frame (230) (both ends of strut 530 are connected to wheel support frame 230 either directly or indirectly, see Fig.s 8 and 9); [Cl. 9] wherein the first position (see Fig. 8) is a locked and in-use position (a child could be placed in seat) and the second position (see Fig. 9) is an unlocked and folded position; [Cl. 10] wherein the seat (110) is a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well); [Cl. 15] further comprising a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well).
It would have been obvious to a person of ordinary skill at the time of the invention to use the seat attachment for a stroller of Jones et al and the folding mechanism and the stroller seat of Maciejczyk in order to provide a reliable means of being able to easily collapse a stroller with an attached seat so the stroller can easily be collapsed to place in the trunk of a car but still be able to safely secure the additional child when in use.

Continued on Supplemental Box

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:
Box V

Claims 16-23 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Huang.
Referring to claims 16-23, Jones et al disclose [Cl. 16] a stroller (10), comprising: a stroller frame (12) comprising wheels (see Fig. 6), a frame (12), a first seat (not labeled, see Fig. 6) and an attachment frame member (8) connected to the frame (12); a seat attachment (2, 4) comprising a wheel (6), a second seat (22), and a connector portion (14) capable of connecting to the attachment frame member (12); [Cl. 17] wherein the connector portion (14) is capable of being releasably connected to the attachment frame member (8) (attachment structure 107 may be attached or directly connected to arm 8, Para [0048]); [Cl. 18] wherein the second seat (22) is releasably connected to the seat support element (20); [Cl. 19] wherein the seat support element (20) is capable of supporting the second seat (22)in either a forward (see Fig. 1) or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2); [Cl. 20] stroller (10), comprising: a first seat attachment (2, 4, 8) capable of removably supporting a child seat (22); and a second seat attachment (12) capable of supporting a child seat (stroller seat is supported by frame member 12); [Cl. 21] wherein each seat attachment (8) comprises two seat connector portions (14); [Cl. 22] wherein the child seat (stroller seat is supported by frame member 12) is one of a stroller seat (see Fig. 6); [CL. 23] comprising a frame (12), wherein the frame (12) comprises a handle portion (11), a front wheel support portion (see Fig. 11e) and a back wheel support portion (see Fig. 11e); but fails to disclose [Cl. 16] a double stroller; [Cl. 20] a double stroller.
However, Huang discloses a locking device for a front seat of a double stroller wherein [Cl. 16] a double stroller (see Fig. 1); [Cl. 20] a double stroller (see Fig. 1).
It would have been obvious to a person of ordinary skill at the time of the invention to use the seat attachment for a stroller of Jones et al and the double stroller of Huang in order to provide a reliable means of being able to safely transport more than 2 children by adding a additional seat to a double stroller.

Claims 24-27 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Huang in view of Maciejczyk.
Referring to claims 24-27, Jones et al and Huang disclose the double stroller of claim 23, [Cl. 26] wherein the second seat attachment (22 of Jones et al) is adjacent to the handle portion (11 of Jones et al); but fails to disclose [Cl. 24] wherein a first seat attachment is adjacent to the front wheel support portion; [Cl. 25] wherein the first seat attachment is above at least one front wheel connected to the wheel support portion; [Cl. 27], further comprising a folding mechanism that connects the handle portion, the front wheel support portion, and the back wheel support portion.
However, Maciejczyk disclose a stroller seat attachment [Cl. 24] wherein a first seat attachment (100) is adjacent to the front wheel support portion (230); [Cl. 25] wherein the first seat attachment (100) is above at least one front wheel (210) connected to the wheel support portion (230); [Cl. 27], further comprising a folding mechanism (500) that connects the handle portion (210), the front wheel support portion (230), and the back wheel support portion (240) (mounting arrangement 500 is connected to portion 230 which is connected to handle portion 210 and back wheel support 240).
It would have been obvious to a person of ordinary skill at the time of the invention to use the double stroller of Jones et al and Huang and the seat attachment is placed on the front portion of the stroller in order to provide a reliable means of being able to safely transport more than 2 children by adding a additional seat to a double stroller, without the additional seat interfering with the person pushing the stroller.

Claim 32 lack an inventive step under PCT Article 33(3) as being obvious over Maciejczyk in view of Haeggberg.
Referring to claim 32, Maciejczyk discloses the stroller of claim 30, but fails to disclose [Cl. 32] wherein the frame comprises a sleeve for removably connecting the seat attachment portion to the frame.
However, Haeggberg discloses a stroller trailer [Cl. 32] wherein the frame (2) comprises a sleeve (18) for removably connecting the seat attachment portion (35) to the frame (2) (see Fig. 6a, holders 34 act as a sleeve for ball 35 of seat attachment portion).
It would have been obvious to a person of ordinary skill at the time of the invention to use the stroller of Maciejczyk and the sleeve attachment means of Haeggberg in order to provide a reliable means of attaching the seat attachment to the stroller that would require minimum effort to securely attach the additional seat.

Claims 1-34 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 November 2005 (10.11.2005)

PCT

(10) International Publication Number
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(25) Filing Language: English

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(30) Priority Data:
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(71) Applicant and
(72) Inventor: **ROHL, Stephanie** [GB/GB]; 63 St Marks Road, Henley-on-Thames, Oxon RG9 1LP (GB).

(74) Agents: **GREY, Ian** et al.; Venner, Shipley LLP, 20 Little Britain, London EC1A 7DH (GB).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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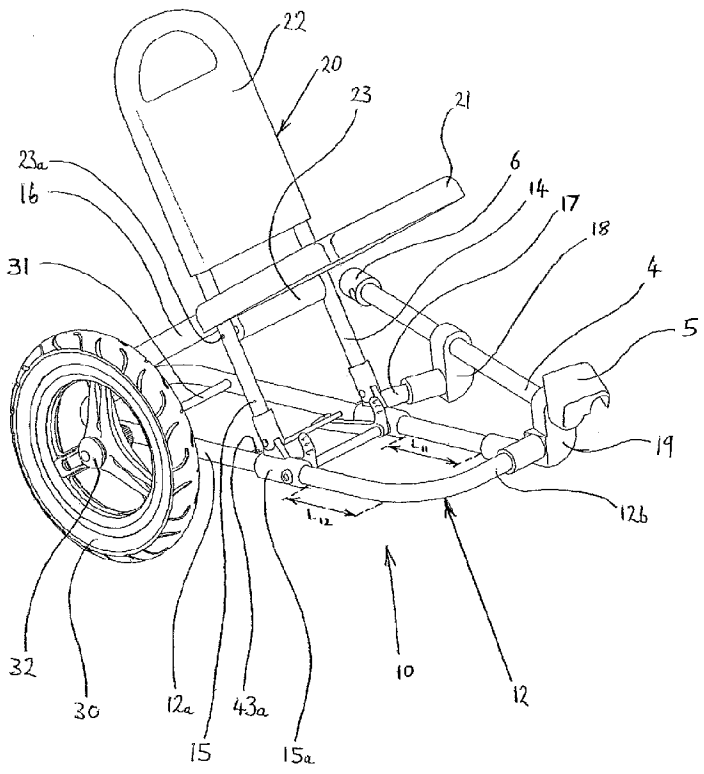
[Continued on next page]

(54) Title: AUXILIARY PUSHCHAIR SEAT



(57) Abstract: An auxiliary seat (1) attachable to a pushchair (2) to enable it to accommodate two children seated side-by-side and facing in the same direction. The seat comprises a frame (10) having a backrest (22) and a base (21) and a wheel (30) in contact with the ground in an operative position to support a child seated on the base (21) with their back against the backrest (22). The frame is configured so that the backrest (22) and the base fold substantially flat when the auxiliary seat is not in use.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Auxiliary Pushchair Seat

Description

The present invention relates to a pushchair, and more specifically, to an add-on seating device for pushchairs.

It is often the case with parents having more than one child that the age gap between the children is such that the older child is not fully able to walk by the time the second child is born or is reluctant to do so for an extended period of time. During the first child's initial years, the parents will most probably have bought a single-seat pushchair to transport the child around in until it learns to walk properly. Modern pushchairs can be an expensive outlay, and perhaps difficult to afford, especially for young couples who may be at an early stage of their professional careers or those on low income. Therefore, when the second child is born, the parents find themselves requiring another pushchair so that both children can be transported together. Therefore, they must either buy another single-seat pushchair in addition to the first, which means having to use two pushchairs each time both children are taken out together or, buy a new double-seat pushchair, which means the original single-seat pushchair is then redundant. In either case, it involves another significant financial outlay for the parents.

One solution to this problem is to provide an add-on device that can be attached to the existing single-seat pushchair to adapt it to be able to carry both children simultaneously. Recently, pushchair add-on products have become commercially available and one such device comprises a wheeled platform that attaches to the rear of the pushchair, on which the elder child can stand whilst the younger child is seated.

However, this platform type of device has a number of disadvantages. Firstly, as the device is a platform and not a seat, it requires the elder child to remain standing, which can quickly tire them out and become uncomfortable for them. This has a safety implication as well, since the elder child is not provided with a harness to stop them falling off the device. Secondly, the device is positioned at the rear of the

pushchair between the pushchair and the parent. This means that the parent has to lean forward and stoop over and/or around the standing child in order to push the pushchair, and this can quickly cause backache and stiffness, and is generally uncomfortable over anything but the shortest distances. Thirdly, the wheels of the platform are positioned behind the rear wheels of the pram, which means that it can be difficult to push the pushchair up or down kerbs, as the device hinders the ability of the pushchair to be pivoted about the rear wheel axle. This device can also unbalance the pushchair and cause it to tip over very easily

It is therefore an object of the present invention to provide an add-on pushchair seating device that substantially alleviates or overcomes the problems mentioned above.

According to the present invention, therefore, there is provided an auxiliary seat attachable to a pushchair to enable it to accommodate two children seated side-by-side and facing the same direction, the seat comprising a frame having a backrest and a base and a wheel in contact with the ground in an operative position to support a child seated on the base with their back against the backrest, wherein the frame is configured so that the backrest and the base fold substantially flat when the auxiliary seat is not in use.

In a preferred embodiment, the base and the backrest are pivotable relative to one another such that they are collapsible from the erect operative position to the collapsed folded position by means of a scissor-like mechanism. Conveniently, the scissor-like mechanism includes at least one sliding joint to enable the base and backrest to be erected and collapsed.

Preferably, the backrest is attached to one end of a first support strut and the base is attached to one end of a second support strut, and said first and second support struts are pivotable relative to each other and the end of the first support strut remote from the backrest is connected to the at least one sliding joint.

Advantageously, the auxiliary seat comprises a locking mechanism to retain the seat in the erect operative position, and the locking mechanism preferably retains the seat in the erect operative position by locking the at least one sliding joint in place.

In a preferred embodiment, the locking mechanism comprises a latch extending from the at least one sliding joint, operable to lock onto a fixed shaft on the frame. Preferably, the latch is located at one end of an arm, the arm rotatably mounted to the at least one sliding joint and operable to move from a first locked position in which the latch snags on the fixed shaft, to a second unlocked position in which the latch is clear of the fixed shaft to allow movement of the at least one sliding joint.

The frame is preferably attached to the pushchair by a first clamping means extending from one side of the frame, and the first clamping means is conveniently attached to a first support strut which is hingedly attached to the frame.

Furthermore, the frame may further be attached to the pushchair by a second clamping means extending from said one side of the frame, and the second clamping means may also be hingedly attached to the frame.

In one preferred embodiment, the first and second clamping means are attachable to a supplementary pushchair frame bar which includes further attachment means operable to fix the bar and seat attached thereto, to the conventional pushchair. Alternatively, the first and second clamping means may be attachable to a replacement pushchair frame bar which can be fitted in place of an existing section of frame of a conventional pushchair to fix the seat thereto.

Preferably, the auxiliary seat is releasably attachable to said pushchair, and in a preferred embodiment, it can pivot relative to the pushchair to be folded against the side thereof in a storage position with the wheel off the ground, once the base and backrest of the seat have been folded substantially flat.

Conveniently, the at least one wheel is detachable, and is preferably positioned such that when the auxiliary seat is mounted on the pushchair in an operative position,

the at least one wheel is in alignment with a rear wheel of the pushchair. In a preferred embodiment, the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, an axle of the at least one wheel is coaxial with an axle of a rear wheel of the pushchair.

Advantageously, the seat includes a safety harness to retain a child in position thereon.

A preferred embodiment includes a rain cover attached to the seat to at least partially surround a child sitting on the seat, and an alternative embodiment includes a sunshade attached to the seat to shade a child sitting on the seat. A toy steering wheel is conveniently positionable in front of a child sitting on the seat, or a toy hobby-horse style attachment may be positionable in front of a child sitting on the seat.

A preferred embodiment of the present invention will now be described, with reference to the accompanying drawings, in which:

Figure 1 shows a perspective view of a pushchair add-on device according to a first embodiment of the invention, in an erected operative position;
Figure 2 shows the pushchair add-on device of Figure 1 in a collapsed position;
Figure 3 shows a side view of the pushchair add-on device of Figure 1;
Figure 4 shows a side view of the pushchair add-on device of Figure 2;
Figure 5 shows a rear perspective view of the pushchair add-on device of Figures 1 and 3;
Figure 6 shows the pushchair add-on device in the erect position attached to a conventional pushchair; and
Figure 7 shows the pushchair add-on device in the collapsed position attached to a conventional pushchair, and folded up in a storage position.

Referring now to the drawings, a pushchair add-on device 1, for attachment to any type of conventional pushchair 2 (see Figures 6 and 7), is shown, comprising a chassis frame 10, a seat portion 20 and a wheel 30. The chassis 10 comprises first

and second generally curved L-shaped tubular chassis members 11, 12 arranged so that long sides 11a, 12a of each member 11, 12 are parallel to one another, and short sides 11b, 12b are parallel to one another. Each end of each chassis member 11, 12 is connected to a correspondingly opposite end of the other member so as to form a generally rectangular chassis frame 10.

The seat portion 20 comprises a base 21 and a backrest 22. It can also include a seat harness (not shown) comprising a strap extending from either side of the backrest 22 and one extending from the middle of the base 21 at the front thereof, in which all three straps meet in a 'T' – shaped clasp.

The chassis frame 10 includes two collars, 14a, 15a, one slideably received on each of the long sides 11a, 12a of the L-shaped chassis members 11, 12. Each collar 14a, 15a includes a pivot joint integrally formed therewith, and a backrest support stanchion 14, 15 is pivotably attached to each of the collar pivot joints 14a, 15a respectively, and extends therefrom. The backrest 22 is attached at either side to the backrest support stanchions 14, 15 and the backrest 22 is thereby pivotable about the collar pivot joints 14a, 15a.

The chassis 10 also includes a seat support stanchion 16 pivotably attached at one end by a pivot joint 16a to the short side 11b of the first L-shaped chassis member 11 at the rear of the chassis frame 10. The base 21 is rigidly secured to the other end of the seat support stanchion 16 and a lug 23 extends from the rear of the base 21. A hinge rod 23a extends through the lug 23 and each end of the hinge rod 23a extends through the backrest support stanchions 14, 15 respectively. The base 21 is thereby pivotable relative to the backrest support stanchions 14, 15 about said hinge rod 23a and lug 23.

The mechanism described above allows the seat portion 20 to be moveable from a collapsed position shown in Figures 2 and 4 in which the base 21 and backrest 22 lie substantially flat against the chassis frame 10, to an operative position as shown in Figures 1, 3, 5 and 6 in which the seat portion 20 is erected and the plane of the base 21 is substantially at right angles to the plane of the backrest 22. The

arrangement of the components is such that the backrest support stanchions 14, 15 and the seat support stanchion 16, are moveable relative to one another in a scissor-like action, wherein the central pivot point of the scissor action is the hinge rod 23a and the lug 23 on the base 21. The end of the seat support stanchion 16 remote from the base 21 is only pivotable relative to the chassis member 11, and is not moveable laterally relative to it. Therefore, to enable the scissor-action mentioned above, the collar pivot joints 14a, 15a, to which the backrest support stanchions 14, 15 are attached, slide along a section L_{11}, L_{12} of the chassis members 11, 12 respectively as the seat portion 20 is moved from the erect position to the collapsed position.

The chassis 10 further includes a horizontal axle shaft 31 that extends from the long side 11a of the first chassis member 11 through the long side 12a of the second chassis member 12 and protrudes a short distance out of the other side of the second chassis member 12. A section of the protruding end of the axle shaft 31 is threaded in order to receive a retaining nut 32. The wheel 30 includes a central aperture through which the protruding end of the axle shaft 31 can be received. The retaining nut 32 can then be screwed onto the threaded end of the axle shaft 31 to retain the wheel 30 in place whilst allowing it to be freely rotatable about the axle shaft 31. The wheel 30 is therefore easily removable from the axle shaft 31 by removal of the retaining nut 32. It will be appreciated that other such retaining means may be used instead of a screw thread and retaining nut, for example, a snap-fit retaining cap.

A clamp strut 17 is attached at one end to the first chassis member 11 and extends outwardly therefrom away from the second chassis member 12. An attachment clamp 18 is disposed on the other end of the clamp strut 17 and is operable to detachably clamp onto a frame of a conventional pushchair 2. Furthermore, a second attachment clamp 19 is disposed at the end of the short side 12b of the second chassis member 12, and, as with the first attachment clamp, is operable to detachably clamp onto a frame of a conventional pushchair 2. The two attachment clamps 18, 19 together can thereby secure the device 1 of the invention to the side of the conventional pushchair 2. Each attachment clamp 18, 19 is pivotable relative

to the clamp strut 17/chassis member 12 respectively, for reasons which will become apparent from the description hereafter.

The device 1 includes a locking mechanism 40 to enable the seat portion 20 of the device 1 to be retained in the erected operative position (see Figures 5 and 6). The locking mechanism 40 comprises a locking shaft 41 that extends between the slidable collar pivot joints 14a, 15a and is rotatable about its axis relative to the collar pivot joints 14a, 15a. The locking shaft 41 therefore restricts the movement of one collar pivot joint 14a relative to the other 15a, so they can only be moved together and in the same direction. Two locking arms 42, 43 are rigidly secured to the locking shaft 41 and extend rearwardly therefrom, substantially parallel to the long sides 11a, 12a of the chassis members 11, 12. Each arm 42, 43 includes a latch portion 42a, 43a at an end distal from the locking shaft 41. A fixed shaft 44 extends between the chassis members 11, 12 and parallel to the locking shaft 41, and is positioned rearwardly of the locking shaft 41 such that the latch portions 42a, 43a of the arms 42, 43 are just able to be clipped over the fixed shaft 44 and held in this locked position hooked over the fixed shaft 44 by friction therewith. Therefore, when the arms 42, 43 are in this locked position, the collar pivot joints 14a, 15a are prevented from sliding along sections L_{11}, L_{12} of the chassis members 11, 12 respectively, and thereby retain the seat portion 20 in the erect operative position.

As described above, the locking mechanism 40 enables the seat portion 20 of the device 1 to be locked in the erected operative position, and thereby capable of supporting a child thereon in a sitting position next to a child sitting in the pushchair 2 so that they are both facing in the same direction. When the device 1 is not in use, the locking mechanism 40 can be released by unclipping the latch portions 42a, 43a from the fixed shaft 44 and rotating the arms 42, 43 downwards. This can be done by pushing lever release tabs 42b, 43b which are formed on the end of the rotating arms 42, 43 perpendicular thereto and at the end distal from the latch portions 42a, 43a. This will allow the collar pivot joints 14a, 15a to freely slide along sections L_{11}, L_{12} of the chassis members 11, 12 respectively. The base 21 and seat stanchion 16 can then pivot downwards about the pivot joint 16a, and the backrest 22 and backrest stanchions 14, 15 can pivot downwards about the collar

pivot joints 14a, 15a, the backrest stanchions 14, 15 pivoting relative to the seat stanchion 16 about the hinge rod 23a in a scissor-like motion as described above, until the seat portion 20 of the device 1 is in the collapsed position.

Once the device 1 has been put into the collapsed position shown in Figures 2 and 4 and as described above, it can be folded up against the side of the conventional pushchair 2 into the storage position, as shown in Figure 7. This is possible due to the attachment clamps 18, 19 being pivotable relative the clamp strut 17/chassis member 12 respectively, as described above. Once the device 1 has been folded into this storage position, is can be held in place by a retaining means such as a clip (not shown).

With the device 1 in the storage position, the pushchair 2 has a much slimmer profile and will fit through normal doorways with ease. However, if a user wishes to neaten the appearance of the pushchair 2 and device 1 combination further, and make it even slimmer, they may unscrew the wheel retaining nut 32 and remove the wheel 30 from the axle shaft 31.

As can be seen in Figure 6, one of the advantages of the present invention is that when it is attached to a pushchair 2 and is not in the folded storage position, the wheel 30 of the device 1 is aligned with or is coaxial with wheels 3 of the pushchair 2. This means that the pushchair 2 and device 1 combination can be tilted backwards on all three wheels 30, 3 about their common contact line on the ground or their common axis, in order to get up a kerb, for example, and so is much more easily manoeuvrable than a conventional pushchair 2 would be with any of the other known add-on devices.

It is intended that the attachment clamps 18, 19 of the device 1 are suitable to attach to a frame of any conventional pushchair 2. However, some pushchairs currently available may not have side frames compatible with the attachment clamps 18, 19, and so it is envisaged that the device may be supplied with a replacement section of pushchair frame 4 that can be substituted for the relevant section of the original frame to allow the device to be attachable thereto. The specific replacement

section of frame 4 could be pushchair-specific, so that a user could identify which pushchair they already own, and purchase a device of the present invention that comes with the appropriate replacement frame section.

In an alternative attachment mechanism to that described above, a universal supplementary section of frame 4 could be provided. This supplementary section 4 would be attachable to the attachment clamps 18, 19 and could further include pushchair-specific attachment means 5, 6 to couple the device 1, via the supplementary frame section 4, to the pushchair 2. Therefore, instead of replacing a section of the existing pushchair frame, there would be an additional section of frame 4. In this case, the user would identify which pushchair they already own, and purchase a device 1 of the present invention that comes with the appropriate pushchair-specific attachment means 5, 6 to enable the device 1 to be fitted to their pushchair 2.

In a further embodiment of the invention, a strap 7 may be connected between a top part 22a of the backrest 22 and a part of the pushchair 2 which is higher than the top 22a of the backrest 22 (see Figure 6). This strap 7 prevents the auxiliary seat device 1 from pivoting downwards about the attachment clamps 18, 19 relative to the pushchair 2 if the wheel 30 runs over a hole or drops off a kerb, for example. In such a scenario, the weight of the auxiliary seat device 1 (and a child thereon) is transferred through the strap 7 to the pushchair 2 and is balanced out by the weight of said pushchair 2 and of a child in the pushchair seat. It will be appreciated that this means of preventing the auxiliary seat device 1 from pivoting downwards beyond a certain angle does not necessarily need to be a strap 7 as shown in Figure 6. For example, a rigid rod could be used secured to the pushchair 2 and some suitable point on the auxiliary seat device 1.

Other unillustrated embodiments of the present invention may include additional features or accessories. For example, a rain cover could be provided, attachable to the auxiliary seat device 1, to partially or entirely surround a child seated on the device to shelter the child from wind/rain/sleet/snow. The rain cover could

incorporate a supporting frame structure attachable to the device. Alternatively, the device could be provided with a sunshade or parasol.

In addition to the functional accessories mentioned above, the auxiliary seat device 1 may also include an accessory intended to amuse the child whilst the child is in the seat. This could include a toy steering wheel or dashboard arrangement, or a hobby-horse style attachment positionable in front of the child.

Claims

1. An auxiliary seat attachable to a pushchair to enable it to accommodate two children seated side-by-side and facing the same direction, the seat comprising a frame having a backrest and a base and a wheel in contact with the ground in an operative position to support a child seated on the base with their back against the backrest, wherein the frame is configured so that the backrest and the base fold substantially flat when the auxiliary seat is not in use.

2. An auxiliary seat according to claim 1 wherein the base and the backrest are pivotable relative to one another such that they are collapsible from the erect operative position to the collapsed folded position by means of a scissor-like mechanism.

3. An auxiliary seat according to claim 2 wherein the scissor-like mechanism includes at least one sliding joint to enable the base and backrest to be erected and collapsed.

4. An auxiliary seat according to claim 3 wherein the backrest is attached to one end of a first support strut and the base is attached to one end of a second support strut, and in which said first and second support struts are pivotable relative to each other and the end of the first support strut remote from the backrest is connected to the at least one sliding joint.

5. An auxiliary seat according to any preceding claim comprising a locking mechanism to retain the seat in the erect operative position.

6. An auxiliary seat according to claim 3 or claim 4 comprising a locking mechanism to retain the seat in the erect operative position and which locks the at least one sliding joint in place.

7. An auxiliary seat according to claim 6 wherein the locking mechanism comprises a latch extending from the at least one sliding joint, operable to lock onto a fixed shaft on the frame.

8. An auxiliary seat according to claim 7 wherein the latch is located at one end of an arm, the arm rotatably mounted to the at least one sliding joint and operable to move from a first locked position in which the latch snags on the fixed shaft, to a second unlocked position in which the latch is clear of the fixed shaft to allow movement of the at least one sliding joint.

9. An auxiliary seat according to any preceding claim wherein the frame is attached to the pushchair by a first clamping means extending from one side of the frame.

10. An auxiliary seat according to claim 9 wherein the first clamping means is attached to a first support strut which is hingedly attached to the frame.

11. An auxiliary seat according to claim 9 or claim 10 wherein the frame is further attached to the pushchair by a second clamping means extending from said one side of the frame.

12. An auxiliary seat according to claim 11 wherein the second clamping means is hingedly attached to the frame.

13. An auxiliary seat according to claim 11 or claim 12 wherein the first and second clamping means are attachable to a supplementary pushchair frame bar which includes further attachment means operable to fix the bar and seat attached thereto, to the conventional pushchair.

14. An auxiliary seat according to claim 11 or claim 12 wherein the first and second clamping means are attachable to a replacement pushchair frame bar which can be fitted in place of an existing section of frame of a conventional pushchair to fix the seat thereto.

15. An auxiliary seat according to any preceding claim which is releasably attachable to said pushchair.

16. An auxiliary seat according to any preceding claim which can pivot relative to the pushchair to be folded against the side thereof in a storage position with the wheel off the ground, once the base and backrest of the seat have been folded substantially flat.

17. An auxiliary seat according to any preceding claim wherein the at least one wheel is detachable.

18. An auxiliary seat according to any preceding claim wherein the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, the at least one wheel is in alignment with a rear wheel of the pushchair.

19. An auxiliary seat according to any preceding claim wherein the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, an axle of the at least one wheel is coaxial with an axle of a rear wheel of the pushchair.

20. An auxiliary seat according to any preceding claim wherein the seat includes a safety harness to retain a child in position thereon.

21. An auxiliary seat according to any preceding claim including a rain cover attached to the seat to at least partially surround a child sitting on the seat.

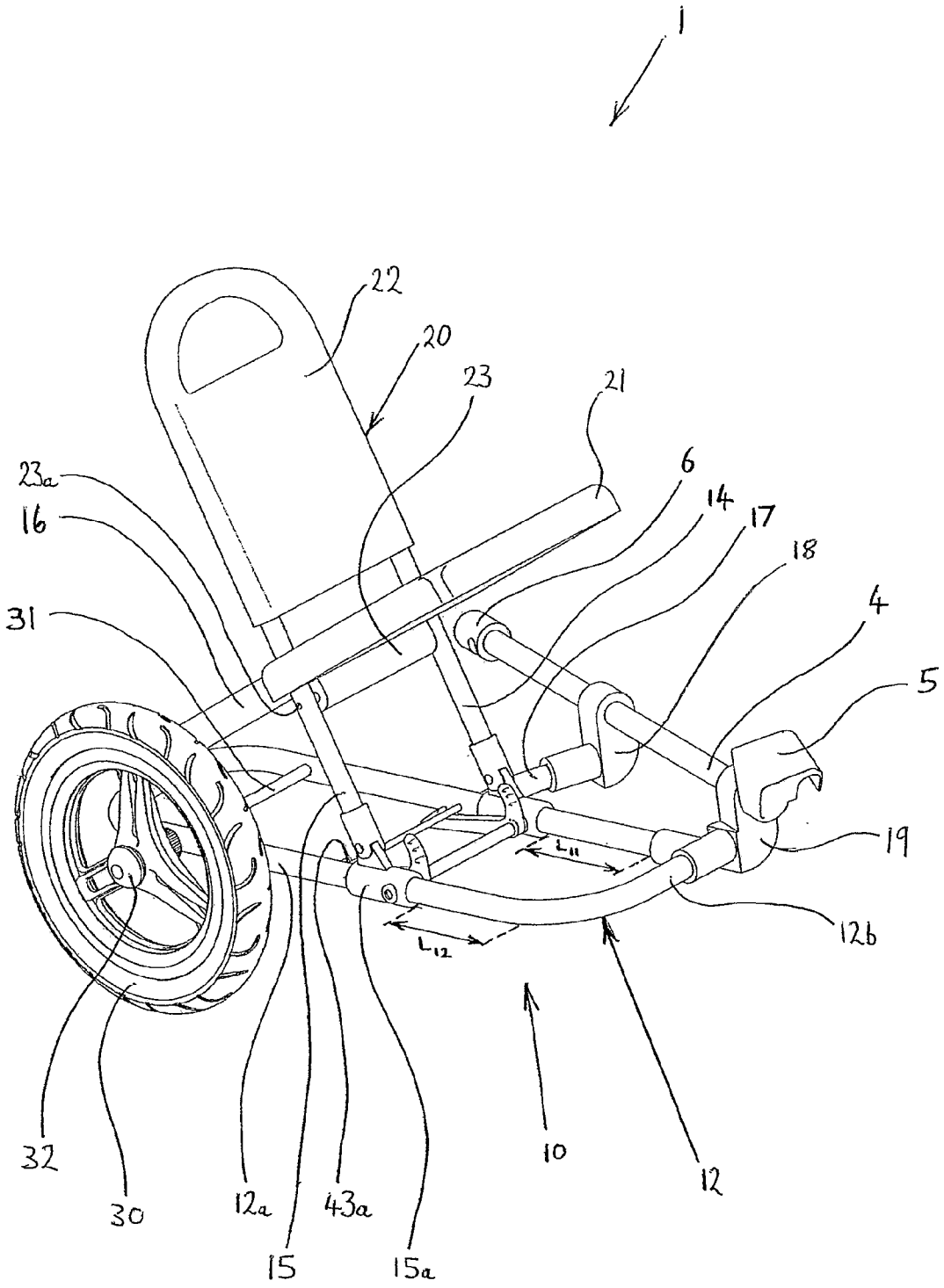
22. An auxiliary seat according to any preceding claim including a sunshade attached to the seat to shade a child sitting on the seat.

23. An auxiliary seat according to any preceding claim including a toy steering wheel positionable in front of a child sitting on the seat.

24. An auxiliary seat according to any preceding claim including a toy hobby-horse style attachment positionable in front of a child sitting on the seat.

25. A pushchair incorporating an auxiliary seat according to any preceding claim.

26. An auxiliary seat substantially as hereinbefore described with reference to the accompanying drawings.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22
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23
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23a
16
6
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17
18
31
4
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19
L_{11}
L_{12}
12b
32
30
12a
43a
15
15a
10
12

FIGURE 1

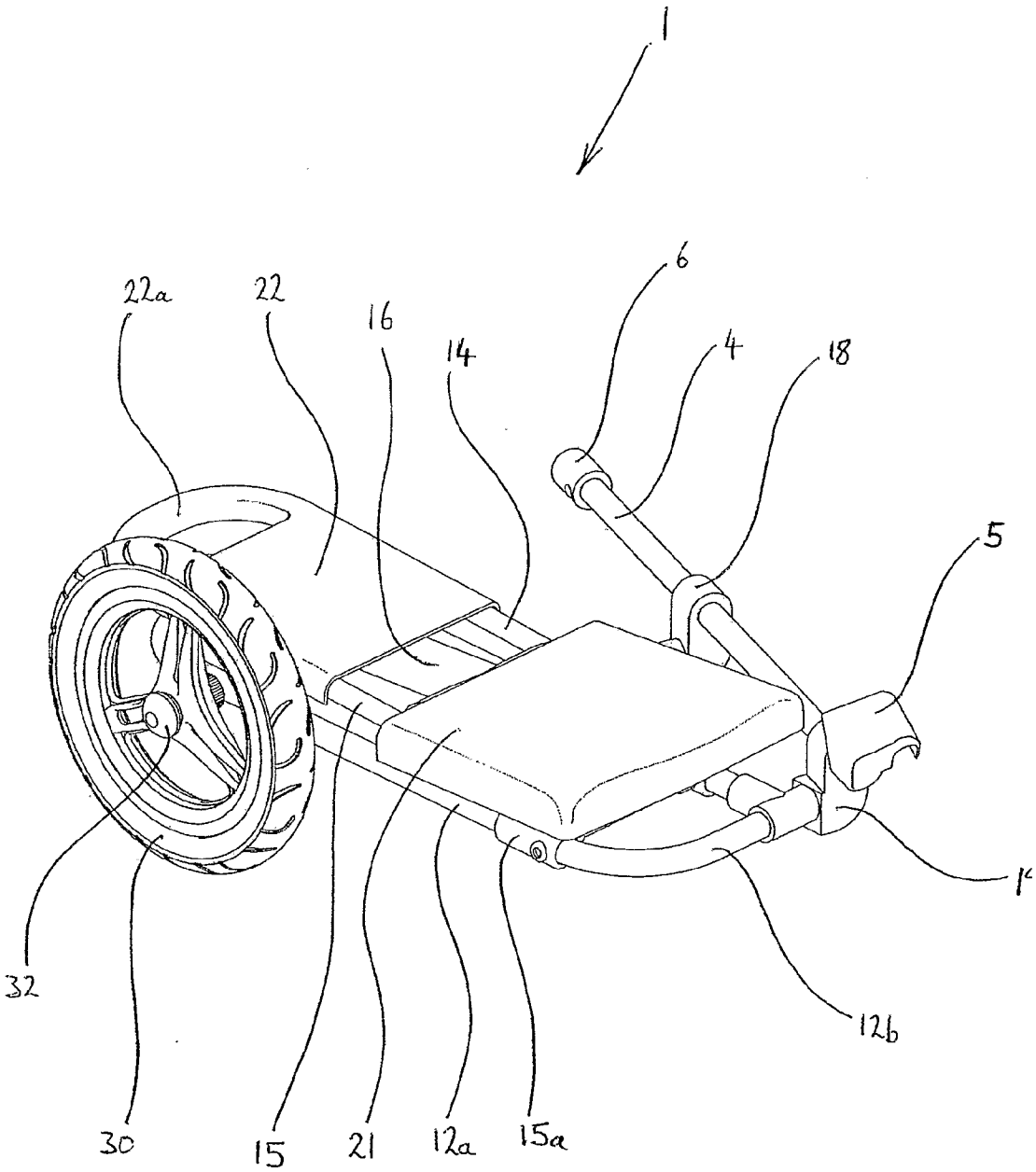


FIGURE 2.

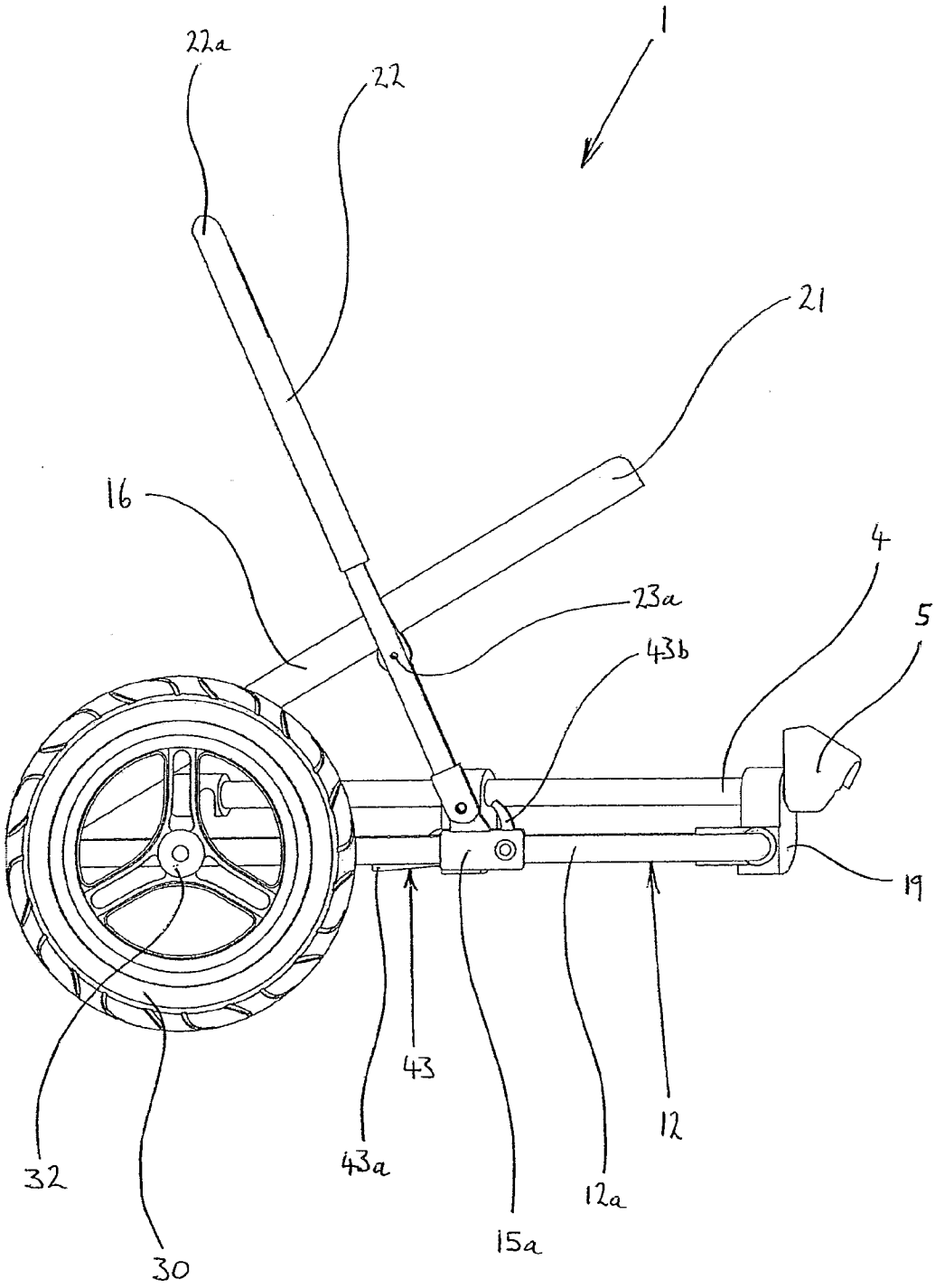


FIGURE 3

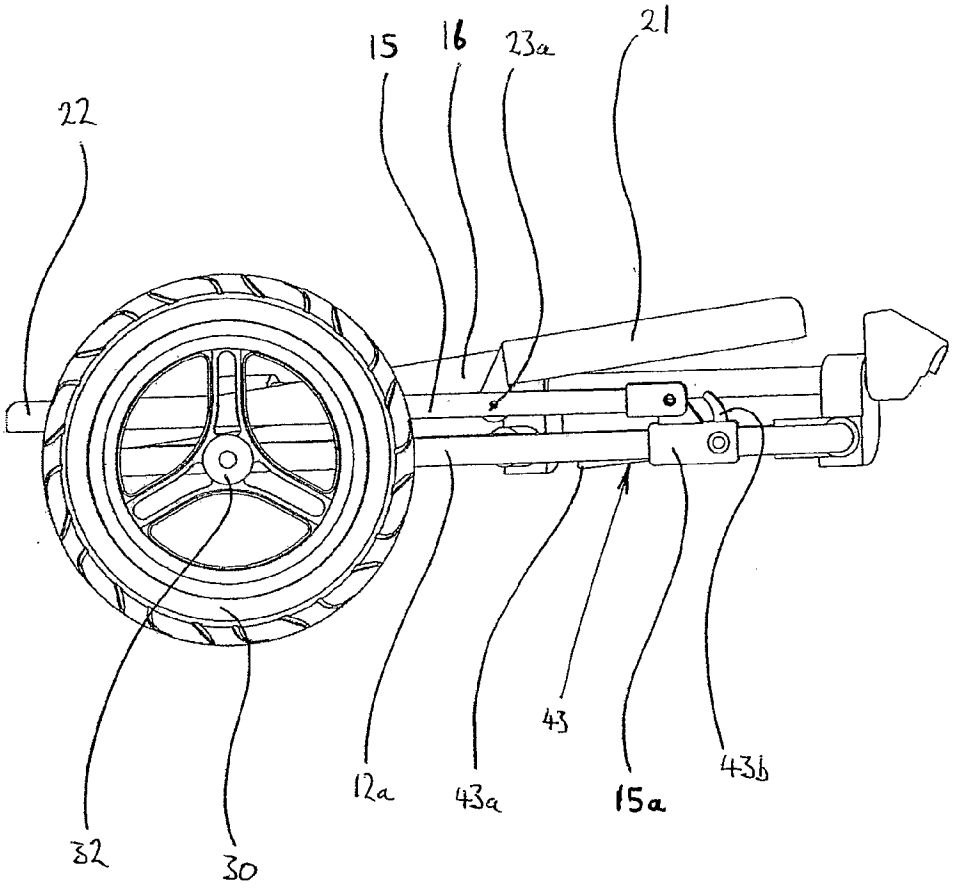
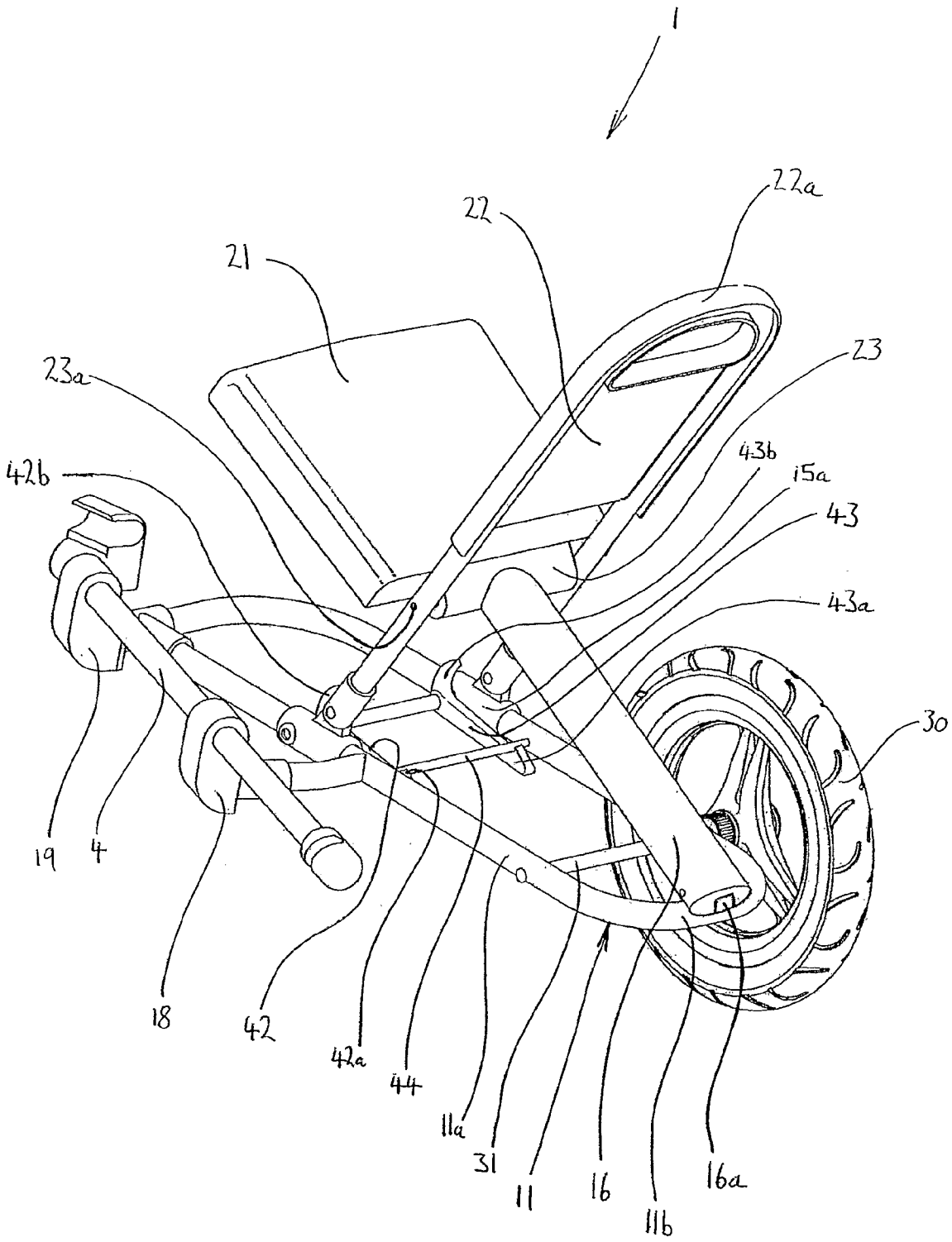


FIGURE 4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23a
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42a
44
11a
31
11
16
11b
16a

FIGURE 5

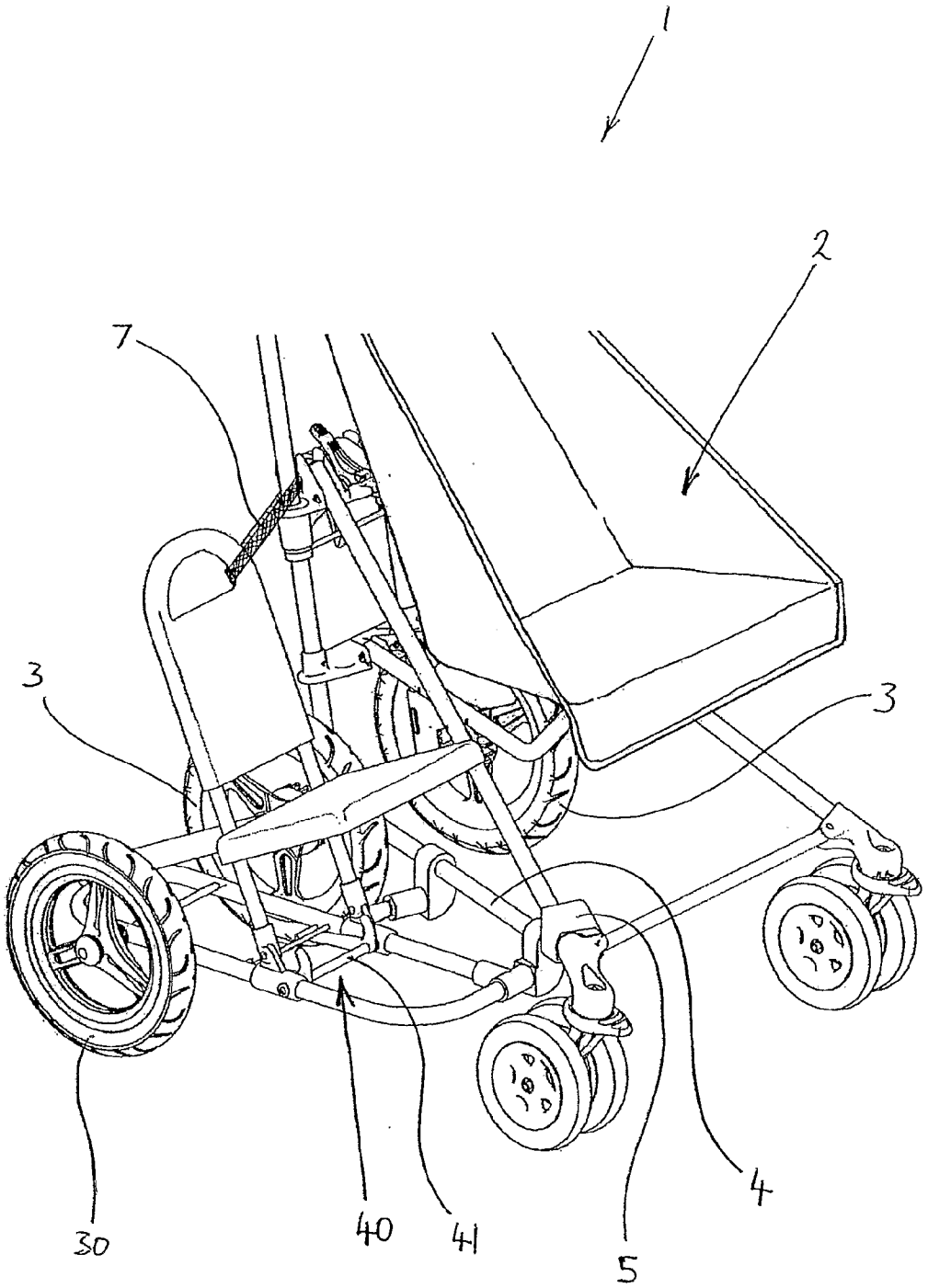

FIGURE 6.

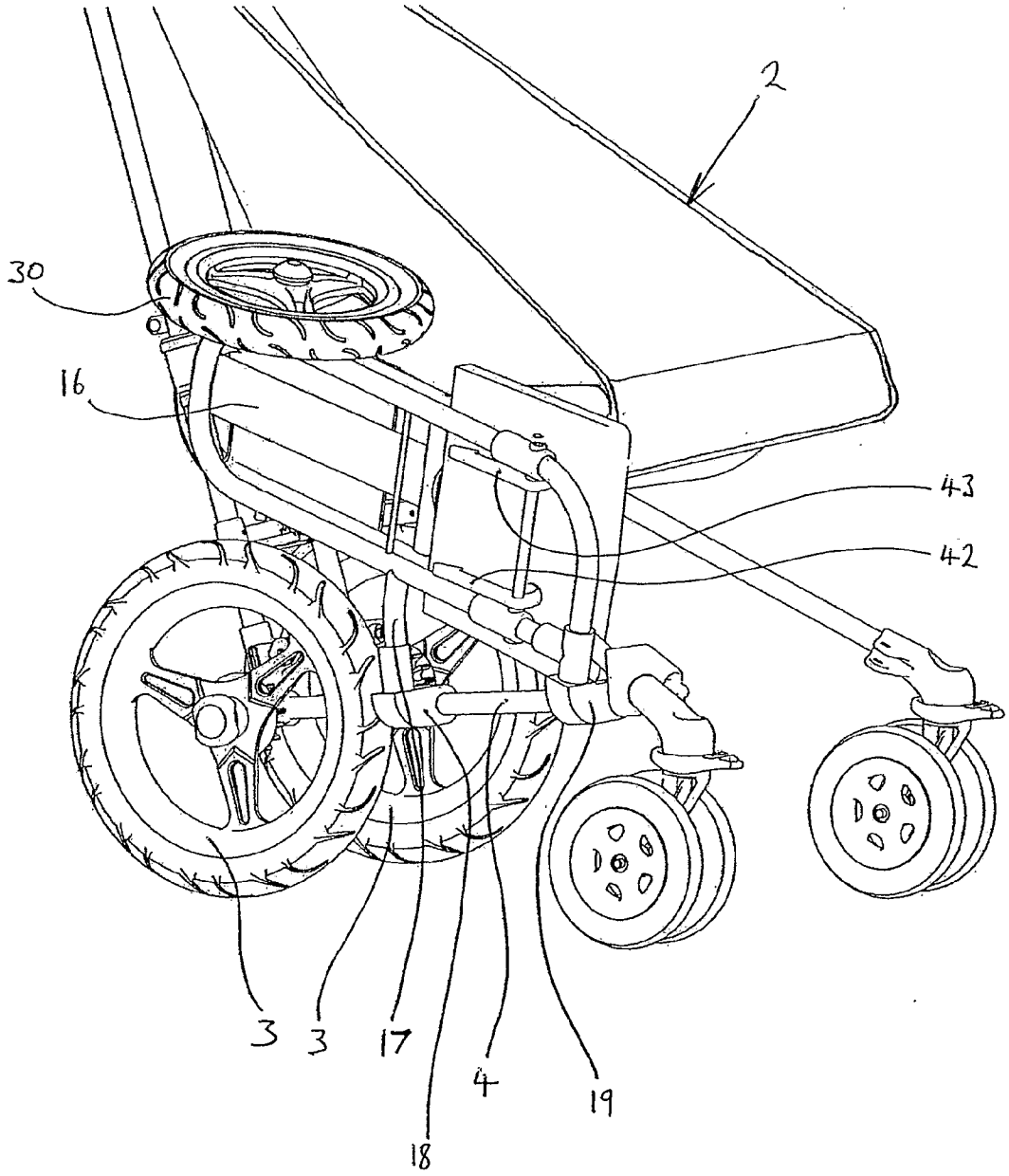

FIGURE 7

INTERNATIONAL SEARCH REPORT

Inte nal Application No
PCT/GB2004/002170

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B62B9/00

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 7 B62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 000 645 A (SCHMIDT CARL O) 19 September 1961 (1961-09-19) abstract; figures 1,2,4,7	1,5, 9-18,25, 26
Y	figures 1,2,4,7	2-4,6
Y	US 6 715 783 B1 (HANSON WAYNE H ET AL) 6 April 2004 (2004-04-06) abstract; figures 4,8,10	2-4,6
A	figures	1
A	DE 40 33 548 A1 (TROAX-AXO AB, HILLERSTORP, SE) 25 April 1991 (1991-04-25) abstract; figure 1	1-4

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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"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	Date of mailing of the international search report
8 June 2005	15/06/2005

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European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Lindner, V

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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(71) Applicant and
(72) Inventor: **ROHL, Stephanie** [GB/GB]; 63 St Marks Road, Henley-on-Thames, Oxon, RG9 1LP (GB).

(74) Agents: **GREY, Ian** et al.; Venner Shipley LLP, 20 Little Britain, London EC1A 7DH (GB).

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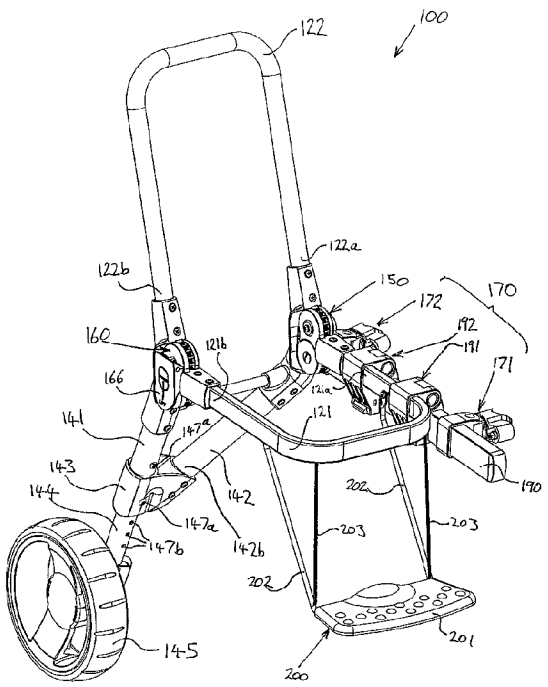
(54) Title: AUXILIARY PUSHCHAIR SEAT



(57) Abstract: An auxiliary seat (1) attachable to a pushchair (2) to enable it to accommodate two children seated side-by-side. The seat comprises a frame (10) having a backrest (22) and a base (21) and a wheel (30) in contact with the ground in an operative position. A child seated on the base is supported with their back against the backrest (22). The frame (10) is configured so that the backrest (22) and the base (21) fold substantially flat when the auxiliary seat is not in use. The auxiliary seat (1), including the base (21) and backrest (22), can pivot relative to the pushchair (2) to be folded against the side thereof in a storage position with the wheel (30) off the ground, once the base (21) and backrest (22) of the seat have been folded substantially flat.

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Auxiliary Pushchair Seat

Description

The present invention relates to a pushchair, and more specifically, to an add-on seating device for pushchairs.

It is often the case with parents having more than one child that the age gap between the children is such that the older child is not fully able to walk by the time the second child is born or is reluctant to do so for an extended period of time. During the first child's initial years, the parents will most probably have bought a single-seat pushchair to transport the child around in until it learns to walk properly. Modern pushchairs can be an expensive outlay, and perhaps difficult to afford, especially for young couples or those on low income. Therefore, when the second child is born, the parents find themselves requiring another pushchair so that both children can be transported together. Therefore, they must either buy another single-seat pushchair in addition to the first, which means having to use two pushchairs each time both children are taken out together or, buy a new double-seat pushchair, which means the original single-seat pushchair is then redundant. In either case, it involves another significant financial outlay for the parents.

One solution to this problem is to provide an add-on device that can be attached to the existing single-seat pushchair to adapt it to be able to carry both children simultaneously. Recently, pushchair add-on products have become commercially available and one such device comprises a wheeled platform that attaches to the rear of the pushchair, on which the elder child can stand whilst the younger child is seated.

However, this platform type of device has a number of disadvantages. Firstly, as the device is a platform and not a seat, it requires the elder child to remain standing, which can quickly tire them out and become uncomfortable for them. This has a safety implication as well, since the elder child is not provided with a harness to stop them falling off the device. Secondly, the device is positioned at the rear of the

pushchair between the pushchair and the parent. This means that the parent has to lean forward and stoop over and/or around the standing child in order to push the pushchair, and this can quickly cause backache and stiffness, and is generally uncomfortable over anything but the shortest distances. Thirdly, the wheels of the platform are positioned behind the rear wheels of the pram, which means that it can be difficult to push the pushchair up or down kerbs, as the device hinders the ability of the pushchair to be pivoted about the rear wheel axle. This device can also unbalance the pushchair and cause it to tip over very easily

It is therefore an object of the present invention to provide an add-on pushchair seating device that substantially alleviates or overcomes the problems mentioned above.

Accordingly, the present invention provides an auxiliary seat attachable to a pushchair to enable it to accommodate two children seated side-by-side, the seat comprising a frame having a backrest and a base and a wheel in contact with the ground in an operative position to support a child seated on the base with their back against the backrest, wherein the frame is configured so that the backrest and the base fold substantially flat when the auxiliary seat is not in use and wherein the auxiliary seat, including the base and backrest, can pivot relative to the pushchair to be folded against the side thereof in a storage position with the wheel off the ground, once the base and backrest of the seat have been folded substantially flat.

In a preferred embodiment, the base and the backrest are pivotable relative to one another such that they are collapsible from the erect operative position to the collapsed folded position by means of a scissor-like mechanism, and the scissor-like mechanism preferably includes at least one sliding joint to enable the base and backrest to be erected and collapsed.

Conveniently, the backrest is attached to one end of a first support strut and the base is attached to one end of a second support strut, and in which said first and second support struts are pivotable relative to each other and the end of the first support strut remote from the backrest is connected to the at least one sliding joint.

A locking mechanism is preferably provided to retain the seat in the erect operative position, and preferably, a locking mechanism locks the at least one sliding joint in place and may comprise a latch extending from the at least one sliding joint, operable to lock onto a fixed shaft on the frame. The latch is preferably located at one end of an arm, the arm rotatably mounted to the at least one sliding joint and operable to move from a first locked position in which the latch snags on the fixed shaft, to a second unlocked position in which the latch is clear of the fixed shaft to allow movement of the at least one sliding joint.

In an alternative embodiment of the invention, the backrest and the base are pivotably connected to one another by hinge joints to be pivotable from the erect operative position to the collapsed storage position in which the backrest lies flat against the base.

The base conveniently comprises a base frame and a seat covering attached thereto, and the backrest preferably comprises a backrest frame with a backrest covering attached thereto.

In a preferred embodiment, the wheel is secured to the frame by a pivotable wheel mechanism which can pivot from an extended operative position to a folded storage position in which the wheel mechanism lies substantially flat against the frame.

The wheel mechanism preferably includes a telescopic strut to allow the distance of the wheel from the frame to be telescopically adjusted independently of the pivoting of the wheel mechanism from the operative position to the storage position, and the telescopic strut conveniently includes a locking mechanism to lock the strut in the desired position.

In a preferred embodiment, in the storage position, the wheel mechanism lies flat against the base on the opposite side thereto to the backrest.

The wheel mechanism is preferably connected to the frame at said hinge joints, and the backrest and the wheel mechanism are advantageously mechanically connected to one another to be moveable from their respective operative positions to their folded storage position together.

At least one hinge joint preferably includes a locking means to lock the backrest, and preferably also the associated wheel mechanism, in the operative position or in the storage position. The locking means preferably includes a pair of ratchet plates operated by a cam lever to move from a locked position in which the ratchets of each plate engage with each other, to an unlocked position in which the ratchets of each plate are out of engagement with each other to allow the backrest and/or wheel mechanism to pivot about the hinge joints.

The frame may be attached to the pushchair by a first clamping means extending from one side of the frame, and the first clamping means may be attached to a first support strut which is hingedly attached to the frame. The frame is preferably further attached to the pushchair by a second clamping means extending from said one side of the frame and the second clamping means is conventiently hingedly attached to the frame. The first and second clamping means are preferably attachable to a supplementary pushchair frame bar which includes further attachment means operable to fix the bar and seat attached thereto, to the conventional pushchair. Alternatively, the first and second clamping means may be attachable to a replacement pushchair frame bar which can be fitted in place of an existing section of frame of a conventional pushchair to fix the seat thereto.

The auxiliary seat may include at least one clamp to secure the add-on seat to a frame of a pushchair, and the at least one clamp is preferably attached to a connection bar, and the frame is attached to the connection bar by at least one hinge connector to be pivotable relative to the connection bar. The at least one clamp and/or the at least one hinge connector are preferably slidable relative to the connection bar allow the position of the frame to be adjusted relative to the pushchair. The frame and connection bar are advantageously releasably attached to

the connection bar. At least one hinge connector preferably includes a locking mechanism to lock the auxiliary seat in the operative position.

The auxiliary seat of the invention is preferably releasably attachable to said pushchair. A preferred embodiment of the invention includes a locking mechanism to secure the auxiliary seat in the storage position.

In a preferred embodiment, the at least one wheel is detachable, and the at least one wheel is preferably positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, the at least one wheel is in alignment with a rear wheel of the pushchair, and more preferably, coaxial with an axle of a rear wheel of the pushchair.

The seat conveniently includes a safety harness to retain a child in position thereon, and may also include a rain cover attached to the seat to at least partially surround a child sitting on the seat. A sunshade may also be attached to the seat to shade a child sitting on the seat, and a toy steering wheel or a toy hobby-horse style attachment may be positionable in front of a child sitting on the seat.

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

Figure 1 shows a perspective view of a pushchair add-on device according to a first embodiment of the invention, in an erected operative position;
Figure 2 shows the pushchair add-on device of Figure 1 in a collapsed position;
Figure 3 shows a side view of the pushchair add-on device of Figure 1;
Figure 4 shows a side view of the pushchair add-on device of Figure 2;
Figure 5 shows a rear perspective view of the pushchair add-on device of Figures 1 and 3;
Figure 6 shows the pushchair add-on device in the erect position attached to a conventional pushchair;
Figure 7 shows the pushchair add-on device in the collapsed position attached to a conventional pushchair, and folded up in a storage position;

Figure 8 is a perspective view of a second embodiment of a pushchair add-on device according to the invention, in an operative position with the base and backrest removed;

Figure 9 is a plan view from above of the seat of Figure 8;

Figure 10 is a side view of the seat of Figures 8 and 9;

Figure 11 is a front view of the seat of Figures 8 – 10;

Figure 12 is a perspective view of the seat of Figures 8 – 11 in a collapsed position;

Figure 13 is a plan view from above of the seat of Figure 12;

Figure 14 is a side view of the seat of Figures 12 and 13;

Figure 15 is a front view of the seat of Figures 12 – 14;

Figure 16 is a perspective view of the seat of Figures 8 – 15, collapsed and folded up in a storage position;

Figure 17 is a plan view from above of the seat of Figure 16;

Figure 18 is a side view of the seat of Figures 16 and 17;

Figure 19 is a front view of the seat of Figures 16 – 18;

Figures 20A – 20B are side views of the left hinge bracket;

Figure 21 is an exploded perspective view of the left hinge bracket of Figures 20A and 20B;

Figures 22A – 22E are various perspective views of the right hinge bracket showing the locking mechanism;

Figure 23 is an exploded perspective view of the right hinge bracket of Figures 22A – 22E;

Figure 24 is an exploded perspective view of a frame clamp;

Figure 25 is a plan view from above of an assembled frame clamp of Figure 24;

Figure 26 is a side view of the frame clamp of Figure 25;

Figure 27 is an exploded perspective view of a hinged frame clip;

Figure 28 is an end view of an assembled frame clip of Figure 27;

Figure 29 is a side view of the frame clip of Figure 28;

Figure 30 is an exploded perspective view of the wheel; and

Figure 31 is a perspective view of the seat of Figures 8 – 19 with the base and backrest covers in place.

Referring now to Figures 1 – 7 of the drawings, a pushchair add-on device 1, for attachment to any type of conventional pushchair 2 (see Figures 6 and 7), is shown, comprising a chassis frame 10, a seat portion 20 and a wheel 30. The chassis 10 comprises first and second generally curved L-shaped tubular chassis members 11, 12 arranged so that long sides 11a, 12a of each member 11, 12 are parallel to one another, and short sides 11b, 12b are parallel to one another. Each end of each chassis member 11, 12 is connected to a correspondingly opposite end of the other member so as to form a generally rectangular chassis frame 10.

The seat portion 20 comprises a base 21 and a backrest 22. It can also include a seat harness (not shown) comprising a strap extending from either side of the backrest 22 and one extending from the middle of the base 21 at the front thereof, in which all three straps meet in a 'T' – shaped clasp.

The chassis frame 10 includes two collars, 14a, 15a, one slideably received on each of the long sides 11a, 12a of the L-shaped chassis members 11, 12. Each collar 14a, 15a includes a pivot joint integrally formed therewith, and a backrest support stanchion 14, 15 is pivotably attached to each of the collar pivot joints 14a, 15a respectively, and extends therefrom. The backrest 22 is attached at either side to the backrest support stanchions 14, 15 and the backrest 22 is thereby pivotable about the collar pivot joints 14a, 15a.

The chassis 10 also includes a seat support stanchion 16 pivotably attached at one end by a pivot joint 16a to the short side 11b of the first L-shaped chassis member 11 at the rear of the chassis frame 10. The base 21 is rigidly secured to the other end of the seat support stanchion 16 and a lug 23 extends from the rear of the base 21. A hinge rod 23a extends through the lug 23 and each end of the hinge rod 23a extends through the backrest support stanchions 14, 15 respectively. The base 21 is thereby pivotable relative to the backrest support stanchions 14, 15 about said hinge rod 23a and lug 23.

The mechanism described above allows the seat portion 20 to be moveable from a collapsed position shown in Figures 2 and 4 in which the base 21 and backrest 22 lie

substantially flat against the chassis frame 10, to an operative position as shown in Figures 1, 3, 5 and 6 in which the seat portion 20 is erected and the plane of the base 21 is substantially at right angles to the plane of the backrest 22. The arrangement of the components is such that the backrest support stanchions 14, 15 and the seat support stanchion 16, are moveable relative to one another in a scissor-like action, wherein the central pivot point of the scissor action is the hinge rod 23a and the lug 23 on the base 21. The end of the seat support stanchion 16 remote from the base 21 is only pivotable relative to the chassis member 11, and is not moveable laterally relative to it. Therefore, to enable the scissor-action mentioned above, the collar pivot joints 14a, 15a, to which the backrest support stanchions 14, 15 are attached, slide along a section L_{11}, L_{12} of the chassis members 11, 12 respectively as the seat portion 20 is moved from the erect position to the collapsed position.

The chassis 10 further includes a horizontal axle shaft 31 that extends from the long side 11a of the first chassis member 11 through the long side 12a of the second chassis member 12 and protrudes a short distance out of the other side of the second chassis member 12. A section of the protruding end of the axle shaft 31 is threaded in order to receive a retaining nut 32. The wheel 30 includes a central aperture through which the protruding end of the axle shaft 31 can be received. The retaining nut 32 can then be screwed onto the threaded end of the axle shaft 31 to retain the wheel 30 in place whilst allowing it to be freely rotatable about the axle shaft 31. The wheel 30 is therefore easily removable from the axle shaft 31 by removal of the retaining nut 32. It will be appreciated that other such retaining means may be used instead of a screw thread and retaining nut, for example, a snap-fit retaining cap.

A clamp strut 17 is attached at one end to the first chassis member 11 and extends outwardly therefrom away from the second chassis member 12. An attachment clamp 18 is disposed on the other end of the clamp strut 17 and is operable to detachably clamp onto a frame of a conventional pushchair 2. Furthermore, a second attachment clamp 19 is disposed at the end of the short side 12b of the second chassis member 12, and, as with the first attachment clamp, is operable to

detachably clamp onto a frame of a conventional pushchair 2. The two attachment clamps 18, 19 together can thereby secure the device 1 of the invention to the side of the conventional pushchair 2. Each attachment clamp 18, 19 is pivotable relative to the clamp strut 17/chassis member 12 respectively, for reasons which will become apparent from the description hereafter.

The device 1 includes a locking mechanism 40 to enable the seat portion 20 of the device 1 to be retained in the erected operative position (see Figures 5 and 6). The locking mechanism 40 comprises a locking shaft 41 that extends between the slidable collar pivot joints 14a, 15a and is rotatable about its axis relative to the collar pivot joints 14a, 15a. The locking shaft 41 therefore restricts the movement of one collar pivot joint 14a relative to the other 15a, so they can only be moved together and in the same direction. Two locking arms 42, 43 are rigidly secured to the locking shaft 41 and extend rearwardly therefrom, substantially parallel to the long sides 11a, 12a of the chassis members 11, 12. Each arm 42, 43 includes a latch portion 42a, 43a at an end distal from the locking shaft 41. A fixed shaft 44 extends between the chassis members 11, 12 and parallel to the locking shaft 41, and is positioned rearwardly of the locking shaft 41 such that the latch portions 42a, 43a of the arms 42, 43 are just able to be clipped over the fixed shaft 44 and held in this locked position hooked over the fixed shaft 44 by friction therewith. Therefore, when the arms 42, 43 are in this locked position, the collar pivot joints 14a, 15a are prevented from sliding along sections L_{11}, L_{12} of the chassis members 11, 12 respectively, and thereby retain the seat portion 20 in the erect operative position.

As described above, the locking mechanism 40 enables the seat portion 20 of the device 1 to be locked in the erected operative position, and thereby capable of supporting a child thereon in a sitting position next to a child sitting in the pushchair 2 so that they are both facing in the same direction. When the device 1 is not in use, the locking mechanism 40 can be released by unclipping the latch portions 42a, 43a from the fixed shaft 44 and rotating the arms 42, 43 downwards. This can be done by pushing lever release tabs 42b, 43b which are formed on the end of the rotating arms 42, 43 perpendicular thereto and at the end distal from the latch portions 42a, 43a. This will allow the collar pivot joints 14a, 15a to freely slide

along sections L_{11}, L_{12} of the chassis members 11, 12 respectively. The base 21 and seat stanchion 16 can then pivot downwards about the pivot joint 16a, and the backrest 22 and backrest stanchions 14, 15 can pivot downwards about the collar pivot joints 14a, 15a, the backrest stanchions 14, 15 pivoting relative to the seat stanchion 16 about the hinge rod 23a in a scissor-like motion as described above, until the seat portion 20 of the device 1 is in the collapsed position.

Once the device 1 has been put into the collapsed position shown in Figures 2 and 4 and as described above, it can be folded up against the side of the conventional pushchair 2 into the storage position, as shown in Figure 7. This is possible due to the attachment clamps 18, 19 being pivotable relative the clamp strut 17/chassis member 12 respectively, as described above. Once the device 1 has been folded into this storage position, is can be held in place by a retaining means such as a clip (not shown).

With the device 1 in the storage position, the pushchair 2 has a much slimmer profile and will fit through normal doorways with ease. However, if a user wishes to neaten the appearance of the pushchair 2 and device 1 combination further, and make it even slimmer, they may unscrew the wheel retaining nut 32 and remove the wheel 30 from the axle shaft 31.

As can be seen in Figure 6, one of the advantages of the present invention is that when it is attached to a pushchair 2 and is not in the folded storage position, the wheel 30 of the device 1 is aligned with or is coaxial with wheels 3 of the pushchair 2. This means that the pushchair 2 and device 1 combination can be tilted backwards on all three wheels 30, 3 about their common contact line on the ground or their common axis, in order to get up a kerb, for example, and so is much more easily manoeuvrable than a conventional pushchair 2 would be with any of the other known add-on devices.

It is intended that the attachment clamps 18, 19 of the device 1 are suitable to attach to a frame of any conventional pushchair 2. However, some pushchairs currently available may not have side frames compatible with the attachment clamps

18, 19, and so it is envisaged that the device may be supplied with a replacement section of pushchair frame 4 that can be substituted for the relevant section of the original frame to allow the device to be attachable thereto. The specific replacement section of frame 4 could be pushchair-specific, so that a user could identify which pushchair they already own, and purchase a device of the present invention that comes with the appropriate replacement frame section.

In an alternative attachment mechanism to that described above, a universal supplementary section of frame 4 could be provided. This supplementary section 4 would be attachable to the attachment clamps 18, 19 and could further include pushchair-specific attachment means 5, 6 to couple the device 1, via the supplementary frame section 4, to the pushchair 2. Therefore, instead of replacing a section of the existing pushchair frame, there would be an additional section of frame 4. In this case, the user would identify which pushchair they already own, and purchase a device 1 of the present invention that comes with the appropriate pushchair-specific attachment means 5, 6 to enable the device 1 to be fitted to their pushchair 2.

In a further embodiment of the invention, a strap 7 may be connected between a top part 22a of the backrest 22 and a part of the pushchair 2 which is higher than the top 22a of the backrest 22 (see Figure 6). This strap 7 prevents the auxiliary seat device 1 from pivoting downwards about the attachment clamps 18, 19 relative to the pushchair 2 if the wheel 30 runs over a hole or drops off a kerb, for example. In such a scenario, the weight of the auxiliary seat device 1 (and a child thereon) is transferred through the strap 7 to the pushchair 2 and is balanced out by the weight of said pushchair 2 and of a child in the pushchair seat. It will be appreciated that this means of preventing the auxiliary seat device 1 from pivoting downwards beyond a certain angle does not necessarily need to be a strap 7 as shown in Figure 6. For example, a rigid rod could be used secured to the pushchair 2 and some suitable point on the auxiliary seat device 1.

Referring now to Figures 8 – 31, a second embodiment 100 of an add-on pushchair seat of the invention is shown. As with the first embodiment described above, the

second embodiment is also attachable to a frame of any conventional pushchair to provide a secondary side seat for a second child to sit on, in addition to a first child seated in the pushchair itself.

The second embodiment of an add-on seat 100 of the invention generally comprises a folding support frame 120 having a seat or base frame member 121 and a backrest frame member 122, and a wheel mechanism 140 including a wheel 145 in contact with the ground when the add-on seat 100 is in an operative position. An attachment mechanism 170 is provided to enable the add-on seat 100 to be secured to a conventional pushchair.

The base frame member 121 and the backrest frame member 122 are both substantially 'U'-shape frame members, each having a respective first (left-side) distal end 121a, 122a, and respective second (right-side) distal end 121b, 122b. The base frame member 121 and the backrest frame member 122 are pivotally connected to each other at their first distal ends 121a, 122a and at their second distal ends 121b, 122b by left and right hinge brackets 150, 160 respectively.

A seat covering 123 is attached to the base frame member 121, and a backrest covering 124 is attached to the backrest frame member 122 (see Figure 31). The seat covering 123 provides the seat for a child to sit on when the add-on seat 100 is in use, and the backrest covering 124 provides a surface for the seated child to lean against. Both the seat covering 123 and the backrest covering 124 are preferably made of a flexible material such as a fabric or a flexible plastic and are attached to each other at their adjacent edges 123a, 124a. The seat covering 123 and the backrest covering 124 are both tensioned across the base frame member 121 and backrest frame member 122 respectively. Alternatively, the seat covering and backrest covering could be made from a rigid plastic material.

A wheel mechanism 140 is connected to the folding support frame 120 at the hinge brackets 150, 160 and comprises a main wheel strut 141 pivotally attached at one end 141a to the right hinge bracket 160, and a diagonal bracing strut 142 pivotally attached at one end 142a to the left hinge bracket 150. The other end 142b of the

bracing strut 142 is secured to the other end 141b of the main wheel strut 141 by a V-shaped moulded connector 143. This enables the main wheel strut 141 and the bracing strut 142 to be pivotable together about the left and right hinge brackets 150, 160 from an operative position in which they extend away from the frame 120 (see Figures 8 – 11), to a collapsed position (see Figures 12 – 15) and a storage position (see Figures 16 – 19) in which they lie flat against the base frame member 121 of the folding support frame 120.

A third sliding wheel strut 144 is telescopically received in the main wheel strut 141 and is slidable relative thereto to move in and out thereof. A wheel 145 is rotatably and detachably attached to an axle 146 at the free end 144a of the sliding strut 144 remote from the main wheel strut 141. An axle bracket 146a is secured to the free end 144a of the sliding wheel strut 144 to support the axle 146 thereon. The sliding strut 144 is locked in a desired position within the main strut 141 by means of securing bolts 147a extending though the main strut 141 and through apertures 147b in the sliding strut 144. To alter the position of the sliding strut 144 within the main strut 141, and thereby the distance of the wheel 145 from the hinge brackets 150, 160, the securing bolts 147a are removed, the sliding strut 144 moved to the new position with the appropriate apertures 147b aligned with the bolts 147a in the main strut 141, and the bolts 147a are screwed in again through the apertures 147b. It will be appreciated that other unillustrated means of securing the sliding strut 144 within the main strut 141 are possible, for example, spring-biased buttons on the sliding strut 144 being received in apertures in the main strut 141. In such an embodiment, the sliding strut 144 could be adjusted by depressing the buttons into the sliding strut 144 so that they are clear of the holes in the main strut 141, and when the sliding strut 144 was located in the new desired position, the buttons would spring out into the nearest holes in the main strut 141 under spring bias to lock the sliding strut 144 in position.

The wheel 145 is releasably attached to the axle 146, and includes the attachement mechanism as shown in Figure 30. The wheel 145 comprises a tyre 145a attached to a rim 145b. The rim 145b has a spring-biased button 145c at its centre (see Figure 10 for example) which can be depressed into the rim 145b. The wheel also

comprises two bearings 148 and two over-lapping axle-plates 149a, 149b, each with a hole therethrough, all contained within the rim 145b by a retaining plate 145d. In use, the wheel 145 is secured to the axle 146 by depressing the button 145c which is configured so as to push the two axle-plates 149a, 149b together so that the holes in each plate are aligned. The axle 146 can then be passed through a hole in the retaining plate 145d, through the first bearing 148, through the aligned holes in the axle-plates 149a, 149b, and through the second bearing 148. The button 145c is then released and the axle-plates move apart under the action of resilient spring arms on their sides pushing against a portion of the rim 145b, and lips on the axle-plates 149a, 149b then locate in a circumferential groove (not shown) in the axle 146 to hold the wheel 145 onto the axle 146. To release the wheel 145 from the axle 146, the process described above is reversed.

The left and right hinge brackets 150, 160 will now be described in more detail with reference to Figures 20 – 23. The left hinge bracket 150 comprises a housing plate 151, a backrest arm 152 and a wheel strut arm 153. The backrest arm 152 and the wheel strut arm 153 each include an integrally formed toothed cog portion 152a, 153a, and are rotatably secured to the housing plate 151 with the teeth of each cog portion 152a, 153a meshing. Therefore, when one arm is rotated, it causes the other arm to rotate. In use, the left side distal end 122a of the backrest frame member 122 is secured in an aperture in the backrest arm 152, and the one end 142a of the diagonal bracing strut 142 is secured in an aperture in the wheel strut arm 153. The housing plate 151 includes an aperture 151a which, in use, receives the left distal end 121a of the base frame member 121. The toothed cog portion 152a of the backrest arm 152 also includes a central aperture 152c, around which ratchet ridges 152d are radially arranged. A ratchet plate 154 is connected to the toothed cog portion 152a and has its own set of ratchet ridges 154a which engage with the ratchet ridges 152d of the toothed cog portion 152a so that the ratchet plate 154 rotates when the toothed cog portion 152a of the backrest arm 152 rotates. A wire guide 155 is attached to the side of the ratchet plate 154 remote from the toothed cog portion 152a, and a wire 156 extends from the ratchet plate 154, through the wire guide 155 and through a guide lug 151b on the left housing plate 151. The wire 156 is attached to the ratchet plate 154 such that when the left backrest arm 152 is

pivoted from the operative position to the collapsed position, the wire 156 is pulled through the wire guide 155 and though the guide lug 151b, for reasons which will be explained in more detail below.

The right hinge bracket 160 is similar to the left hinge bracket 150 and comprises a backrest arm 162 and a wheel strut arm 163. The backrest arm 162 and the wheel strut arm 163 each include an integrally formed toothed cog portion 162a, 163a, and are rotatably secured to the housing plate 161 with the teeth of each cog portion 162a, 163a meshing. Therefore, when one arm is rotated, it causes the other arm to rotate. In use, the right side distal end 122b of the backrest frame member 122 is secured in an aperture in the backrest arm 162, and the one end 141a of the main wheel strut 141 is secured in an aperture in the wheel strut arm 163. The housing plate 161 includes an aperture 161a which, in use, receives the right distal end 121b of the base frame member 121. Any suitable means may be used to secure the backrest frame member 122 in the backrest arms 152, 162 and the diagonal bracing strut 142 and the main wheel strut 141 in the wheel strut arms 153, 163, such as screws, rivets or bolts. Similarly, the same suitable means can be used to secure the base frame member 121 to the apertures 151a, 161a in the left and right housing plates 151, 161 respectively.

The above arrangement allows the base and backrest frame members 121, 122 to be pivotable relative to one another about the hinge brackets 150, 160 from an operative position (see Figures 8 – 11), in which each frame member 121, 122 is spaced from the other, to a collapsed position and a storage position, in which the backrest frame member 122 is folded substantially flat and lies against the base frame member 121 (see Figures 12 - 19). In the operative position, the backrest arms 152, 162 and the wheel strut arms 153, 163 extend away from each other (see Figures 20A and 22A) and are at their maximum angular displacement from the base frame member 121, limited by end faces 152b, 162b of the backrest arms 152, 162 adjacent the toothed cog portions 152a, 162a, contacting end faces 153b, 163b of the wheel strut arms 153, 163 adjacent the toothed cog portions 153a, 163a (indicated at arrows 'A'). In the collapsed position and the storage position, the backrest arms 152, 162 and the wheel strut arms 153, 163 lie close to each other

either side of their respective housing plate 151, 161 (see Figures 20B and 22E). The backrest arms 152, 162 and the wheel strut arms 152, 163 can be locked in the operative or storage position by a locking mechanism, described in detail below.

The right hinge bracket 160 includes a locking mechanism to lock the backrest arm 162 and the wheel strut arm 163 in a chosen position relative to each other. The locking mechanism comprises a locking plate 164 with a central post 164a, a spring 165 and a locking lever 166. The toothed cog portion 162a of the backrest arm has a central aperture 162c, around which ratchet ridges 162d are radially arranged. The locking plate 164 has a corresponding set of ratchet ridges (not shown) radially disposed around where the central post 164a joins the locking plate 164. The ratchet ridges 162d are located on the side of the toothed cog 162a that faces the ratchet ridges on the locking plate 164. The backrest arm 162 is rotatably attached to the housing plate 161 by the post 164a of the locking plate 164 passing though the spring 165, through the aperture 162c in the centre of the toothed cog portion 162a, through an aperture 161b in the housing plate 161 and is secured to the locking lever 166 by a pin 167 which extends though the locking lever 166 and through an aperture in the end of the post 164a.

Once assembled as described above, the locking lever 166 is pivotable about the pin 167. However, the distance $D_{unlocked}$ between the axis of the pin 167 and an upper angled face 166b of the locking lever 166 is less than a distance D_{locked} between the axis of the pin 167 and a rear face 166c of the locking lever 166. Therefore, when the locking lever 166 is moved from a locked position (see Figures 22A and 22E) to an unlocked position (see Figures 22C and 22D), the locking lever 166 acts as a cam against the housing plate 161 and the pin 167 moves towards the housing plate 161 by a distance equal to $[D_{locked} - D_{unlocked}]$. This moves the post 164a and therefore the locking plate 164 away from the toothed cog portion 162a by a corresponding distance which is sufficient to ensure that the two sets of ratchet ridges are spaced from one another. The backrest arm 162 and the wheel strut arm 163 are therefore free to rotate relative to the housing plate 161. The spring 165 ensures that the locking plate 164 is held away from the toothed cog portion 162a when the locking lever 166 is in the unlocked position.

When the locking lever 166 is moved from the unlocked position to the locked position, the cam action moves the pin 167 by a distance equal to $[D_{locked} - D_{unlocked}]$ away from the housing plate 161. This pulls the central post 164a and the locking plate 164 towards the toothed cog portion 162a and the ratchet ridges 162d on the toothed cog portion 162a into engagement with the ratchet ridges on the locking plate 164. Neither the locking plate 164 nor the locking lever 166 can rotate about the axis of the central post 164a. The locking plate 164 is shaped to abut a portion of the housing plate 161 and is thereby prevented from rotating relative to the housing plate 161. The wheel strut arm 163 is rotatably attached to the housing plate 161 by a shaft 168. The end of the shaft 168 proximate the locking lever 166 has a mushroom head 168a which projects from the end of the shaft 168 away from the wheel strut arm 163. The locking lever 166 includes a locking aperture 166a to receive the mushroom head 168a at the end of the shaft 168, and a latch mechanism within the locking lever 166 (not shown) engages with the rim of the mushroom head 168a to secure the locking lever 166 thereto. The locking lever also includes a release button 169 which disengages the latch mechanism from the mushroom head 168a to allow the locking lever to be pivoted about the pin 167 as described above. Therefore, when the locking lever 166 is secured to the mushroom head 168a at the end of the shaft 168 as described above, it is unable to rotate about the axis of the central post 164a. As a result, the backrest arm 162 and the wheel strut arm 163 are locked in position until the locking lever 166 is again moved to the unlocked position as described above, so that the ratchet ridges are moved out of engagement with each other. As the backrest frame member 122 connects the left backrest arm 152 to the right backrest arm 162, and the wheel struts 141, 142 connect the left wheel strut arm 153 to the right wheel strut arm 163, the locking mechanism locks the movement of the both the wheel mechanism 140 and the backrest frame member 122 about the hinge brackets 150, 160.

The add-on seat 100 is provided with an attachment mechanism 170 to enable it to be secured to a conventional pushchair. The attachment mechanism 170 comprises front and rear pushchair clamps 171, 172, a connection bar 190, and front and rear hinges 191, 192. The pushchair clamps 171, 172 can be secured to a side frame of a

pushchair and are releasably attachable to the connection bar 190. They are also designed to be able to be securely attached to pushchair frames of different cross-sections and dimensions, for example, they can attach to circular, oval, square and rectangular cross-section pushchair frames. The front and rear hinges 191, 192 are pivotally attached to the base frame member 121 and also to the connection bar 190. Therefore, when the two pushchair clamps 171, 172 are secured to the pushchair frame and to the connection bar 190, and the two hinges 191, 192 are secured to the base frame member 121 and to the connection bar 190, the add-on seat 100 is secured to the pushchair.

The connection bar 190 may also be provided with an articulated section 190a (see Figures 9 and 10) which is of the same cross-sectional dimension as the connection bar 190, but which is connected to one end thereof by an articulated joint 190b to be pivotable about a vertical axis of the joint 190b relative to the connection bar 190. This articulated section is designed to enable the add-on seat 100 to be connected to a pushchair whose side frame may not lie parallel with the forward direction of travel of the pushchair. For example, modern three-wheeled pushchairs have two rear wheels and the side frames taper inwards towards a single front wheel. To enable the add-on seat 100 to be attached to such a pushchair, the rear pushchair clamp 172 can be connected to the rear of the side frame of the pushchair and to the rear of the connection bar 190, and the front pushchair clamp 171 can be connected to the front of the pushchair and to the articulated section 190a of the connection bar 190, so that the front pushchair clamp 171 and articulated section 190a would be inset from the rear pushchair clamp 172 due to the shape of the pushchair. The articulated section 190a of the connection bar 190 would thus be pivoted towards the pushchair at an angle to the connection bar 190. The add-on seat 100 would still be secured to the pushchair, but the connection bar 190, and therefore the folding support frame 120 and wheel mechanism 140, would be in alignment with the direction of travel of the pushchair, and not angled inwards parallel to the tapered side of the pushchair. It will be appreciated that the articulated section 190a could equally be connected to the rearmost end of the connection bar 190 instead of the front end if necessary, for example, if the side of

the pushchair to which is it so be attached, tapered inwardly towards the rear of the pushchair.

The two pushchair clamps 171, 172 are identical and so only one will be described in detail hereafter. The pushchair clamps 171, 172 comprise a first body 173 with a flexible metal band 174 ridgedly secured at one end 174a to one side of the first body 173, and the other free end 174b removably received in an aperture 173a in the opposite side of the first body 173. The aperture 173a houses a threaded screw 175 and the other free end 174b of the band 174 is received in the aperture 173a in contact with the threaded screw 175. The side of the band 174 adjacent the threaded screw 175 is provided with a series of parallel grooves 174c which cooperate with the thread of the threaded screw 175 such that when the threaded screw 175 is turned clockwise, the band 174 is pulled through the aperture 173a, reducing the size of the loop of band 174 between the rigidly secured one end 174a of the band 174 and the threaded screw 175. Conversely, when the threaded screw is turned anticlockwise, the other free end 174b of the band 174 is pushed through the aperture 173a, enlarging the size of the loop of band 174 between the rigidly secured one end 174a of the band 174 and the threaded screw 175, until the other end 174b of the band 174 is pushed free of the threaded screw 175. This function is similar to that of known 'jubilee clips'.

A second body 176 is secured to the first body 173 and can rotate relative to the first body 173 so that the second body 176 can be positioned in a specific orientation about a horizontal axis, regardless of at which angle the first body 173 is secured to a pushchair. The second body 176 includes a front opening to an internal cavity, and an upper and lower circular hole 176a, 176b in the upper and lower faces respectively leading to the internal cavity. A shaft 177 is disposed vertically within the internal cavity and includes side wings 177a which are received in corresponding slots 177b in the side walls of the internal cavity. A bolt 178 extends through a hole in the middle of the shaft 177 and through the rear wall of the second body portion 176, and is secured to the first body portion 173, providing the rotateable coupling described above. Upper and lower ends of the shaft 177 are provided with buttons 179a, 179b respectively, which are slidably received thereon and biased away from

each other by upper and lower springs 180a, 180b respectively. When assembled, the upper and lower buttons 179a, 179b extend through the upper and lower holes 176a, 176b and are prevented from being pushed all of the way through their respective hole by a lip 181a, 181b at the base of each button which abuts the rim of the hole 176a, 176b on the inside of the internal cavity.

The pushchair clamps 171, 172 further include a third body 182 comprising a box section with a rectangular aperture 183 therethrough, and upper and lower arms 184a, 184b extending perpendicularly from the upper and lower faces of the box section. Each arm 184a, 184b has a circular aperture 185a, 185b therethrough sized slightly larger than the diameter of the buttons 179a, 179b of the second body 176. The third body 182 can be releasably secured to the second body 176 by depressing the buttons 179a, 179b towards each other so that they sit within the apertures 176a, 176b, and then sliding the third body 182 to engage with the second body 176 with the upper and lower arms 184a, 184b above and below the upper and lower surfaces of the second body 176. When the upper and lower circular holes 176a, 176b in the second body 176 are aligned with the upper and lower circular apertures 185a, 185b in the arms 184a, 184b respectively, the buttons 179a, 179b can spring outwards under the biasing force of the springs 180a, 180b through both upper and lower holes 176a, 176b and upper and lower apertures 185a, 185b to secure the second and third bodies 176, 182 together.

The front and rear hinges 191, 192 are similar to each other and will be described in detail hereafter. Both hinges 191, 192 comprise a first part 193 and a second part 194, pivotally connected to one another by a hinge rod 195 and pivotable relative to one another from an operative position in which the first and second part 193, 194 lie adjacent to each other, to a storage position in which the first and second parts 193, 194 extend away from each other.

The first part 193 has a rectangular aperture 193a therethrough of the same cross sectional dimension as that of the base frame member 121 to allow, in use, the base frame member 121 to make a press fit in the aperture 193a to be secured thereto. The second part 194 has a rectangular aperture 194a therethrough of the same cross

sectional dimension as that of the connection bar 190 to allow, in use, the connection bar 190 to make a press fit in the aperture 194a to be secured thereto.

The first part 193 of the rear hinge 192 has a latch plate 198 which is received in a slot 196 in the bottom of the first part 193, and is spring biased out of the slot 196. The latch plate 198 is prevented from being pushed out of the slot 196 by a small retaining pin 198a which is located in a small vertical slot 193b in the side of the first part 193 of the hinge 192. The second part 194 has a flange 197 extending perpendicularly from the side of the second part 194 opposite the latch plate 198, and an upstanding lip 197a extends from the flange 197. As the hinge 192 is pivoted to the operative position, the lip 197a contacts the latch-plate 198 and pushes it upwards against the force of the spring bias, until the lip 197a passes the latch plate 198 and the latch plate 198 clicks into place between the lip 197a and the second part 194 of the hinge 192. The hinge 192 is thereby retained in the operative position until the latch plate 198 is lifted up and retracted into the slot 196 to release the lip 197a and allow the first and second parts 193, 194 to pivot freely. The latch plate 198 is attached to the wire 156 from the left hinge bracket 150 at a wire fastening point 198b on the top of the latch plate 198. The wire 156 extends from the wire fastening point, through the slot 196, out of the first part 193 of the rear hinge 192 and to the guide lug 151b, the wire guide 155 and ratchet plate 154 as described previously. Therefore, when the wire 156 is pulled by rotation of the ratchet plate 154 on rotation of the backrest arm 152, the latch plate 198 is pulled upwards in the direction of arrow 'B' into the slot.

The front hinge 191 does not have the latch plate 198 and lip 197a arrangement of the rear hinge 192. Instead, the front hinge only has a flange without an upstanding lip, and when the front hinge 191 is in the operative position, a lower face of the first part 193 sits on the flange 197 and is supported by it, but is not locked in that position. However, it is possible, in an alternative embodiment of the invention, for both front and rear hinges 191, 192 to include the latch 198 and lip 197a arrangement of the rear hinge 192.

The pushchair also includes a footrest 200, comprising a foot plate 201 and two support arms 202 pivotably attached to the base frame member 121. The footrest 200 can pivot from an operative position in which a seated child can rest their feet on the foot plate 201 (see Figures 8 – 11), to a folded position in which the footrest 200 is folded flat against the base frame member 121 (see Figures 12 – 19). The footrest 200 can be retained in the folded position by the wheel struts 153, 163 sandwiching it between them and the base frame member 121. The footrest also includes two wires or strings 203 extending from the footplate 201, or proximate the footplate 201, to the base frame member 121 to limit the maximum degree to which the footrest 200 can pivot away from the base frame member 121.

The add-on pushchair seat 100 of the invention is used as described hereafter. First, the two pushchair clamps 171, 172 are secured to the side frame of a pushchair. Once in place, the clamps 171, 172 are designed to remain secured to the pushchair at all times, even when the add-on seat 100 is not attached to the pushchair, and also when the pushchair itself is folded away for storage. The pushchair clamps 171, 172 are secured to the pushchair by unscrewing the threaded screw 175 so that the free end 174b of the steel band 174 is free of the first body 173. The steel band is then passed around an appropriate part of the pushchair frame and the free end 174b of the band 174 pushed into the aperture 173a so that the grooves 174c in the band 174 engage with the thread of the screw 175. The threaded screw 175 is then rotated clockwise to pull the band through the aperture 173a in the first body 173, which tightens the band 174 around the frame of the pushchair and grips the frame clamp 171, 172 thereto. An important feature of this system is that the pushchair clamps 171, 172 are attachable to pushchair frames of varying shapes and sizes, allowing the add-on seat 100 of the invention to be universally used with any commercially available pushchair. Although the add-on seat is adjustable to allow the pushchair clamps to be positioned at a range of heights on the side of the pushchair frame, it is important that each pushchair clamp 171, 172 is placed at the same height as the other.

Next, the second bodies 176 are rotated about their securing bolts 178 so that each one is positioned with the upper button 179a directly above the lower button 179b

and the axis of the shaft 177 lying vertically. The two third bodies 182 are secured to the connection bar 190 and/or the articulated section 190a of the connection bar 190 if necessary, with the connection bar 190 and articulated section 190a making a press fit in the rectangular apertures 183. The third bodies 182 can be forced to slide along the connection bar 190 and articulated section 190a against the resistance of the press fit, so that they are horizontally spaced to align with the first and second bodies 173, 176 on the pushchair. The third bodies 182 are then attached to the second bodies 176 as described above, by depressing the upper and lower buttons 179a, 179b, sliding the upper and lower arms 184a, 184b above and below the upper and lower surfaces of the second bodies 176, and releasing the buttons 179a, 179b so that they spring though the upper and lower holes 176a, 176b in the second bodies 176, and also through the upper and lower apertures 185a, 185b in the arms 184a, 184b respectively. The third bodies 182 are thereby secured to the first and second bodies 173, 176, and so the connection bar 190 and articulated section is secured to the pushchair frame. As described above, the hinges 191, 192 are also secured to the connection bar 190 and to the base frame member 121, thereby connecting the whole add-on seat 100 to the pushchair.

The add-on seat 100 must be adjusted so that it is positioned correctly with respect to the pushchair. First the whole device is folded into the operative position as shown in Figures 8 – 11, with hinges 191, 192 in the operative position so the base frame member 121 is positioned in a horizontal plane, the backrest frame member 122 folded away from the base frame member 121, and the wheel mechanism 140 fully folded away from the base frame member 121. Next, the sliding wheel strut 144 is telescopically adjusted within the main wheel strut 141 until the wheel 145 contacts the ground. It will be appreciated that if the pushchair clamps 171, 172 are positioned either higher or lower on the pushchair frame, the sliding wheel strut 144 will need to be either extended out of, or retracted into the main wheel strut 141 for the wheel 145 to contact the ground. Once the sliding wheel strut 144 is in the correct position, it is secured in that position by the securing bolts 147a extending though the main strut 141 and through apertures 147b in the sliding strut 144. Finally, the add-on seat 100 is positioned so that the wheel 145 is aligned with the rear wheels of the pushchair to which it is attached. This can be done by sliding

either the hinges 191, 192 along the connection bar 190 and/or articulated section 190a, or by sliding the third bodies 182 of the pushchair clamps 171, 172 along the connection bar 190. This allows the add-on seat 100 to be moved forwards or backwards with respect to the pushchair, until the correct position is obtained.

It is an important feature of the add-on seat 100 of the invention that it is constructed so that the rear wheel 145 and axle 146 can be positioned in line with and/or co-axial with the rear wheels of the pushchair. This enables the pushchair and attached add-on seat 100 to easily mount kerbs because a user can tilt the pushchair backwards towards themselves so that the pushchair and add-on seat 100 all pivot about a common axis – i.e. the line of contact on the ground of the pushchair wheels and the add-on seat 100 wheel 145. If the wheel 145 of the invention is not aligned with the rear wheels of the pushchair, the combined apparatus of the pushchair and add-on seat 100 would not tilt backwards (or forwards, to descend kerbs) easily.

It will be appreciated that if the height at which the add-on seat 100 is attached on the pushchair is changed, then the extension of the sliding wheel strut 144 within the main wheel strut 141, and the position of the base frame member 121 relative to the pushchair will have to be changed if the wheel 145 is to remain in line/co-axial with the rear wheels of the pushchair. More specifically, if the pushchair clamps 171, 172 are positioned higher up on the pushchair, the sliding wheel strut 144 will need to be extended out of the main wheel strut 141 further so that the wheel 145 contacts the ground, and consequently, the wheel 145 will be positioned further back relative to the pushchair. The base frame member 121 will then need to be moved forwards relative to the pushchair to re-align the wheel 145 with the wheels of the pushchair. Conversely, if the pushchair clamps 171, 172 are positioned lower down on the pushchair, the sliding wheel strut 144 will need to be retracted into the main wheel strut 141 for the wheel 145 to contact the ground, and consequently, the wheel 145 will be positioned further forwards relative to the pushchair. Therefore, the base frame member 121 will then need to be moved backwards relative to the pushchair to re-align the wheel 145 with the wheels of the pushchair.

Once in this operative position, the backrest frame member 122 is locked relative to the base frame 121 by the cam action of the locking lever 166 pulling the ratchet ridges of the locking mechanism into engagement as described above. The locking lever 166 is also held in the locked position by the internal latch engaging with the mushroom head 168a of the shaft 168 of the right hinge bracket 160, as described above. A child can then sit on the seat covering 123 with their back against the backrest covering 124 to be transported around on the add-on seat.

When the pushchair is to be used to carry only one child and the add-on seat 100 is not required, the add-on seat 100 can be folded from the operative position to a collapsed position (as shown in Figures 12 – 15) and then folded up to a storage position (as shown in Figures 16 - 19) as described hereafter.

The release button 169 is depressed (Figure 22B), releasing the internal latch within the locking lever 166 which allows the locking lever 166 to pivot about the pin 167 (Figure 22C) and free the mushroom head 168a of the shaft 168 from the locking aperture 166a. As described above, this cam action of the locking lever 166a allows the locking plate 164 to move away from the toothed cog portion 162a of the backrest arm 162 under the biasing force of the spring 165, and thereby disengage the ratchet ridges 162d on the toothed cog portion 162a from the ratchet ridges on the locking plate 164. This allows the two backrest arms 152, 162 and the two wheel strut arms 153, 163 to pivot about the hinge brackets 150, 160 respectively (Figure 22D), and therefore allows the associated backrest frame member 122 and wheel mechanism 140 to pivot about the hinge brackets 150, 160.

The wheel mechanism 140 and the backrest frame member 122 can then be folded into the collapsed position in which they both lie flat against the base frame member 121 (see Figures 12 – 15). Once in this collapsed position, the locking lever 166 can be pivoted back to the locked position (Figure 22E), pulling the locking plate 164 back towards the locking lever 166 and thereby engaging the ratchet ridges 162d on the toothed cog 162a with the ratchet ridges on the locking plate 164. This locks the backrest arms 152, 162 and associated backrest frame member 122, and the wheel strut arms 153, 163 and associated wheel mechanism 140, in the collapsed

position. As mentioned previously, the footrest 200 is folded up with the wheel mechanism 140 in the collapsed position and is held between the main and bracing wheel struts 141, 142 and the base frame member 121.

Once in the collapsed position as described above, the add-on seat 100 can be folded up against the side of the pushchair into the storage position (see Figures 16 – 19). By moving the backrest frame member 122 to the folded collapsed position as described above, the wire 156 is pulled though the wire guide 155 and though the guide lug 151b, which pulls the latch plate 198 into the slot 196 in the rear hinge 192 to release the lip 197a, and thereby release the second part 194, of the rear hinge 192 from the first part 193. The collapsed folding support frame 120 and wheel mechanism 140 can then be pivoted upwards about the front and rear hinges 191, 192 to the storage position to lie flat against the side of the pushchair in a substantially vertical plane.

The add-on seat can be retained in the storage position described above by using a strap (not shown) to hold it to the pushchair. In addition, the wheel 145 can be removed from the axle as described above, and attached to a 'false axle' 146b protruding from the side of the connection bar 190 (see Figures 16 and 18). The side of the wheel 145 thereby abuts the hinges 191, 192 and prevents them from pivoting back to the operative position.

If the pushchair is to be transported, for example, in the boot of a car, it will most probably be necessary to remove the main body of the add-on seat 100 from the pushchair to allow the pushchair to be folded. This is done by detaching the third bodies 182 from the second bodies 176 of the pushchair clamps 171, 172 as described above. The only part of the add-one seat 100 that then remains attached to the pushchair is the first and second bodies 173, 176 of the pushchair clamps 171, 172 which are intended to be small enough to not hinder the folding mechanism of modern pushchairs.

Other unillustrated embodiments of the present invention may include additional features or accessories. For example, a rain cover could be provided, attachable to

the auxiliary seat device 1/100, to partially or entirely surround a child seated on the device to shelter the child from wind/rain/sleet/snow. The rain cover could incorporate a supporting frame structure attachable to the device. Alternatively, the device could be provided with a sunshade or parasol.

The add-on seat 1/100 would preferably include a seat belt or a 3- or 5- point safety harness to secure around the child's waist and/or shoulders when seated, to prevent the child from falling off the seat and being injured.

The wheel struts 141, 142, 144 and folding frame members 121, 122 are intended to be made from light-weight steel tubing for optimum strength and rigidity, whilst also remaining light enough to carry easily. This also has the benefit of minimising the weight of the accessory exerted on the side of the pushchair so that when it is in the storage position, it does not cause the pushchair to tip over. It is also envisaged that the seat cover 123 and the backrest cover 124 are easily removable for cleaning, and replaceable when worn or to change the aesthetic appearance of the invention.

In addition to the functional accessories mentioned above, the auxiliary seat device 1 may also include an accessory intended to amuse the child whilst the child is in the seat. This could include a toy steering wheel or dashboard arrangement, or a hobby-horse style attachment positionable in front of the child.

Claims

1. An auxiliary seat attachable to a pushchair to enable it to accommodate two children seated side-by-side, the seat comprising a frame having a backrest and a base and a wheel in contact with the ground in an operative position to support a child seated on the base with their back against the backrest, wherein the frame is configured so that the backrest and the base fold substantially flat when the auxiliary seat is not in use and wherein the auxiliary seat, including the base and backrest, can pivot relative to the pushchair to be folded against the side thereof in a storage position with the wheel off the ground, once the base and backrest of the seat have been folded substantially flat.

2. An auxiliary seat according to claim 1 wherein the base and the backrest are pivotable relative to one another such that they are collapsible from the erect operative position to the collapsed folded position by means of a scissor-like mechanism.

3. An auxiliary seat according to claim 2 wherein the scissor-like mechanism includes at least one sliding joint to enable the base and backrest to be erected and collapsed.

4. An auxiliary seat according to claim 3 wherein the backrest is attached to one end of a first support strut and the base is attached to one end of a second support strut, and in which said first and second support struts are pivotable relative to each other and the end of the first support strut remote from the backrest is connected to the at least one sliding joint.

5. An auxiliary seat according to any preceding claim comprising a locking mechanism to retain the seat in the erect operative position.

6. An auxiliary seat according to claim 3 or claim 4 comprising a locking mechanism to retain the seat in the erect operative position and which locks the at least one sliding joint in place.

7. An auxiliary seat according to claim 6 wherein the locking mechanism comprises a latch extending from the at least one sliding joint, operable to lock onto a fixed shaft on the frame.

8. An auxiliary seat according to claim 7 wherein the latch is located at one end of an arm, the arm rotatably mounted to the at least one sliding joint and operable to move from a first locked position in which the latch snags on the fixed shaft, to a second unlocked position in which the latch is clear of the fixed shaft to allow movement of the at least one sliding joint.

9. An auxiliary seat according to claim 1 wherein the backrest and the base are pivotably connected to one another by hinge joints to be pivotable from the erect operative position to the collapsed storage position in which the backrest lies flat against the base.

10. An auxiliary seat according to claim 9 wherein the base comprises a base frame and a seat coving attached thereto.

11. An auxiliary seat according to claim 9 or claim 10 wherein the backrest comprises a backrest frame with a backrest covering attached thereto.

12. An auxiliary seat according to any of claims 9 – 11 wherein the wheel is secured to the frame by a pivotable wheel mechanism which can pivot from an extended operative position to a folded storage position in which the wheel mechanism lies substantially flat against the frame.

13. An auxiliary seat according to claim 12 wherein the wheel mechanism includes a telescopic strut to allow the distance of the wheel from the frame to be telescopically adjusted independently of the pivoting of the wheel mechanism between the operative position and the storage position.

14. An auxiliary seat according to claim 13 wherein the telescopic strut includes a locking mechanism to lock the strut in the desired position.

15. An auxiliary seat according to any of claims 12 to 14 wherein, in the storage position, the wheel mechanism lies flat against the base on the opposite side thereto to the backrest.

16. An auxiliary seat according to any of claims 12 to 15 wherein the wheel mechanism is connected to the frame at said hinge joints.

17. An auxiliary seat according to claim 16 wherein the backrest and the wheel mechanism are mechanically connected to one another to be moveable together between their respective operative position and their folded storage position.

18. An auxiliary seat according to claim 16 wherein at least one hinge joint includes a locking means to lock the backrest in the operative position or in the storage position.

19. An auxiliary seat according to claim 17 wherein at least one hinge joint includes a locking means to lock the backrest and the mechanically associated wheel mechanism in the operative position or in the storage position.

20. An auxiliary seat according to claim 18 or claim 19 wherein the locking means includes a pair of ratchet plates operated by a cam lever to move from a locked position in which the ratchets of each plate engage with each other, to an unlocked position in which the ratchets of each plate are out of engagement with each other to allow the backrest and/or wheel mechanism to pivot about the hinge joints.

21. An auxiliary seat according to any preceding claim wherein the frame is attached to the pushchair by a first clamping means extending from one side of the frame.

22. An auxiliary seat according to claim 21 wherein the first clamping means is attached to a first support strut which is hingedly attached to the frame.

23. An auxiliary seat according to claim 21 or claim 22 wherein the frame is further attached to the pushchair by a second clamping means extending from said one side of the frame.

24. An auxiliary seat according to claim 23 wherein the second clamping means is hingedly attached to the frame.

25. An auxiliary seat according to claim 23 or claim 24 wherein the first and second clamping means are attachable to a supplementary pushchair frame bar which includes further attachment means operable to fix the bar and seat attached thereto, to the conventional pushchair.

26. An auxiliary seat according to claim 23 or claim 24 wherein the first and second clamping means are attachable to a replacement pushchair frame bar which can be fitted in place of an existing section of frame of a conventional pushchair to fix the seat thereto.

27. An auxiliary seat according to any of claims 1 – 20 including at least one clamp to secure the add-on seat to a frame of a pushchair.

28. An auxiliary seat according to claim 27 wherein the at least one clamp is attached to a connection bar, and the frame is attached to the connection bar by at least one hinge connector to be pivotable relative to the connection bar.

29. An auxiliary seat according to claim 28 wherein the at least one clamp and/or the at least one hinge connector are slidable relative to the connection bar to allow the position of the frame to be adjusted relative to the pushchair.

30. An auxiliary seat according to claim 28 or 29 wherein the frame, at least one hinge connector and connection bar are releasably attached to the at least one clamp.

31. An auxiliary seat according to any of claims 28 to 30 wherein the at least one hinge connector includes a locking mechanism to lock the auxiliary seat in the operative position.

32. An auxiliary seat according to any preceding claim which is releasably attachable to said pushchair.

33. An auxiliary seat according to any preceding claim wherein the at least one wheel is detachable.

34. An auxiliary seat according to any preceding claim including locking mechanism to secure the auxiliary seat in the storage position.

35. An auxiliary seat according to any preceding claim wherein the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, the at least one wheel is in alignment with a rear wheel of the pushchair.

36. An auxiliary seat according to any preceding claim wherein the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, an axle of the at least one wheel is coaxial with an axle of a rear wheel of the pushchair.

37. An auxiliary seat according to any preceding claim attachable to a pushchair to enable two children to be seated side-by-side and facing the same direction.

38. An auxiliary seat according to any preceding claim wherein the seat includes a safety harness to retain a child in position thereon.

39. An auxiliary seat according to any preceding claim including a rain cover attached to the seat to at least partially surround a child sitting on the seat.

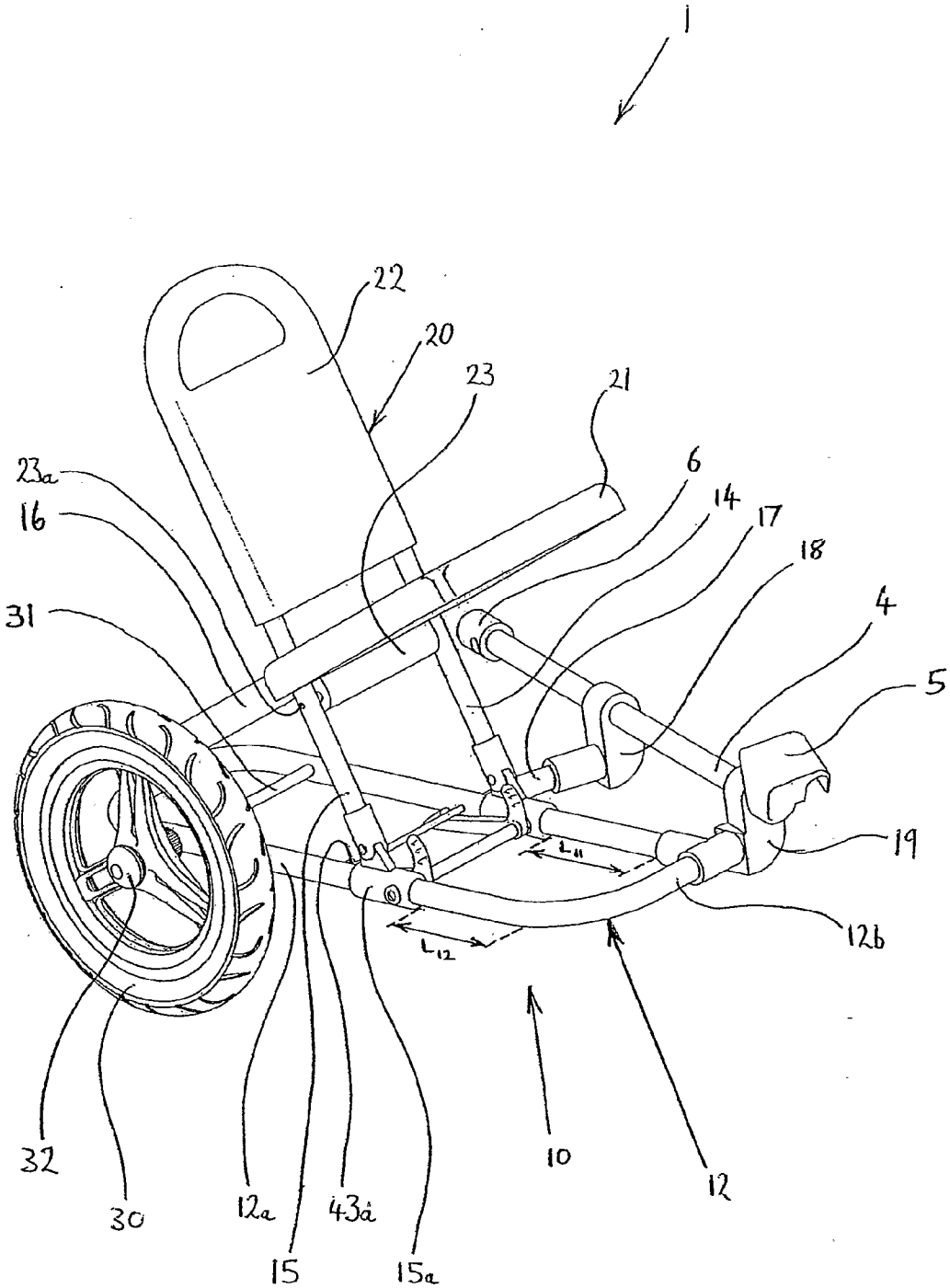
40. An auxiliary seat according to any preceding claim including a sunshade attached to the seat to shade a child sitting on the seat.

41. An auxiliary seat according to any preceding claim including a toy steering wheel positionable in front of a child sitting on the seat.

42. An auxiliary seat according to any preceding claim including a toy hobby-horse style attachment positionable in front of a child sitting on the seat.

43. A pushchair incorporating an auxiliary seat according to any preceding claim.

44. An auxiliary seat substantially as hereinbefore described with reference to the accompanying drawings.


1
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20
23
21
23a
16
6
14
17
18
31
4
5
19
L_{11}
L_{12}
12b
32
30
12a
43a
15
15a
10
12

FIGURE 1

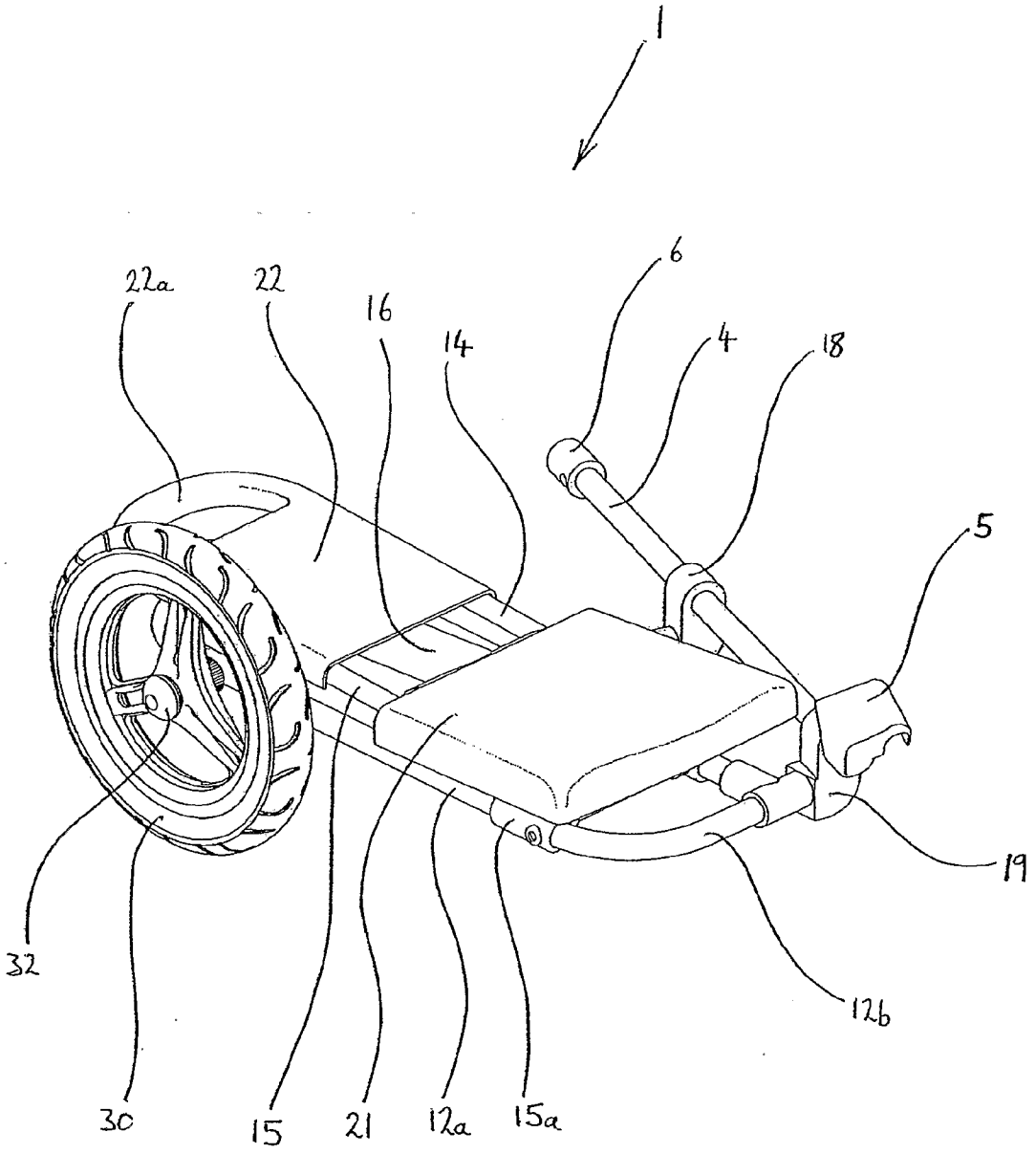


FIGURE 2.

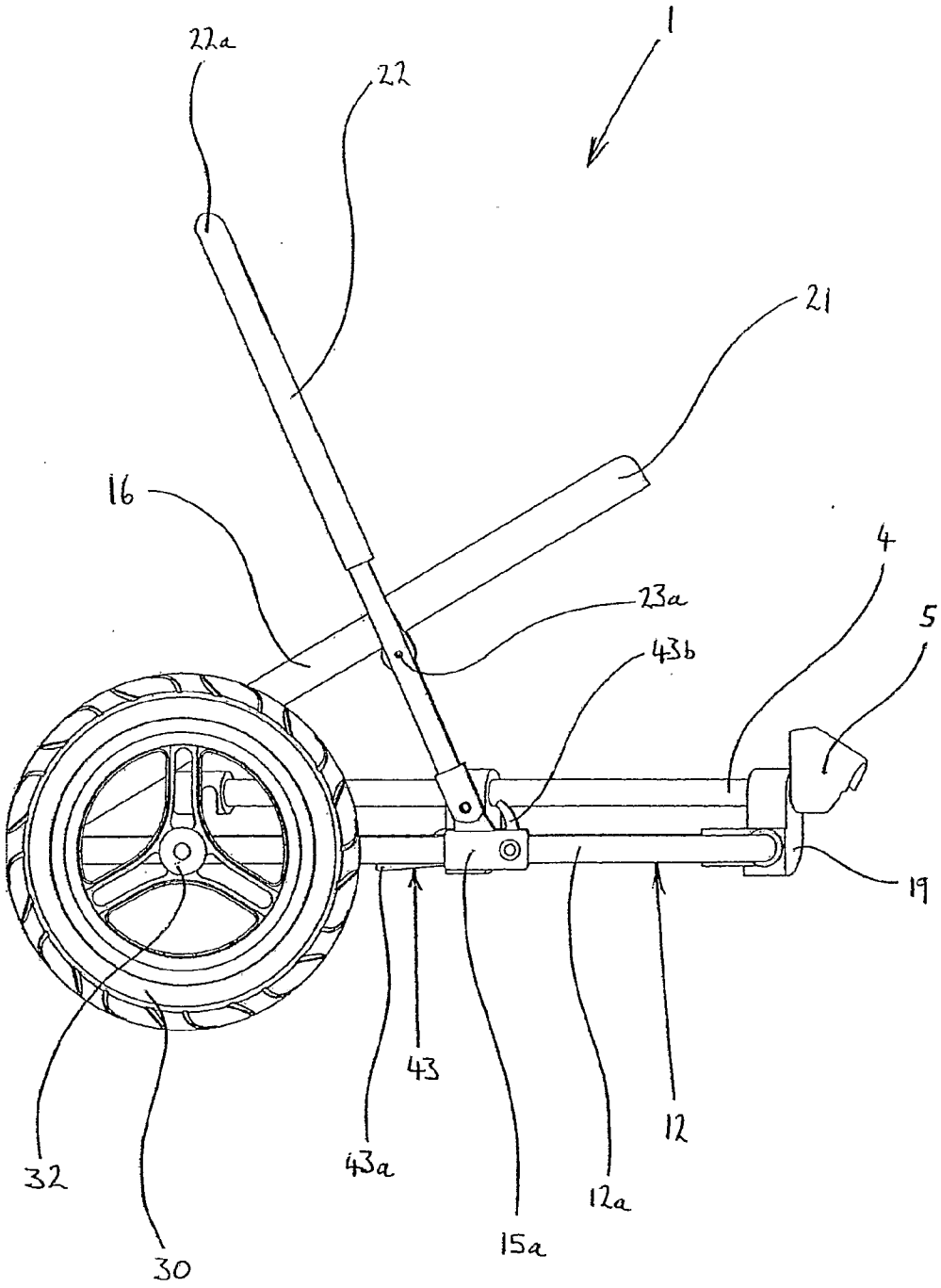


FIGURE 3

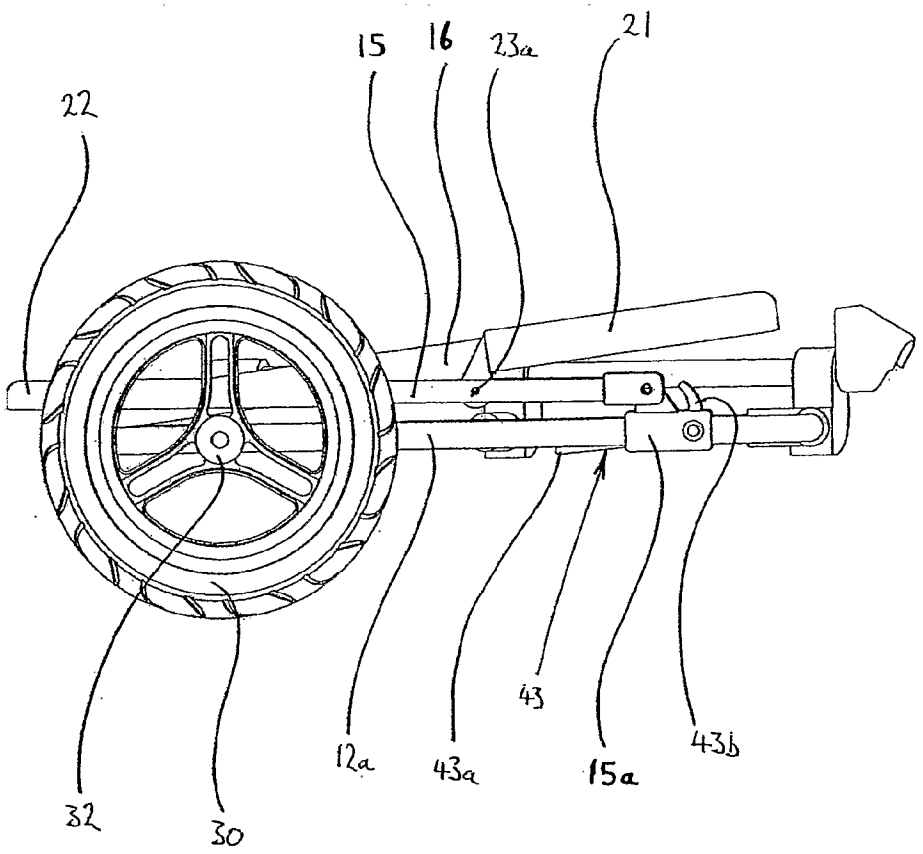
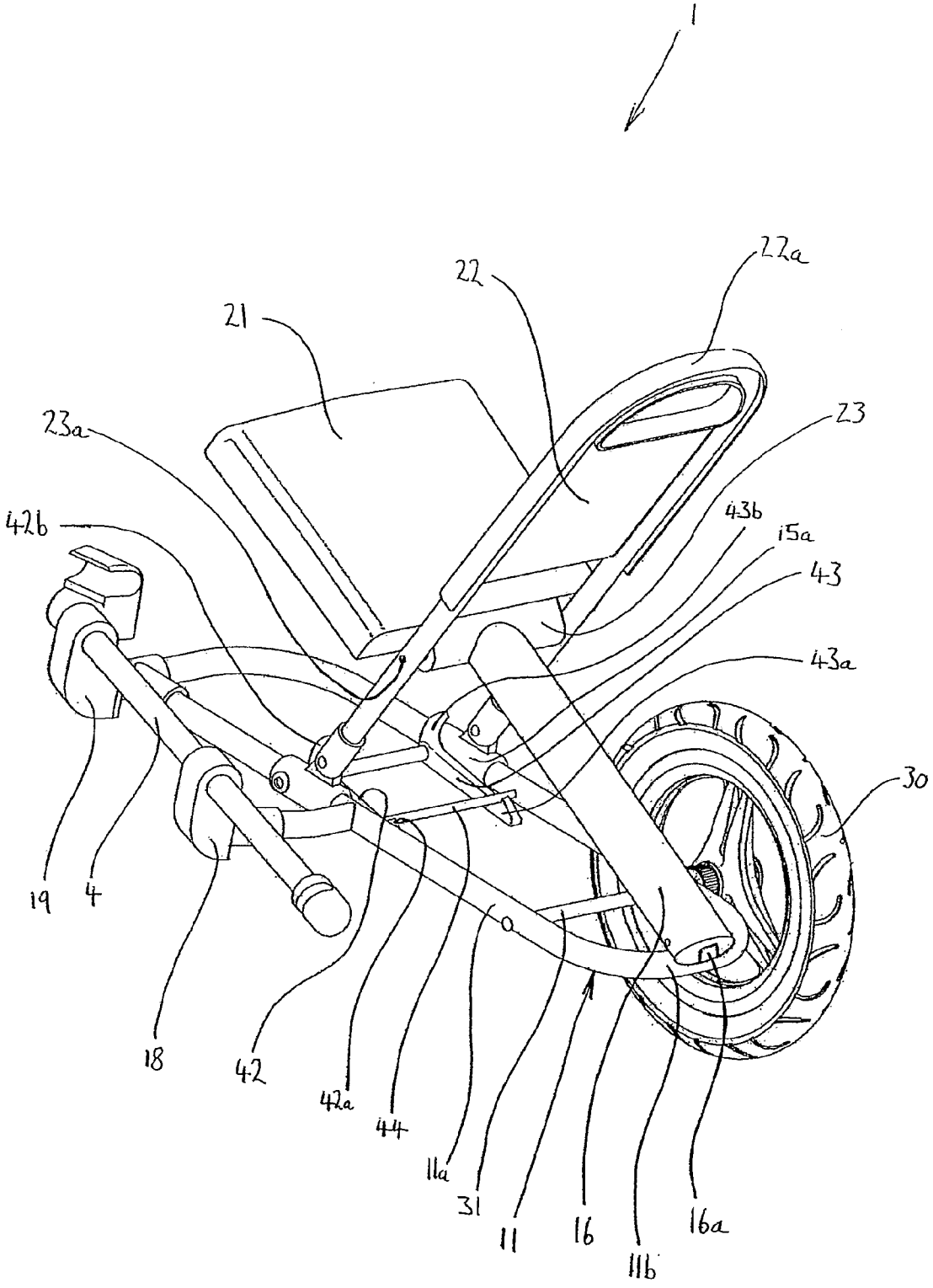


FIGURE 4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22a
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42b
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42a
44
11a
31
11
16
16a
11b

FIGURE 5

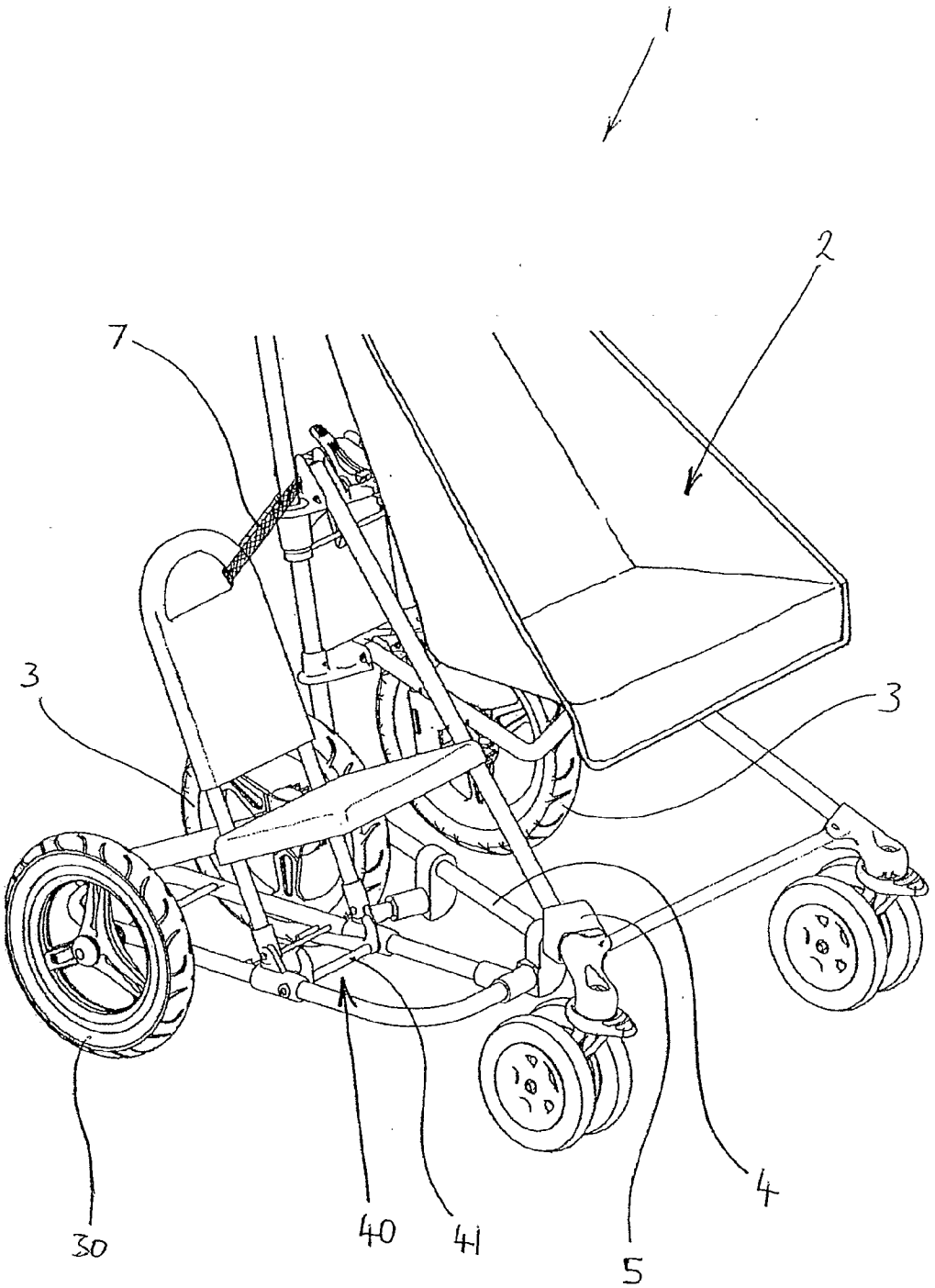


FIGURE 6.

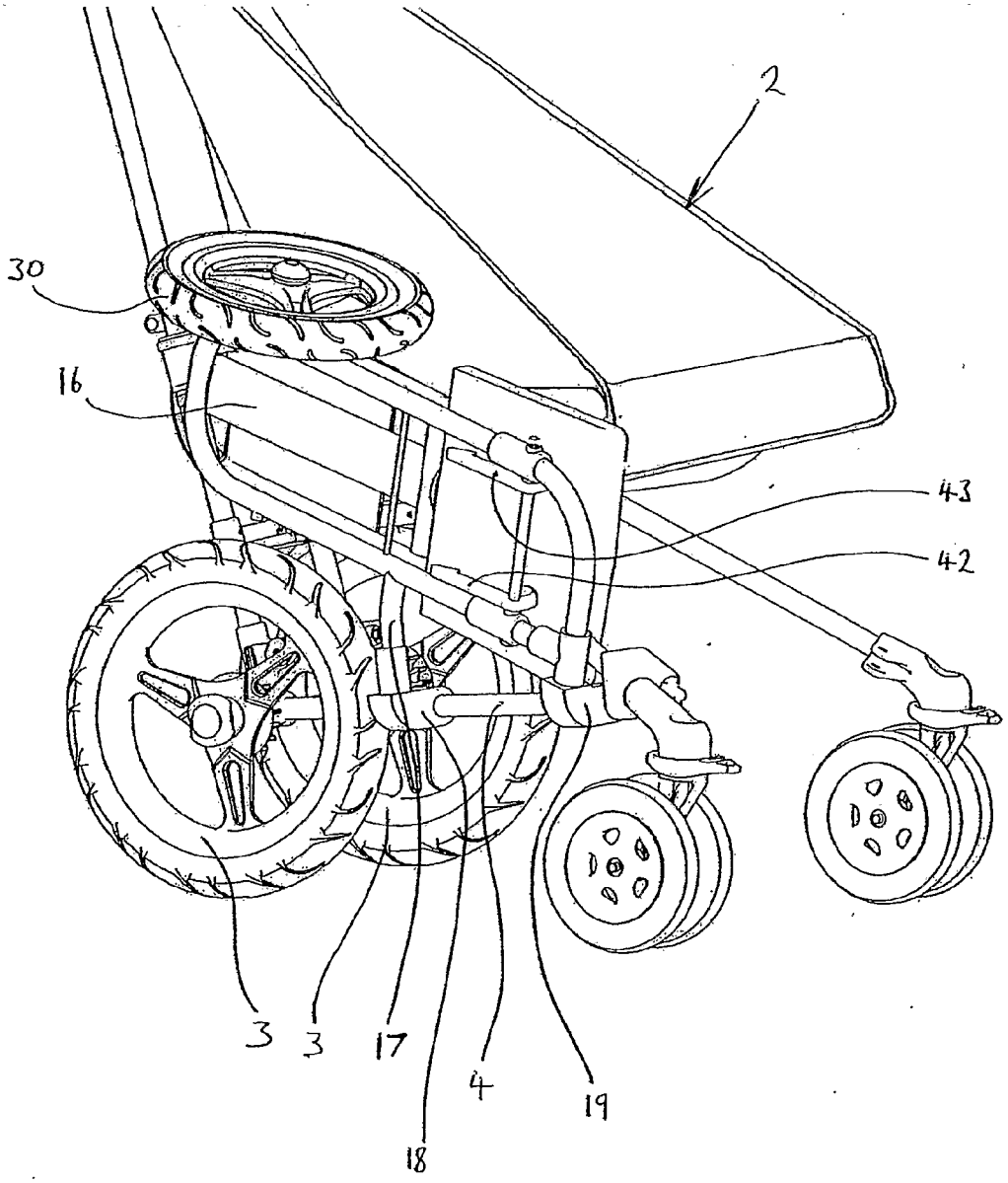
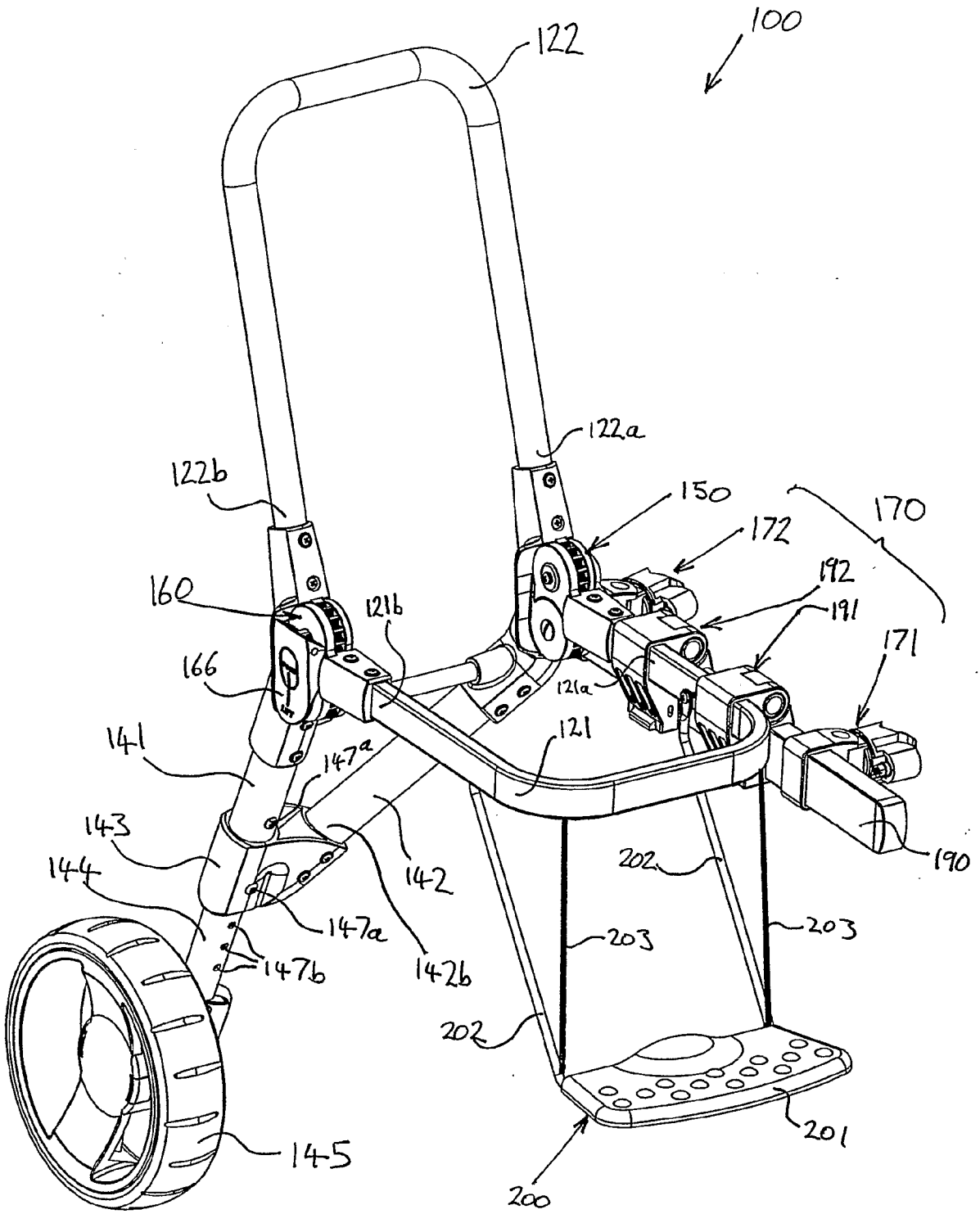


FIGURE 7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121b
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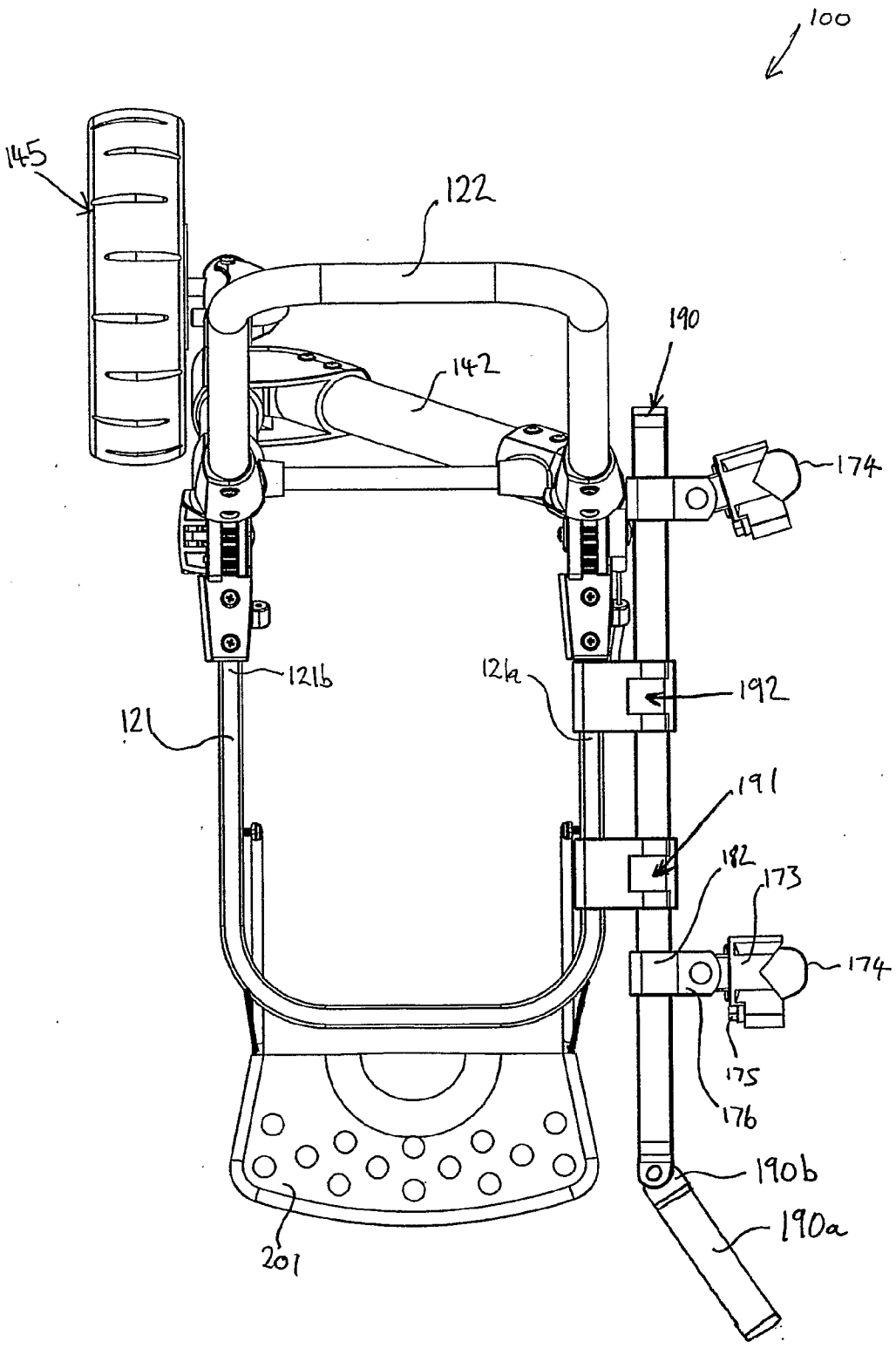
147b
142b
202
203
203
202
201
145
200
190

FIGURE 8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121b
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176
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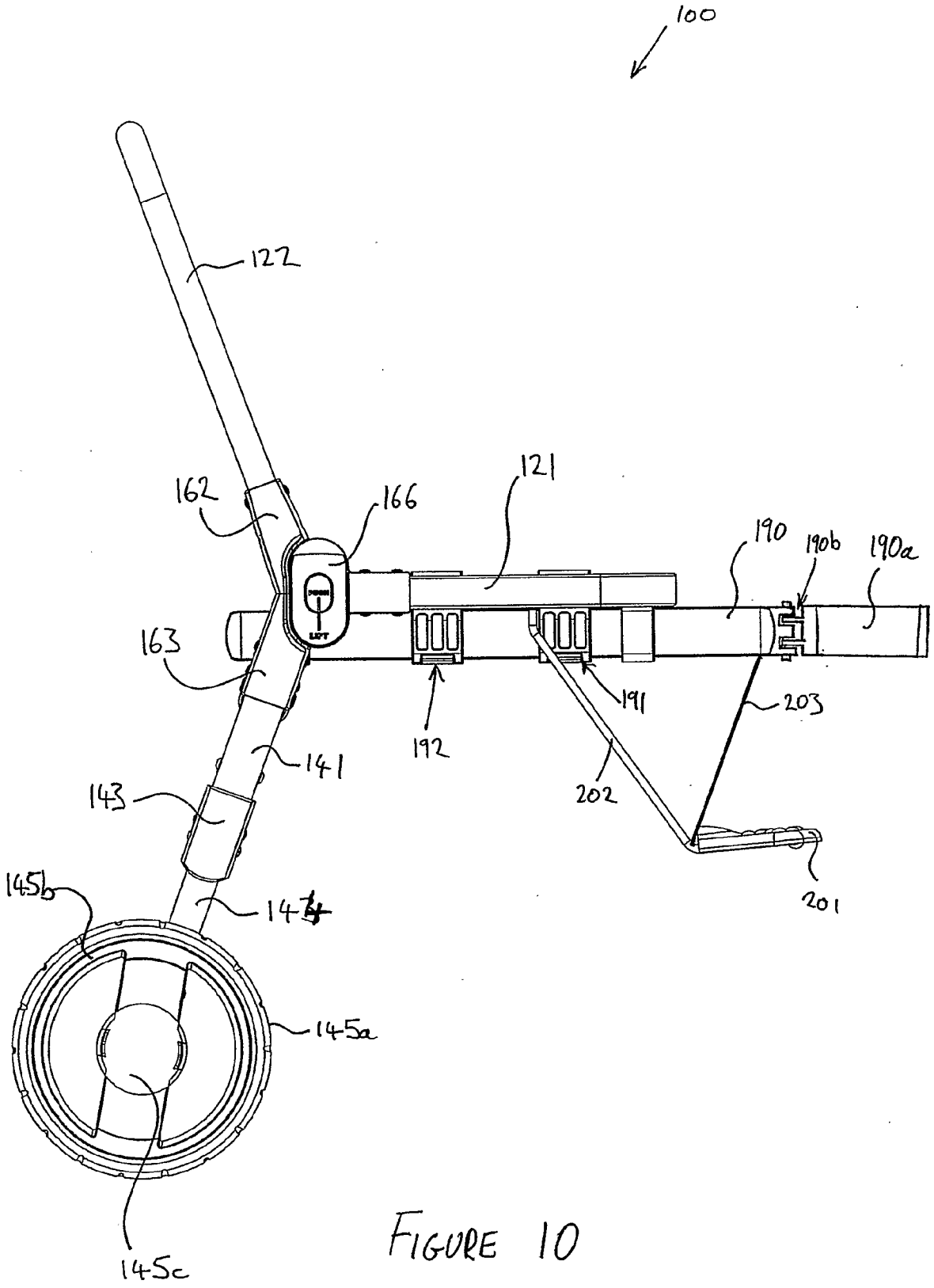
201

FIGURE 9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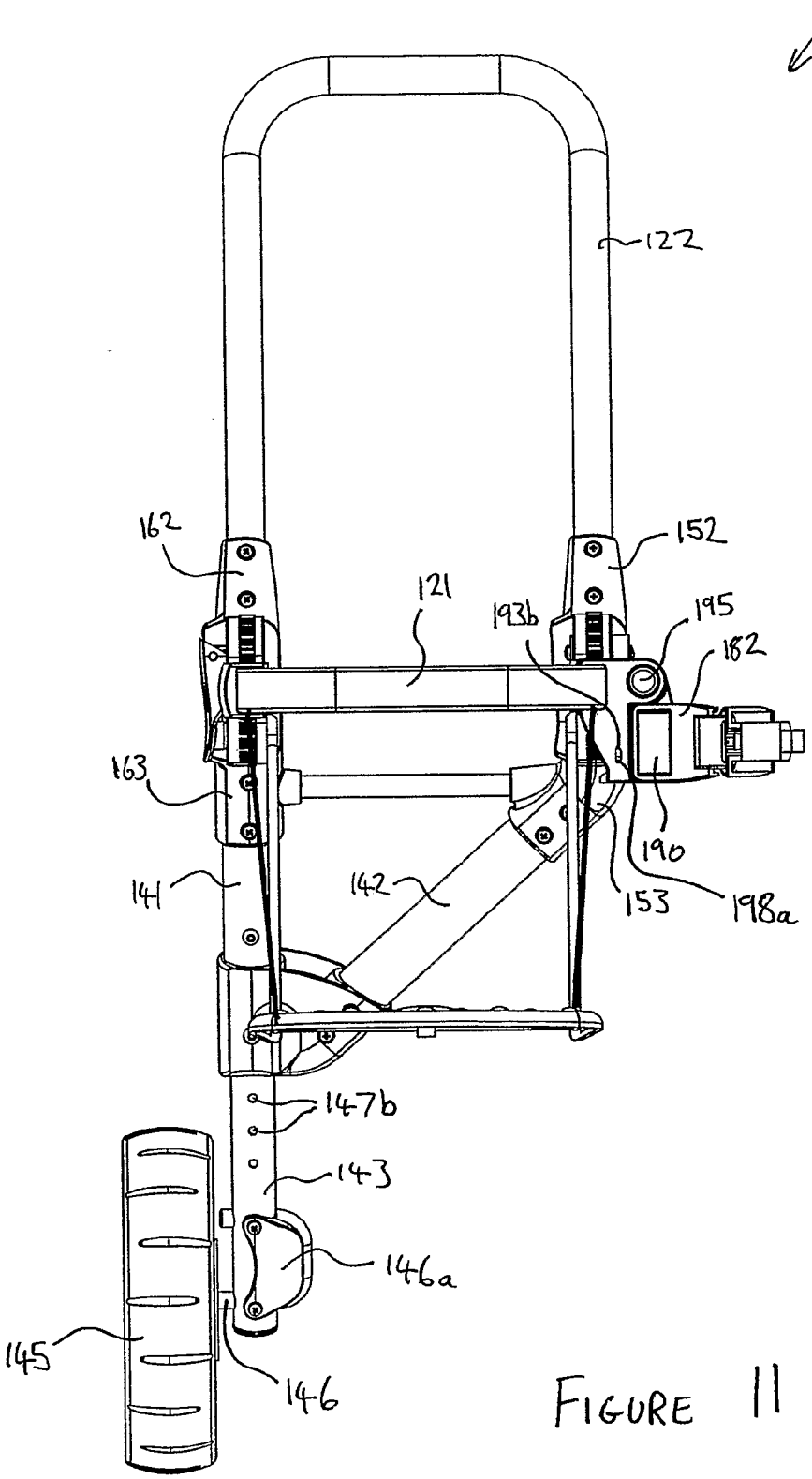
145a
145c
201

FIGURE 10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122
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193b
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182
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198a
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146a
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146

FIGURE 11

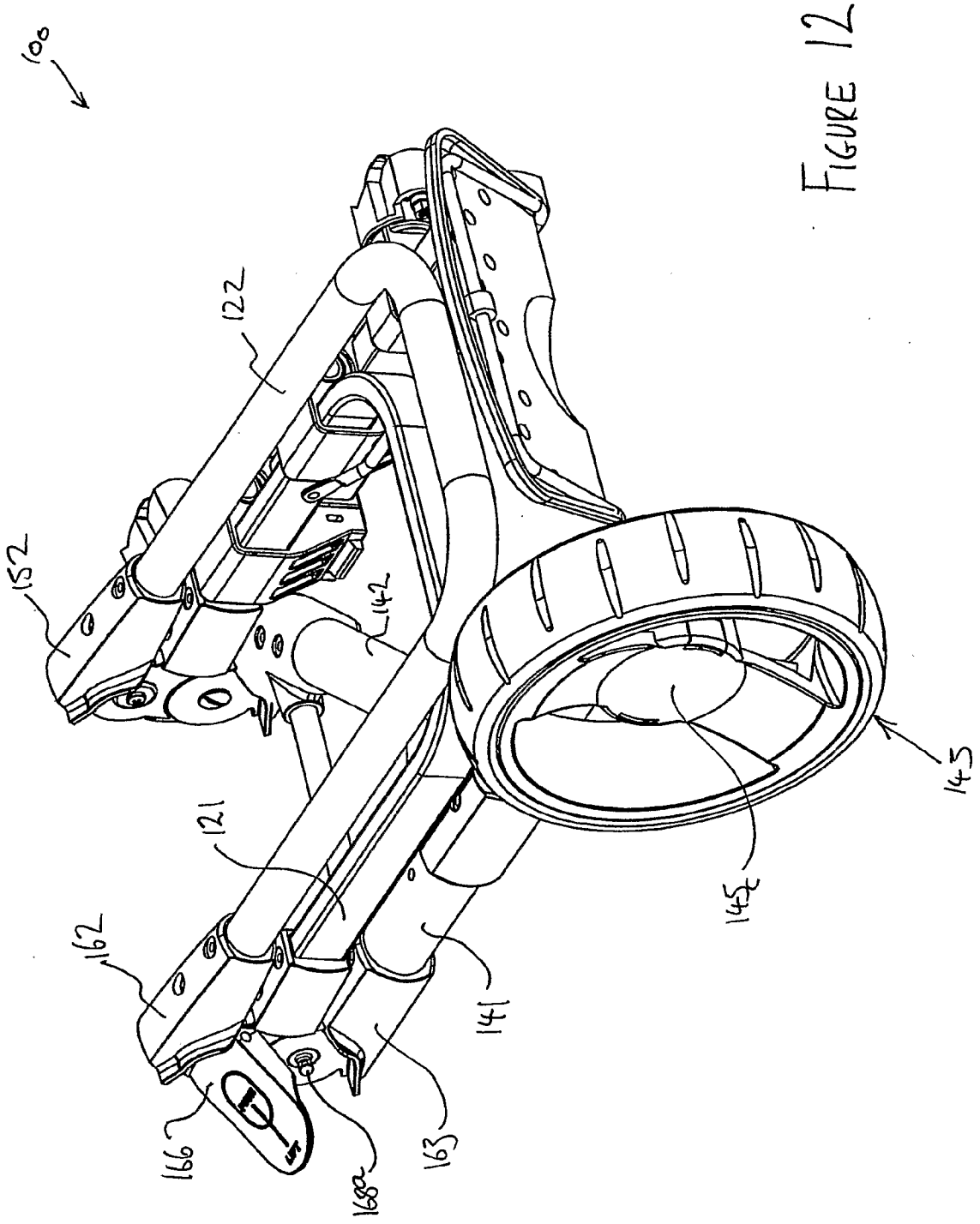


FIGURE 12

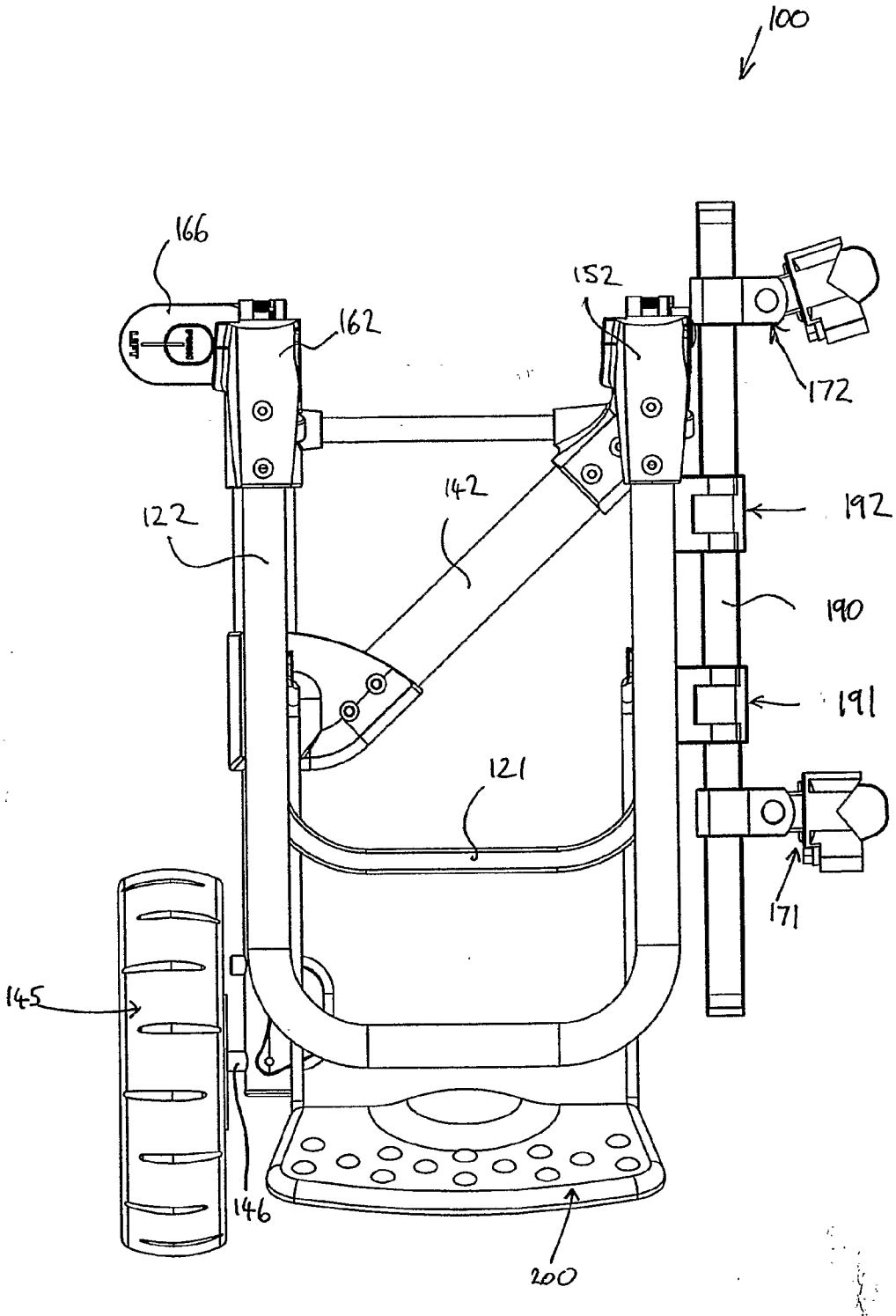


FIGURE 13

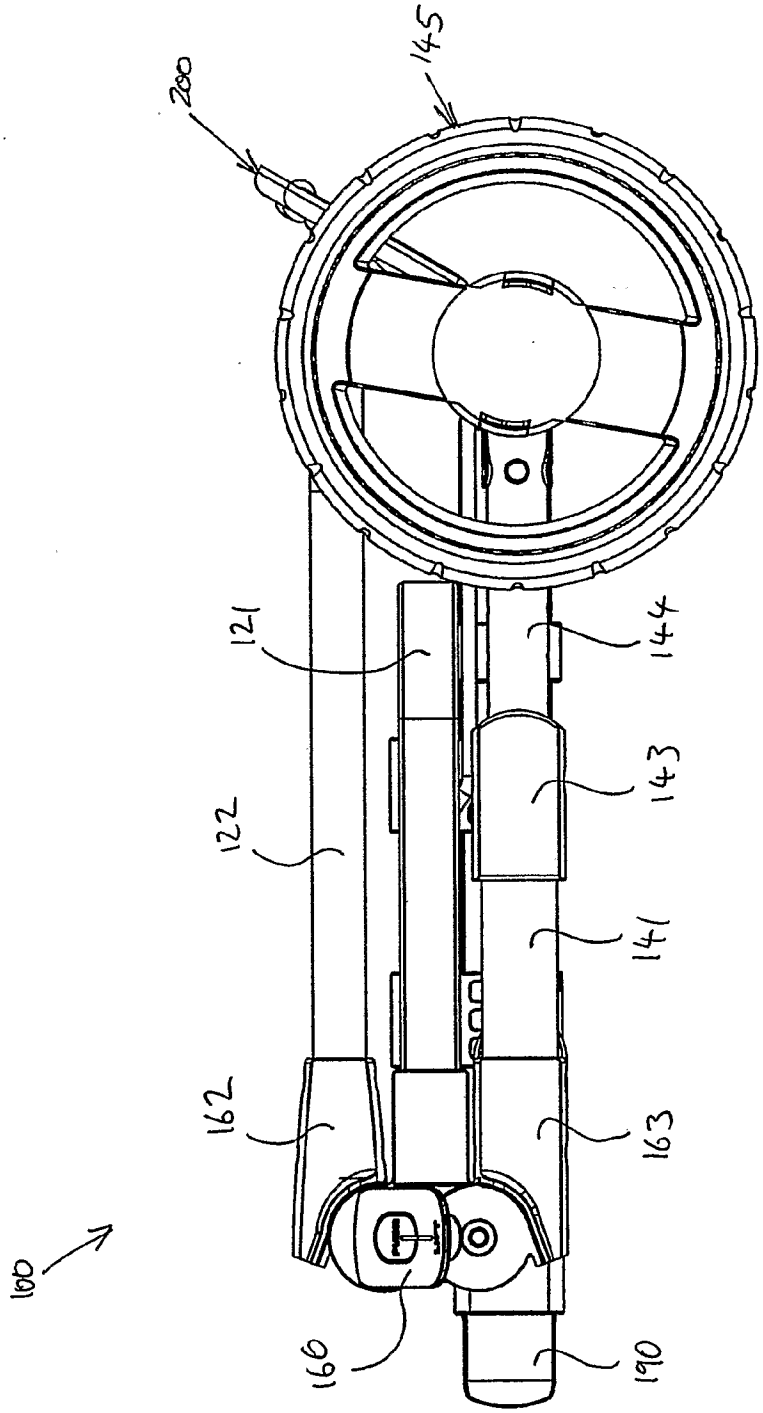


FIGURE 14

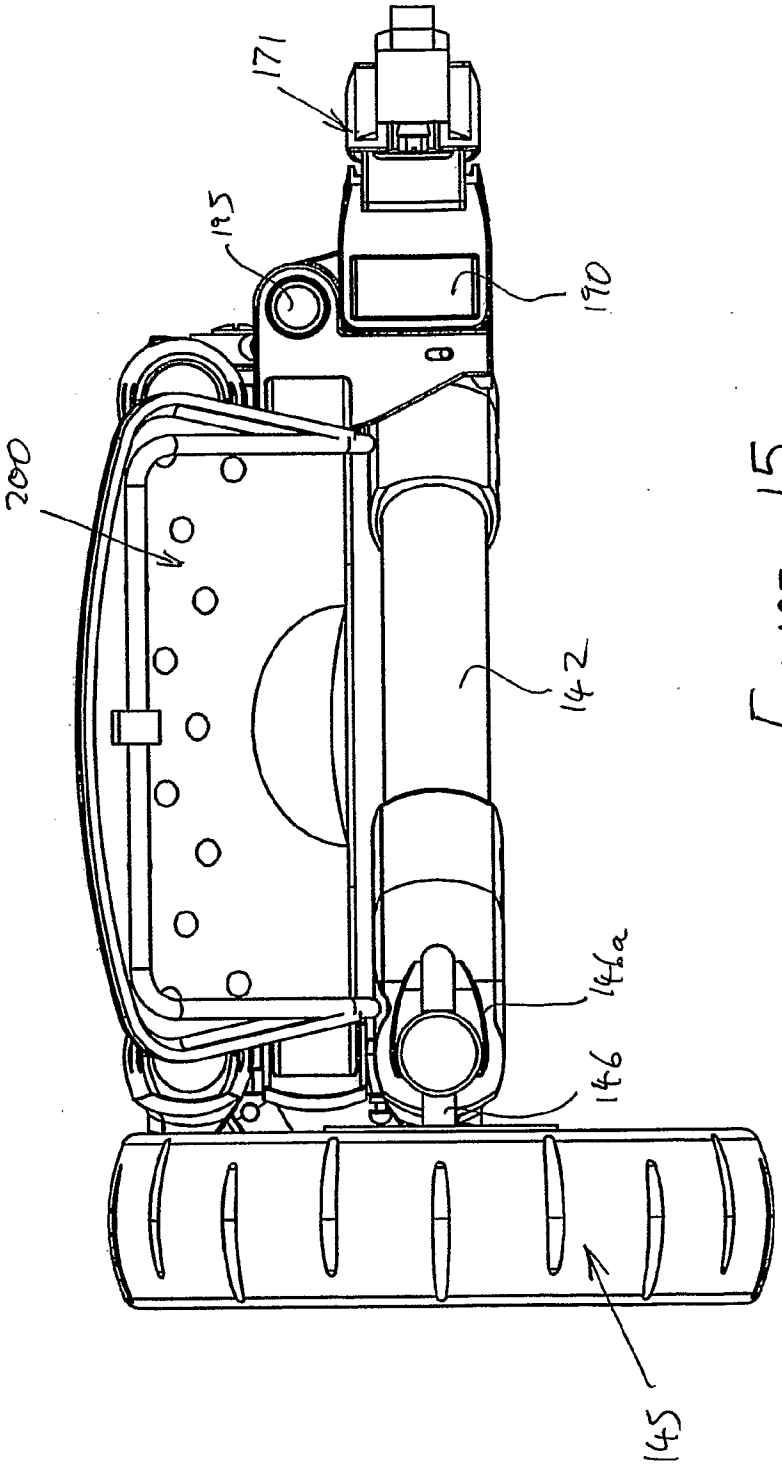
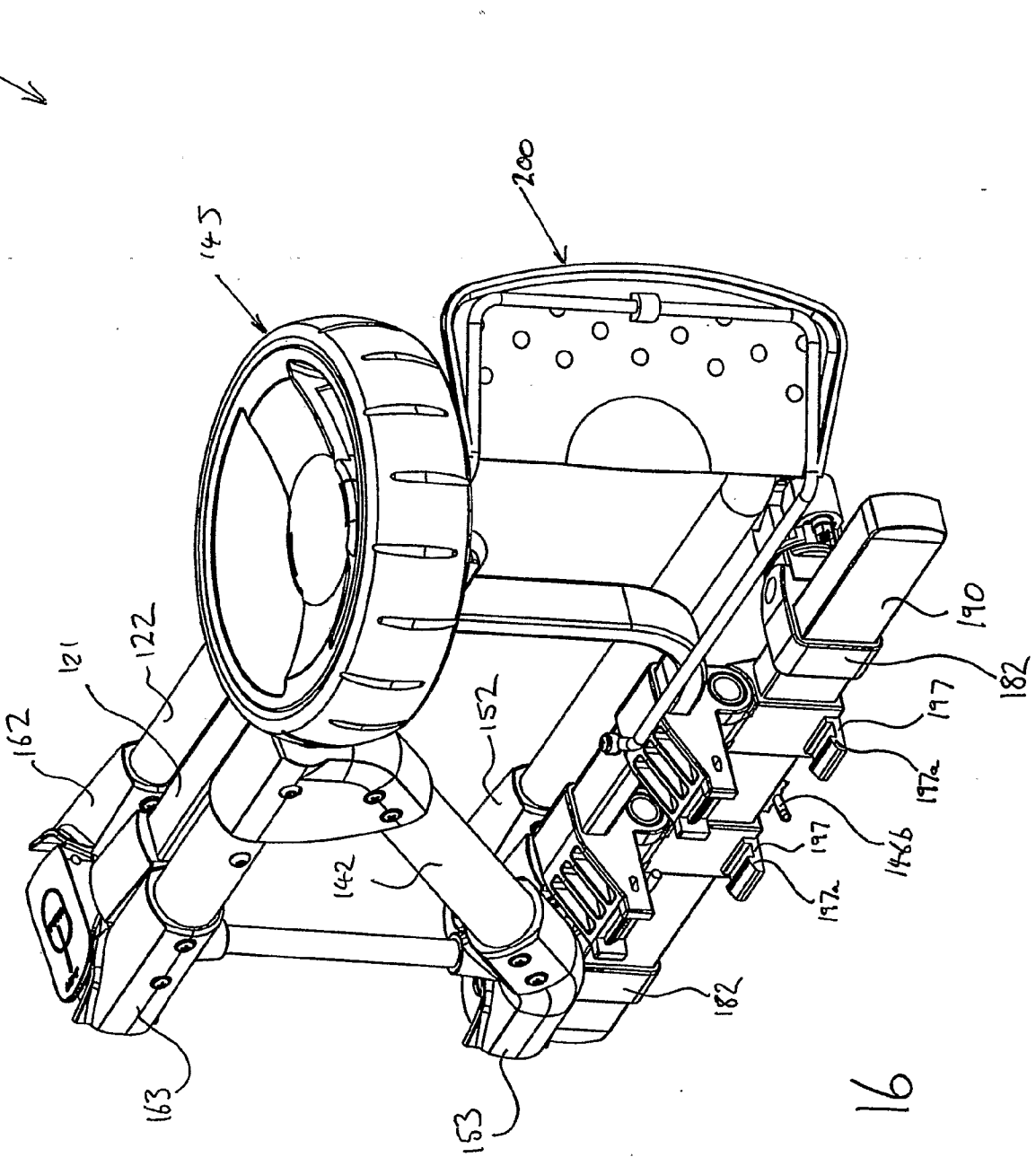


FIGURE 15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197a
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197a
182
152
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121
122
163
153

FIGURE 16

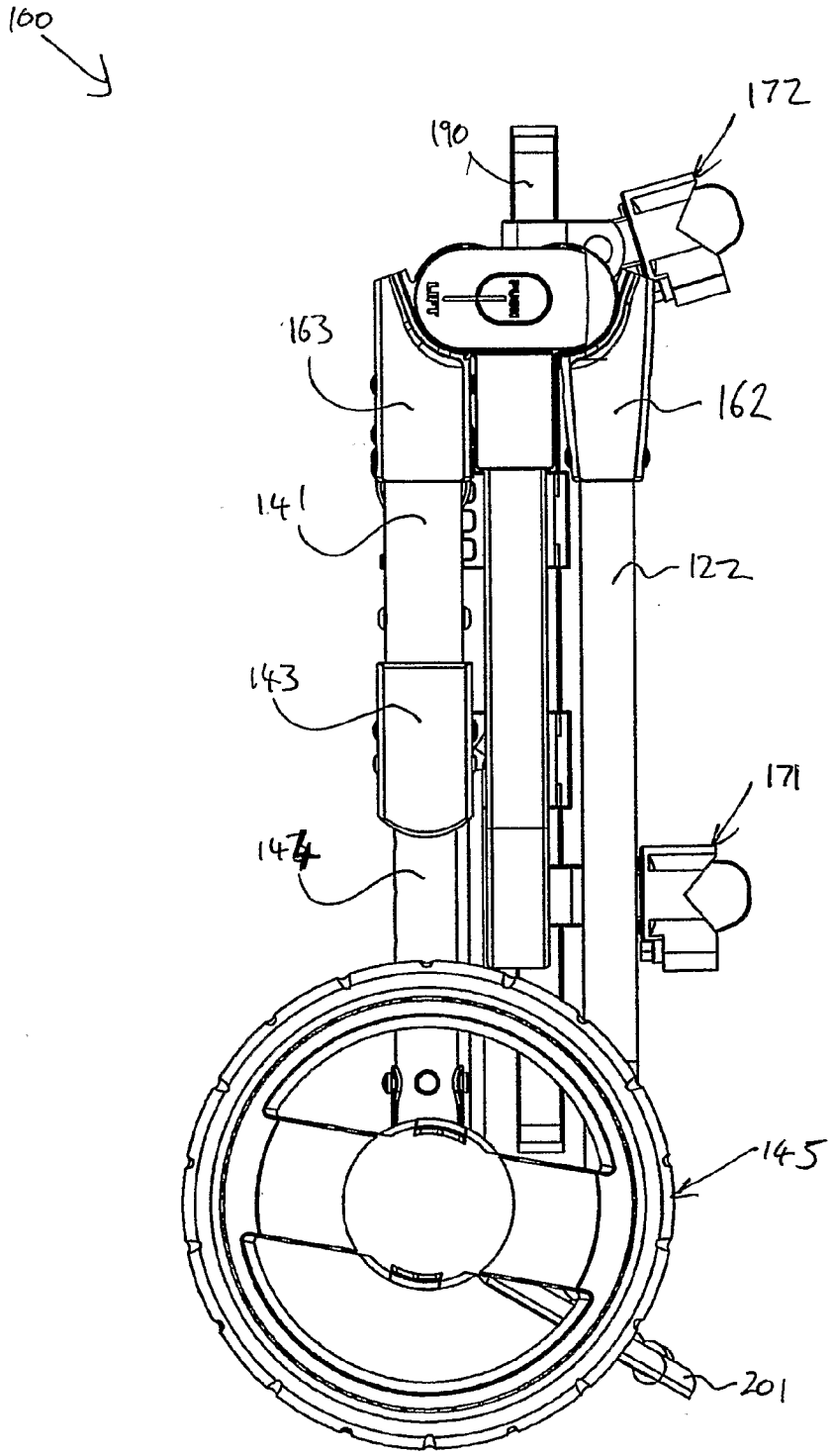
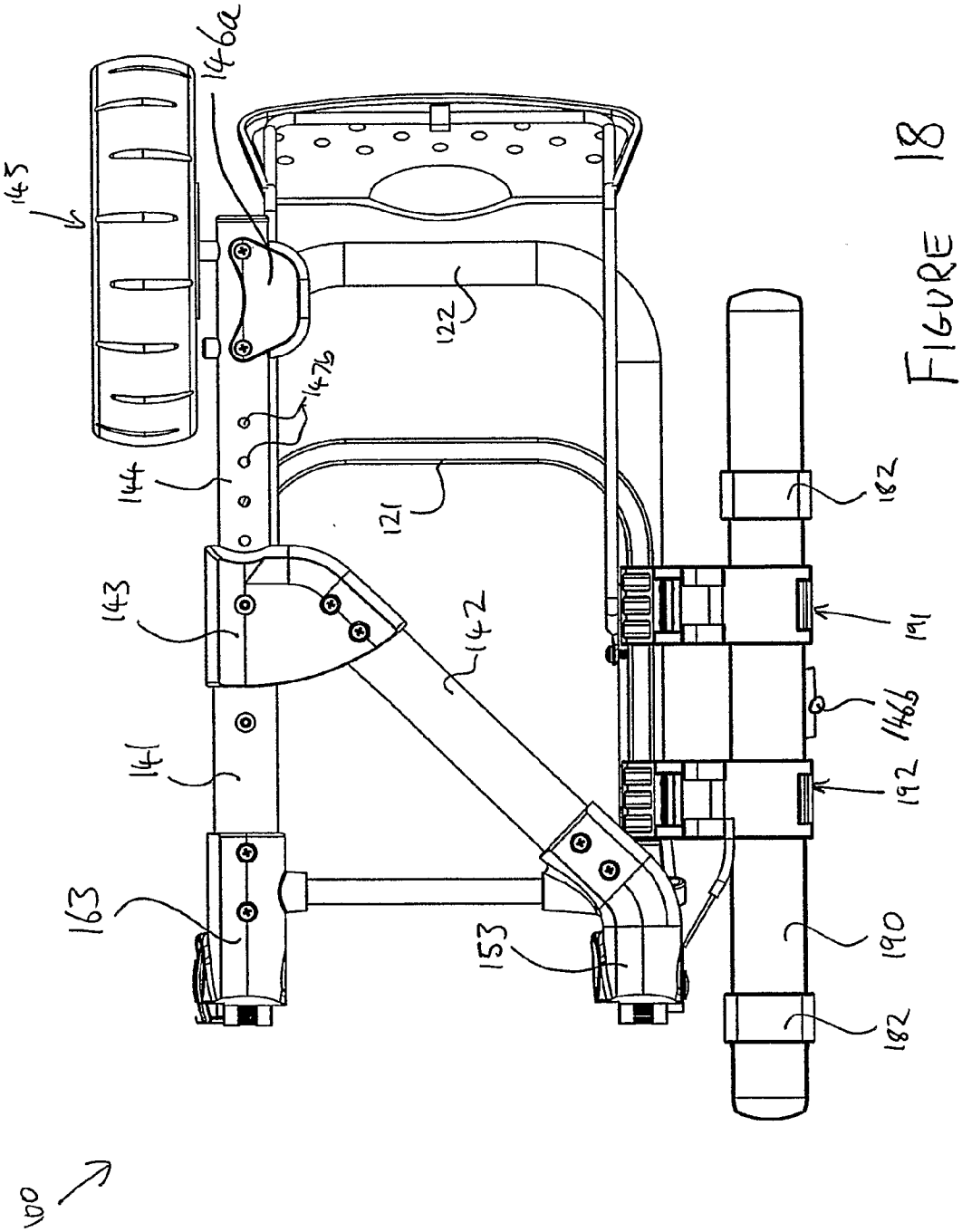


FIGURE 17


146a
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182
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100

FIGURE 18

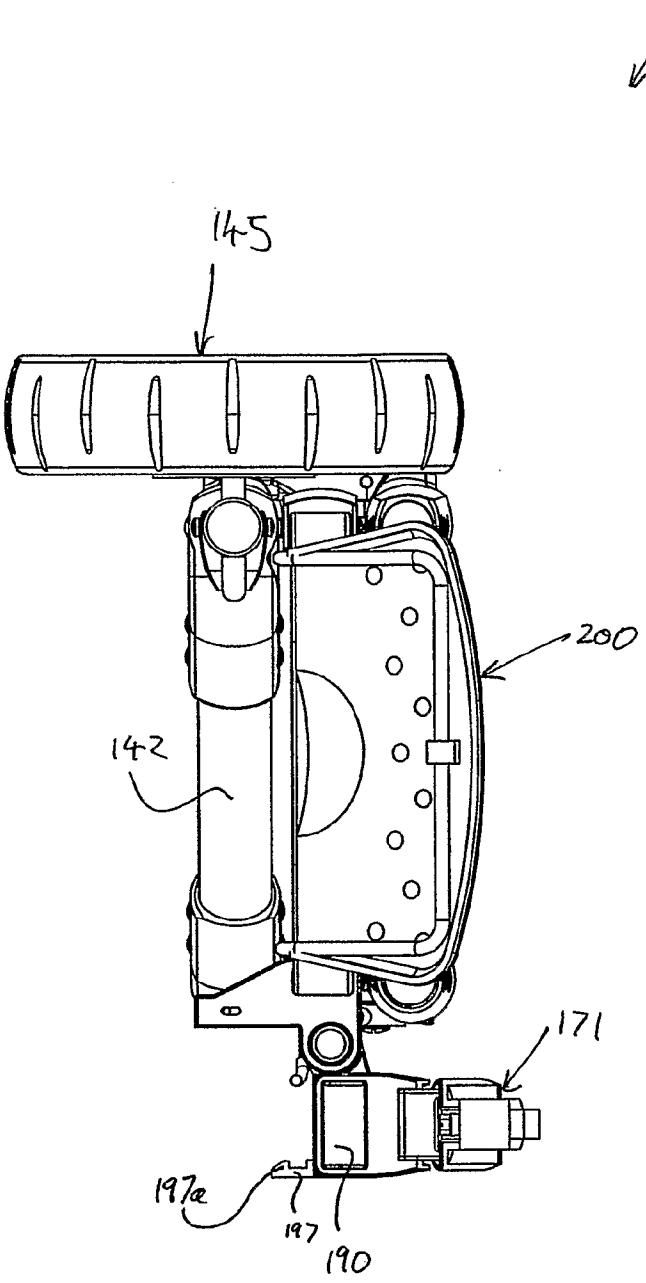

FIGURE 19

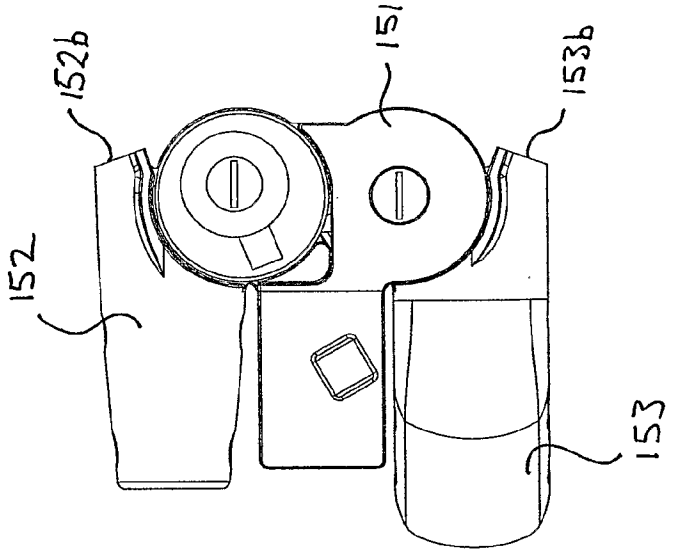

FIGURE 20B

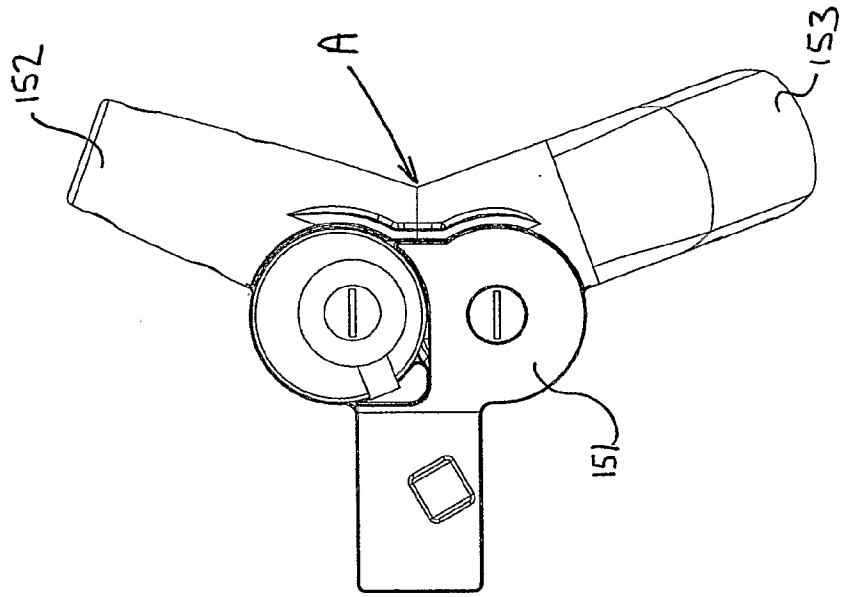

FIGURE 20A

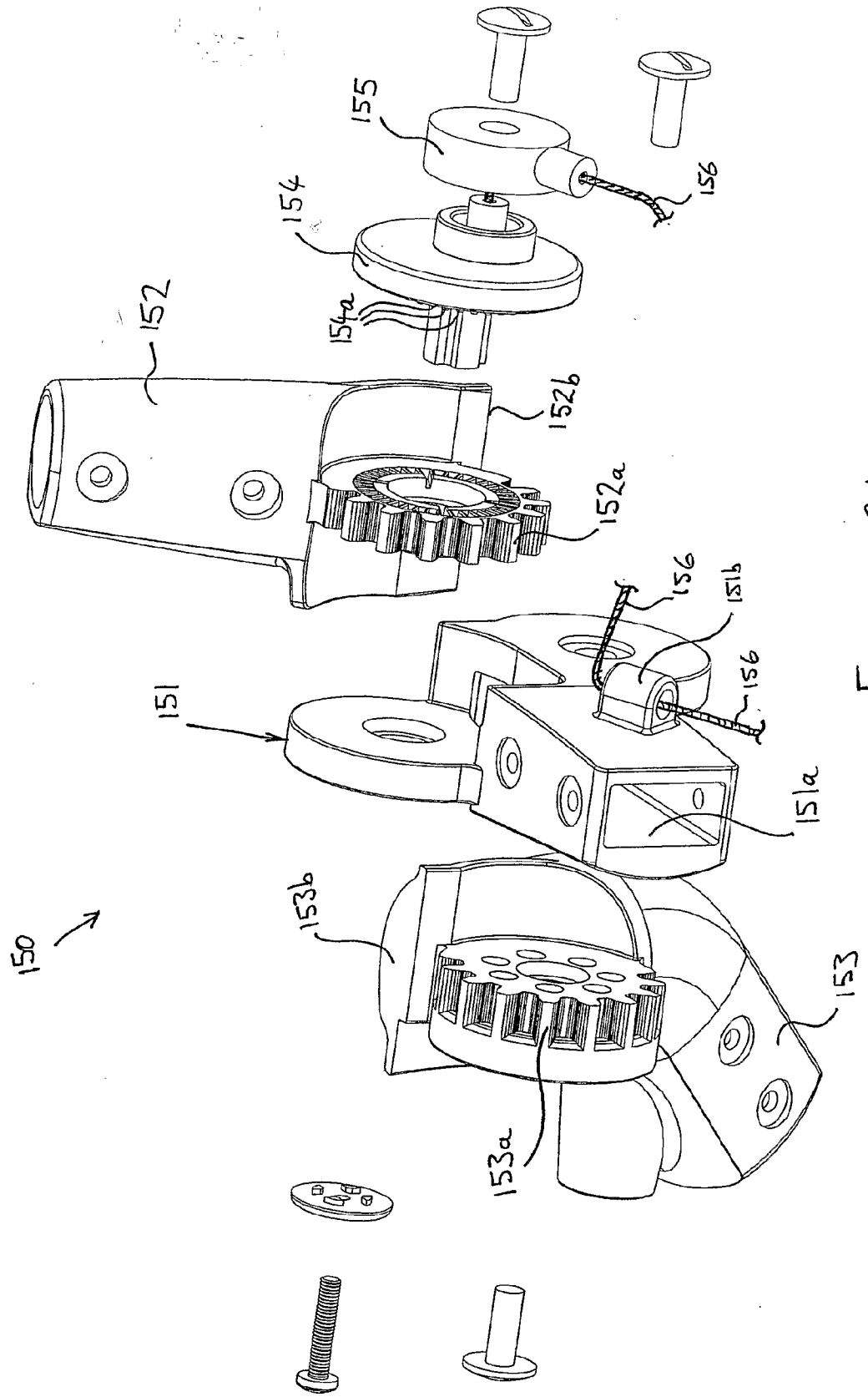
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FIGURE 21

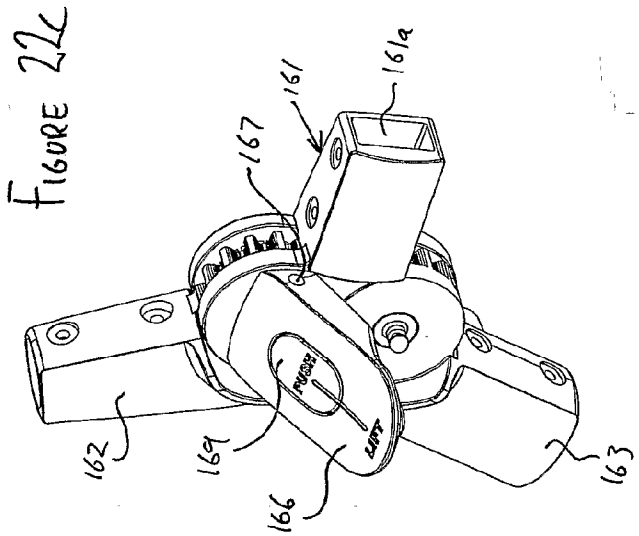


FIGURE 22C

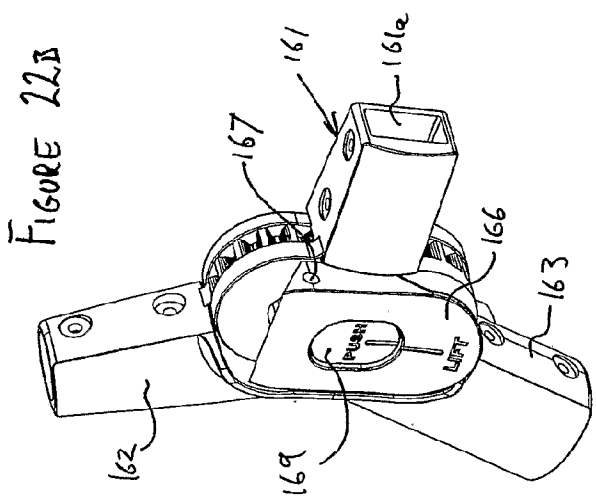


FIGURE 22B

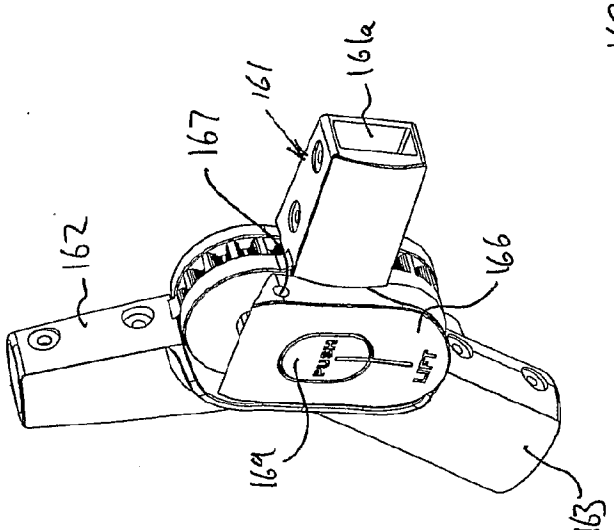


FIGURE 22A

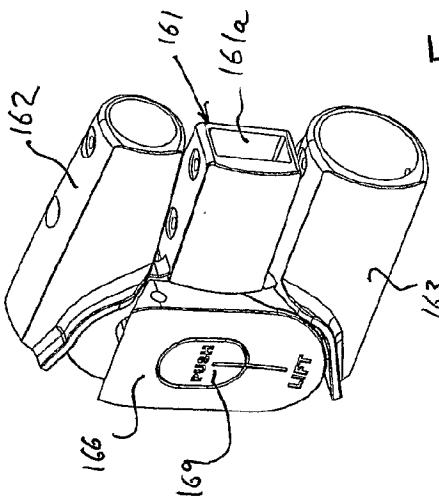


FIGURE 22E

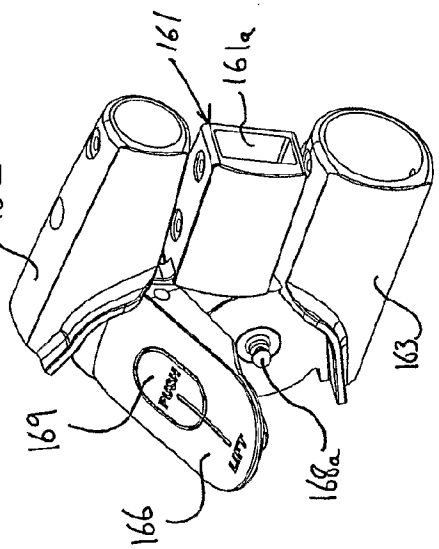
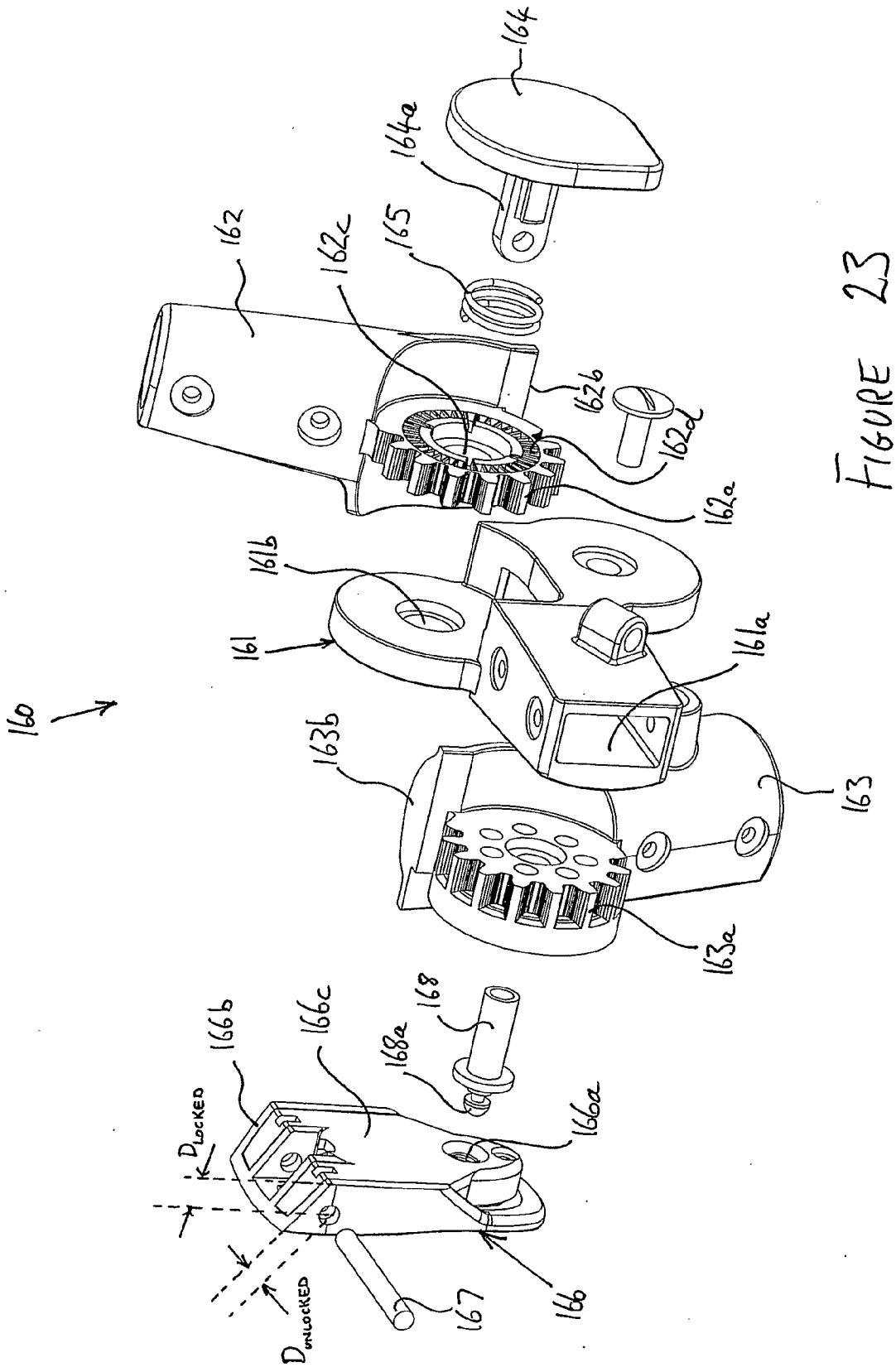


FIGURE 22D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168a
D_{LOCKED}
$D_{UNLOCKED}$

FIGURE 23

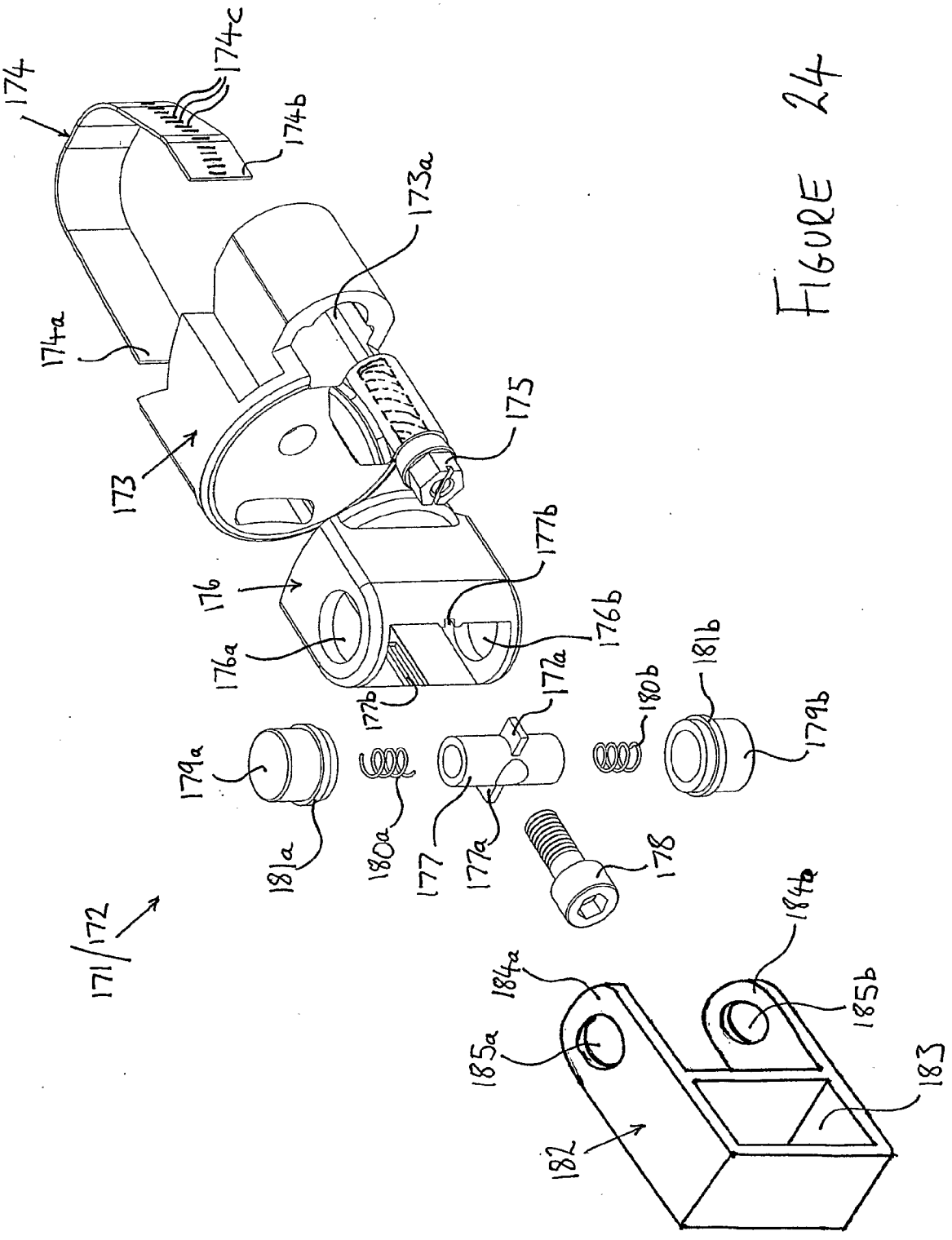
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FIGURE 24

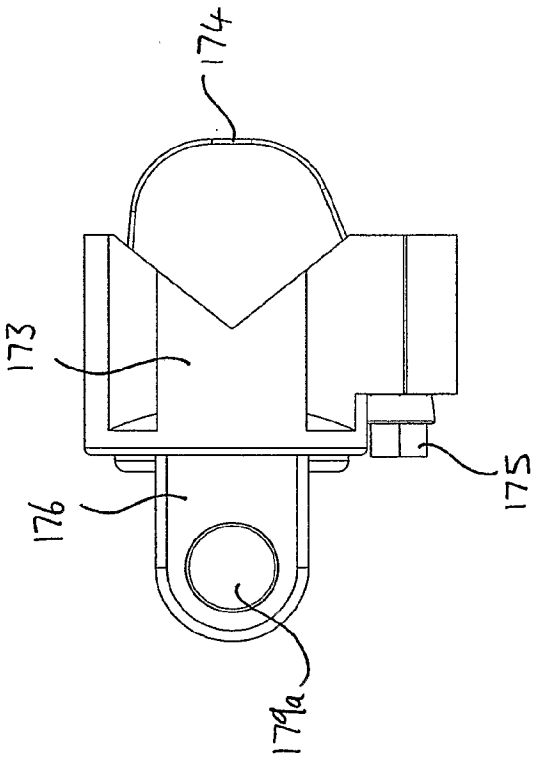


FIGURE 25

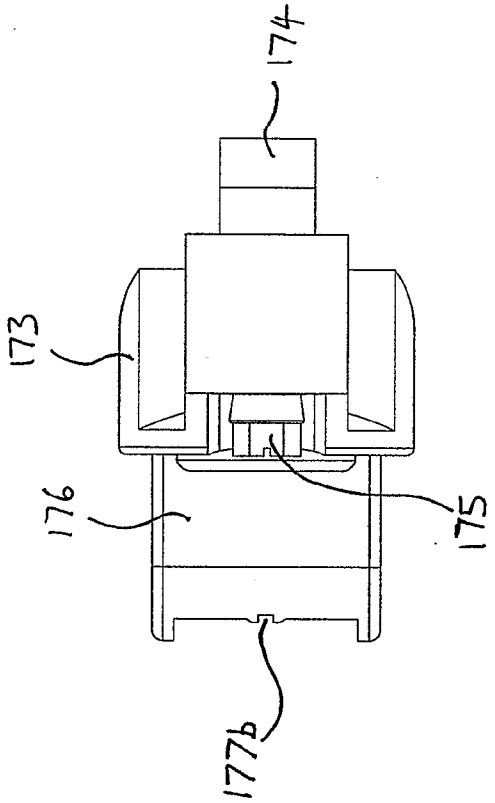
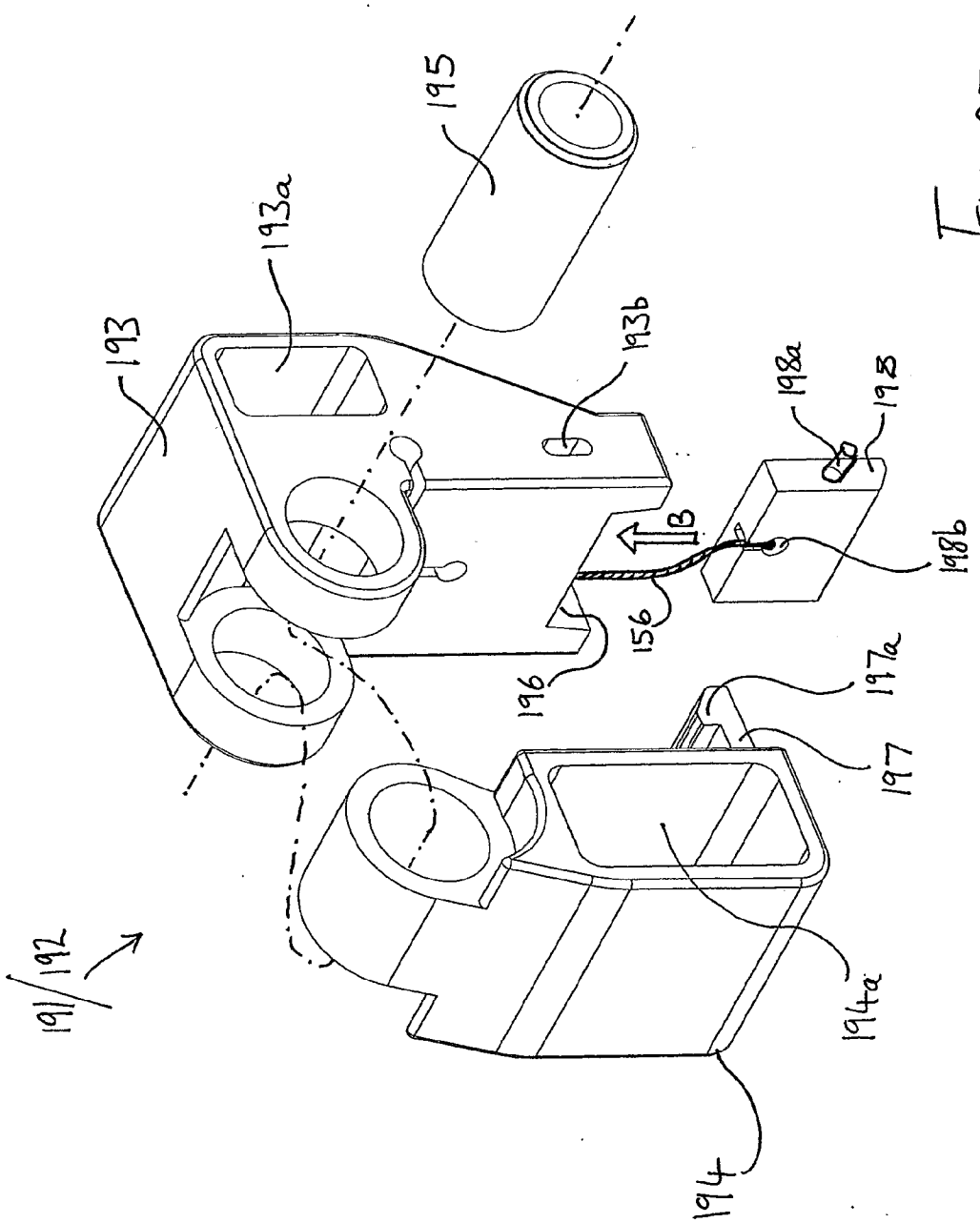


FIGURE 26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197a
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194a
194

FIGURE 27

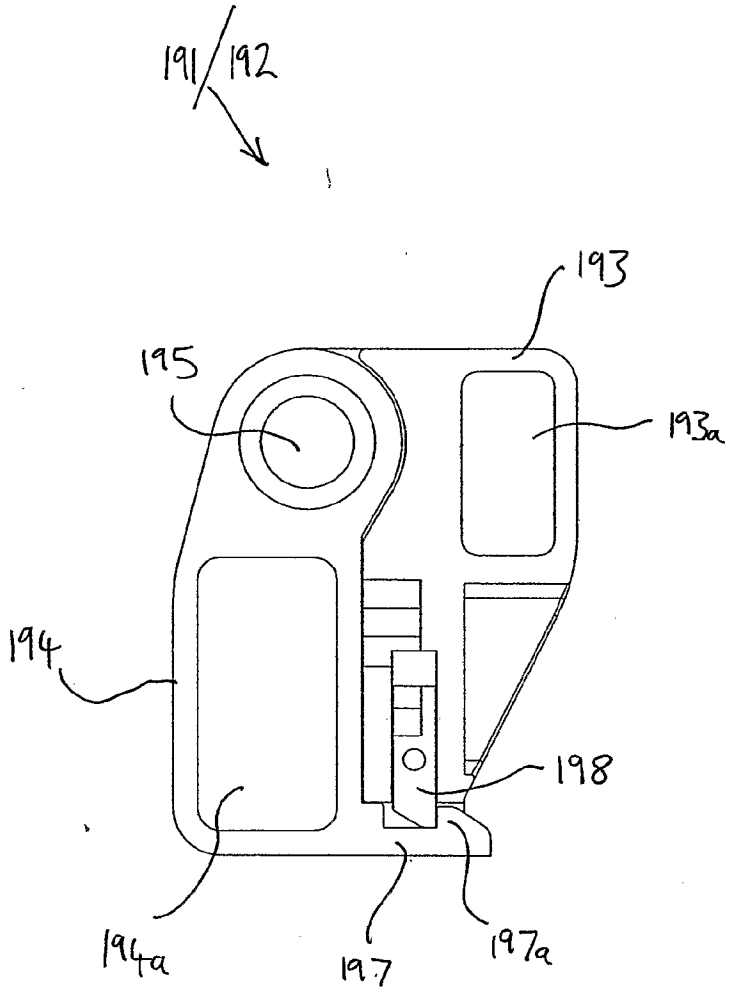

FIGURE 28

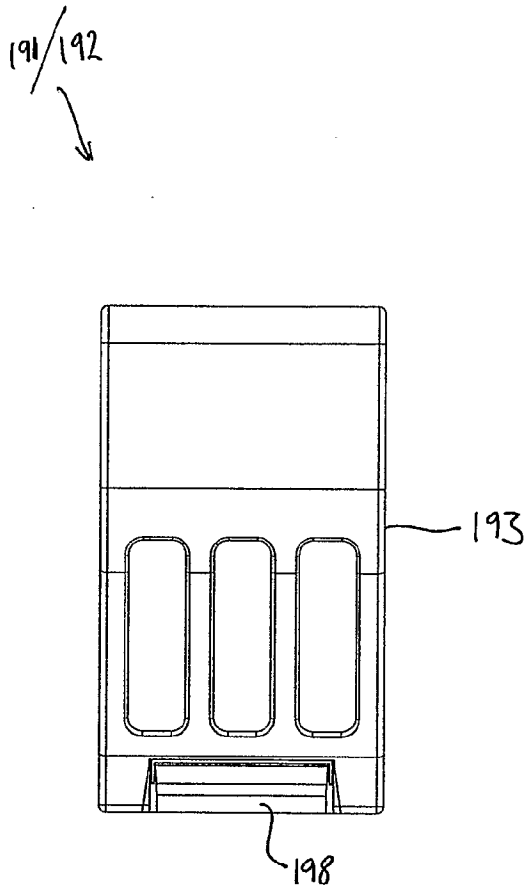

FIGURE 29

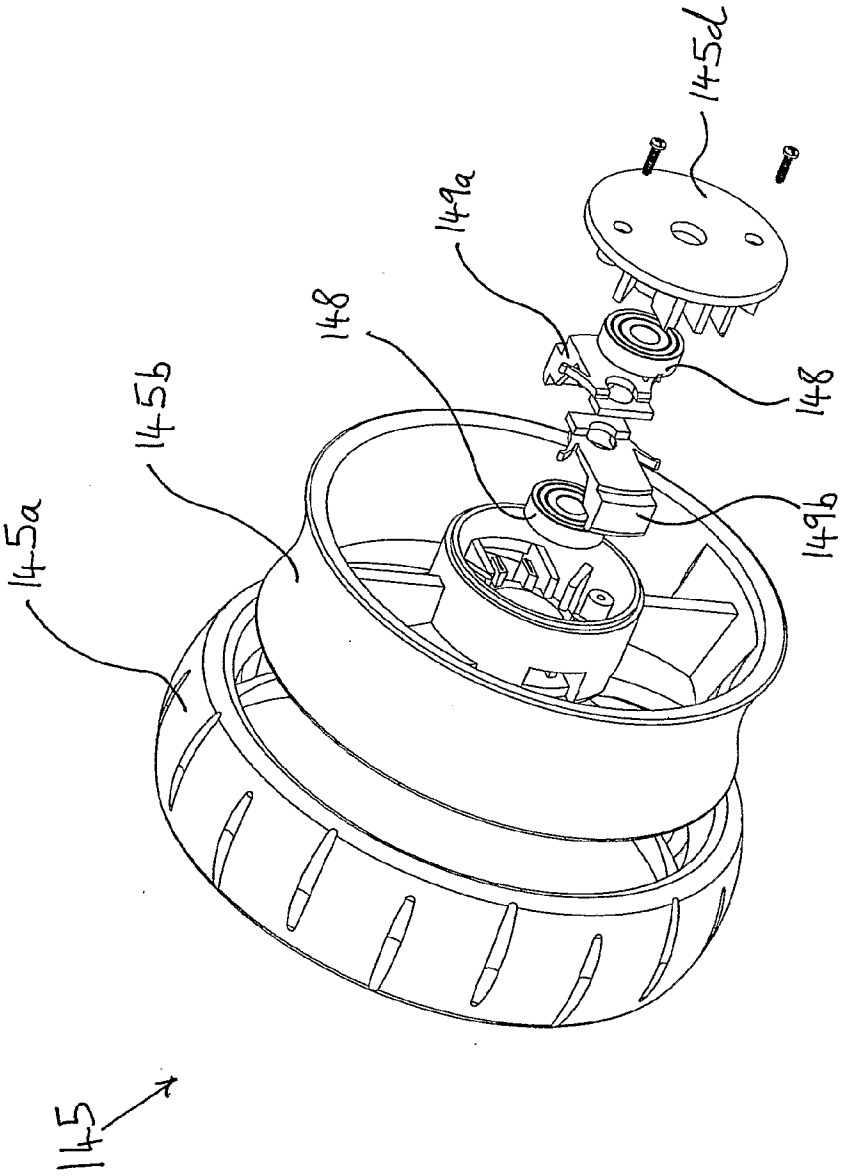

FIGURE 30

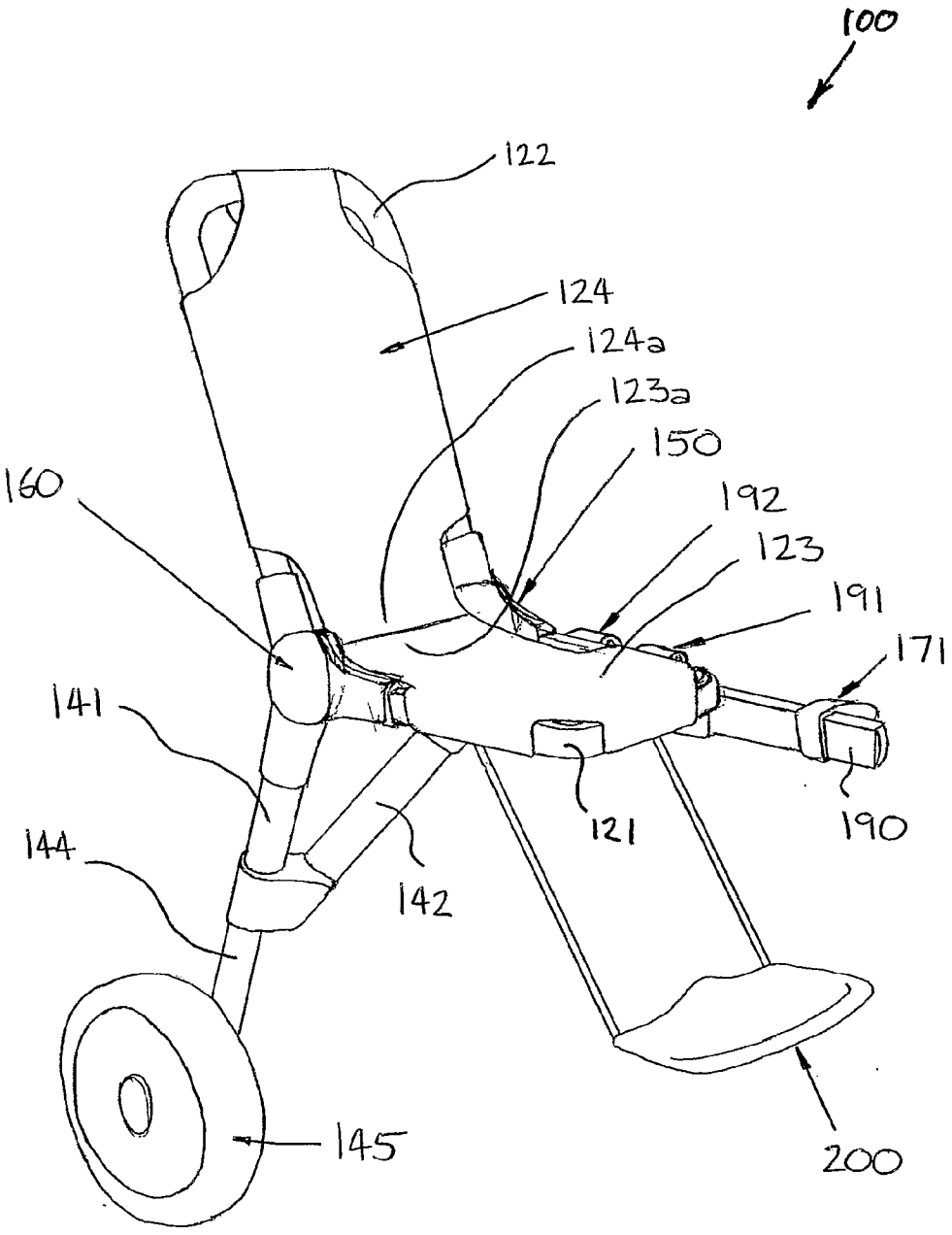
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FIGURE 31

INTERNATIONAL SEARCH REPORT

Inter Application No
PCT/GB2005/001276

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B62B9/00

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 7 B62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 000 645 A (SCHMIDT CARL O) 19 September 1961 (1961-09-19) abstract; figures 1,2,4,7	1,5, 9-12, 15-19, 21-28, 30-35, 37,43,44
Y	figures 1,2,4,7	2-4,6
Y	US 6 715 783 B1 (HANSON WAYNE H ET AL) 6 April 2004 (2004-04-06) abstract; figures 4,8,10	2-4,6
A	figures	1
A	DE 40 33 548 A1 (TROAX-AXO AB, HILLERSTORP, SE) 25 April 1991 (1991-04-25) abstract; figure 1	1-4

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in 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 document 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

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European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Lindner, V

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INTERNATIONAL SEARCH REPORT

Inte Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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INTERNATIONAL SEARCH REPORT

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(71) Applicant *(for all designated States except US)*: **DYNAMIC BRANDS, LLC** [US/US]; 8575 Magellan Parkway, Suite 1000, Richmond, VA 23227 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **ZEHFUSS, Mark** [US/US]; 5120 Austin Healey Drive, Glen Allen, VA 23059 (US).

(74) Agent: **PIKE, Bernard, G.**; Troutman Sanders LLP, Patent & Trademark Department, 600 Peachtree Street, N.E., Suite 5200, Atlanta, GA 30308-2216 (US).

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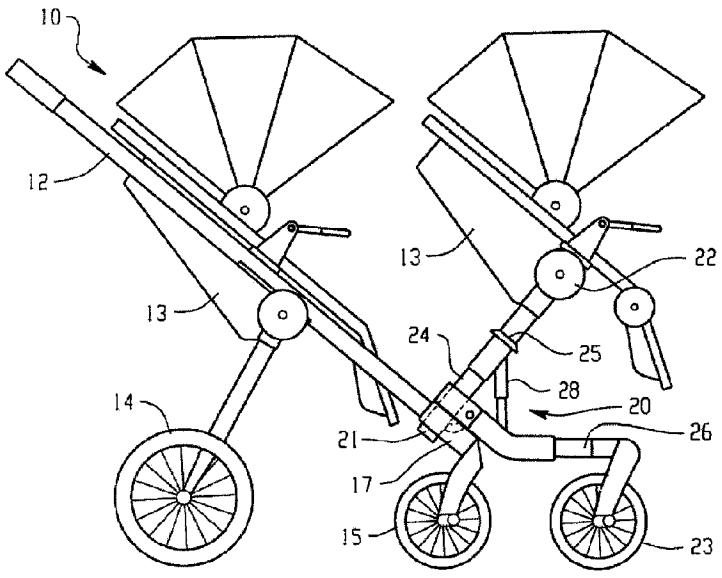

Fig. 3

(57) Abstract: The invention relates to a seat attachment for a stroller, single stroller and double strollers. Such a seat attachment may be used to reversibly convert a single stroller into a double stroller. More specifically, versions of the seat attachment relate to a seat attachment for a stroller capable of supporting a seat such as, but not limited to, a stroller seat, a baby seat, bassinet, a pram, a car seat, or a baby carrier, for example. The seat may be supported in front of a permanent seat of the stroller.

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TITLE

SEAT ATTACHMENT FOR A STROLLER

INVENTOR

Mark Zehfuss

TECHNICAL FIELD

[0001] The invention is directed to a seat attachment for a stroller, single stroller and double strollers. Such a seat attachment may be used to convert a single stroller into a double stroller. More specifically, embodiments of the invention are directed to a seat attachment for a stroller capable of supporting a seat such as, but not limited to, a stroller seat, a baby seat, bassinet, a pram, a car seat, or a baby carrier, for example. Embodiments of the seat attachment are capable of reversibly converting a single stroller into a double stroller.

BACKGROUND

[0002] Parents with multiple young children may have difficulty transporting their children from place to place. Children are slow, easily distracted and, therefore, may lag behind their parents while the parents are trying to complete shopping tasks or get exercise in a limited amount of time. In response, many parents have purchased double strollers allowing the parent or other guardian to push two children simultaneously and thus allow them to more efficiently run errands, take walks, or jog. As such, a double stroller allows the parents or guardians more freedom than they would have with only a single stroller, especially while trying to manage two sleeping children.

[0003] Though double strollers have certain advantages, double strollers also have disadvantages. Double strollers are substantially larger than single strollers and are, therefore, more difficult to maneuver through doors and down aisles in stores. Typically, the benefits of being able to accommodate two children greatly offset these disadvantages. However, when the parent or guardian has only one child with them, the benefits of the double stroller are not realized but the disadvantages still exist.

[0004] Therefore, parents often buy two or more strollers to use at different times; a single stroller for times when they only have one child with them and a double stroller for

when they need a stroller that will accommodate two children. This often creates its own set of problems. The multiple strollers must be stored and there is seldom room for both a folded double stroller and a folded single stroller in the trunk of a typical car or back of a sport utility vehicle.

[0005] Stroller manufacturers have attempted to solve this problem by providing a place for a second child to stand on the back of a single stroller or attachments that provide another seat for the second child that hangs under and slightly behind the seat of the single stroller. This provides a second seat for a child but the child is tucked close to the back of the front seat which may be uncomfortable, reduce the capacity of the under seat storage, and prevent the parent from hanging a bag on the handle bars.

[0006] There exists a need for a single stroller that may be conveniently converted to a double stroller. There is also a need for a conversion kit that converts the single stroller into a full double stroller that is capable of accommodating two children without loss of convenience for the parent or guardian.

SUMMARY OF THE INVENTION

[0007] Strollers are typically single strollers (strollers having one seat for transporting one child) or may also be double strollers (strollers having two seats for transporting two children). Embodiments of the invention are directed to a seat attachment for a stroller comprising an connector portion capable of connecting directly to a stroller frame or to an attachment frame member connected to the stroller frame; and a seat support element capable of supporting a seat. In certain embodiments, the attachment for a stroller comprises an attachment frame member having a first end and a second end. The first end may be capable of connecting the seat attachment to a stroller frame and the second end may be capable of connecting to the seat support element. The seat support element is thus capable of supporting a seat on the strolle. In more specific embodiments, the seat may be supported in either a forward or backward position.

[0008] Another embodiment comprises a stroller and seat attachment for the stroller, wherein the stroller comprises an attachment frame member connected to the frame of the stroller and the seat attachment for the stroller comprises a connector portion. The attachment frame member and the connector portion comprise components that are capable of being securely connected together. In certain embodiments, the attachment frame member and the connector portion comprise components that are capable of being securely and releasably connected together. In this manner, the seat attachment may be attached to the

stroller and a seat, as defined above, may be connected to the seat attachment, thus reversibly converting the single stroller into a double stroller.

[0009] In a further embodiment, the seat attachment for the stroller further comprises at least one wheel. The wheel may be connected to the seat attachment by a wheel support frame which may be rigidly attached or may be pivotally attached to the seat attachment. The wheel support frame may be connected to any section of the seat attachment, preferably the wheel support frame is pivotally connected to the back portion of the seat attachment in an area adjacent to the connector portion or connected near the middle of the attachment portion.

[0010] Embodiments of the seat attachment for a stroller may further comprise a folding mechanism. The folding mechanism may comprise a sliding member slidingly connected to the attachment portion and a folding frame member or strut having a first end connected to the sliding member and a second end connected to the wheel support frame. The folding mechanism allows the wheel support frame to pivot from a first position (in-use position), to a second position (a folded position). The attachment for the stroller also may comprise a locking mechanism that secures the attachment to a stroller in the in-use position and unlocks the attachment to allow the attachment to be connected or removed from the stroller when in the folded position. The locking mechanism may be a small protrusion attached to the wheel support frame that engages a corresponding aperture in the stroller or the stroller attachment portion to secure the attachment to the stroller. In the folded position, the protrusion is not engaged in the aperture.

[0011] A further aspect is directed to a double stroller. The double stroller may comprise a frame, wherein the frame comprises a handle portion, a front wheel support portion, a back wheel support portion, and a folding mechanism. Embodiments of the double stroller comprise a stroller frame comprising wheels, the frame, a first seat and a connector portion connected to the frame. The double stroller may further comprise a seat attachment frame comprising a wheel, a second seat, and a second attachment portion capable of connecting to the connector portion of the stroller frame. The second attachment portion may be releasably connected to the connector portion. Further, the second seat may be releasably connected to the seat attachment frame and is capable of supporting the second seat in either a forward or backward position.

[0012] A further embodiment of the double stroller comprises a first seat attachment capable of releasably supporting a first child seat and a second seat attachment capable of releasably supporting a second child seat. The seat attachments may comprise two seat connector portions for supporting the seat on both sides.

[0013] An still further embodiment of the double stroller comprises at least one first seat attachment adjacent to the front wheel support portion and a second seat attachment adjacent to each folding mechanism and/or the handle portion. The first seat attachment may be above at least one front wheel connected to the wheel support portion.

[0014] A still further embodiment of the stroller comprises a frame, at least one front wheel, at least one rear wheel, a first stroller seat with at least one first attachment portion permanently attached to the frame; and at least one releasably connected second seat attachment portion capable of supporting a second seat in front of the first stroller seat. As in other embodiments, the seat attachment may comprise two seat connectors. Either or both seat attachment portions may be a single part with two seat connectors or two separate pieces each comprising a seat connector.

[0015] In any of the above embodiments, the stroller, double stroller or attachment may comprise one or more of the following features; a sleeve for removably receiving the attachment portion. The seat attachment portion may comprise a protrusion having a complementary shape to the sleeve for inserting into the sleeve. Further, the second seat may be integral to the seat attachment.

[0016] Aspects of the stroller, double stroller and attachment are presented in various embodiments, however one skilled in the art will understand various variation and interchangeability of the components of the various embodiments which are intended to be included in the scope of the invention.

BRIEF DESCRIPTION OF THE FIGURES

[0017] Figure 1 shows an embodiment of a single stroller;

[0018] Figure 2 shows an embodiment of a seat attachment to convert a single stroller into a double stroller;

[0019] Figure 3 shows the combination of the single stroller of Figure 1 attached to the seat attachment of Figure 2;

[0020] Figure 4 shows an embodiment of a seat attachment capable of supporting a car seat on an attachment of Figure 2;

[0021] Figure 5 shows a combination of the single stroller of Figure 1 attached to an embodiment of the attachment in the form of a tricycle-like riding device; and

[0022] Figure 6A shows an accessory attachment for supporting an accessory on a stroller; Figure 6B shows a bag or purse for attaching to the accessory attachment of Figure 6A.

[0023] Figure 7 shows an attachment for supporting a seat comprising one wheel.

[0024] Figure 8 shows an embodiment of a stroller reversibly that is capable of being converted from a single stroller to a double stroller comprising an attachment portion that does not comprise a wheel.

[0025] Figures 9A, 9B, 9C, 9D, 9E, and 9F show various configurations of the embodiments of the stroller shown in Figure 8.

DESCRIPTION

[0026] The invention relates to an accessory, attachment, or conversion kit (hereinafter "seat attachment") for a stroller. As discussed above, parents or guardians may find themselves in a situation wherein it is more convenient to transport two children in a stroller, but at the same time find it inconvenient to have both a single stroller and double stroller. Embodiments of the seat attachment solve this problem. In one aspect, an embodiment of the seat attachment for a stroller is capable of converting a single stroller into a double stroller. The seat attachment may support a seat such as, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example. Therefore, the parent or guardian does not require both a single stroller and a double stroller. A stroller configured to receive a seat attachment for converting a single stroller into a double stroller provides convenience to the user. The single stroller may be connected to a double stroller by attaching the seat attachment to the single stroller and then attaching the second seat. As such, an embodiment of the seat attachment for converting a single stroller into a double stroller comprises at least one connector portion capable of connecting to a stroller frame and a seat support element capable of supporting a seat. The seat attachment may optionally comprise at least one wheel for additional support and stability, however, for more convenience, embodiments of the attachment do not include a wheel. In certain embodiments, a wheel may stabilize the double stroller, but in other embodiments of the attachment the wheel may not be desirable or necessary. Additional embodiments of the attachment comprise a cart, wagon, tricycle-like attachment, or other riding toy that may be connected to the stroller, for example. A tricycle-like attachment would allow a child to ride or be pushed in front of the stroller.

[0027] A side view of an embodiment a single stroller 10 is shown in Figure 1. As a note, Figure 1 shows only one side of the single stroller 10, however, most components include a complementary component on the other side of the single stroller but are not shown in Figure 1. The single stroller 10 comprises a frame 12 that supports seat 13. The frame 12 may, optionally, include at least one, preferably two, folding mechanism 16 that allows the stroller 10 to be folded to a more convenient size for storing or transporting the stroller 10.

[0028] In this embodiment, the seat 13 is shown as a typical stroller seat, however, other types of seats may be used in a single stroller. The seat 13 may be permanently affixed to the frame 12 or releasably connected such that it is capable of being removed and substituted with a different seat. As used herein, "releasably connected" or "releasably attached" means the connection is not a permanent connection and that the connection is capable being of connected and disconnected by the user of the stroller without requiring special tools or special skills. Releasable connections include, but are not limited to, buttons, snaps, friction fittings, interference fits, threaded connections, locking tabs, keyed connections, other fasteners, or the like. On stroller 10 of Figure 1, the frame 12 is supported on a pair of back wheels 14 and a pair of front wheels 15. In this embodiment, back wheels 14 are fixed and do not swivel or pivot on the frame. The pair of front wheels 15 on the single stroller 10 pivot to make turning the single stroller 10 easier and more convenient. Though, pivoting wheels may be preferred in certain strollers, strollers with fixed non-pivoting wheels are also common. It should be noted that a single stroller does not require pairs of front or rear wheels and either the front pair of wheels 15 or the back pair of wheels 14 may be substituted with a single wheel. Conventionally, many single strollers, including umbrella strollers, jogging strollers, all-terrain strollers, as well as other strollers may only include one front wheel. Embodiments of the seat attachment of the invention may be capable of converting any style of stroller to a double stroller, including strollers with one or two front wheels.

[0029] The embodiment of the stroller 10 comprises two attachment frame members 17. The connector portions are preferably on the front of the stroller to allow the seat attachment and the seat to be connected to the front of the stroller 10. The attachment frame members 17 allow a seat attachment such as the seat attachment for converting the single stroller 10 to a double stroller, as shown in Figure 3, to be connected to the stroller. Only one seat attachment is shown in Figure 3, the stroller 10 would use two seat attachments as shown in Figure 3 or one seat attachment comprising two seat support elements. The embodiment of the stroller 10 has a left side and right side attachment frame members 17. An embodiment

of a seat attachment of stroller 10 will comprise corresponding connector portions capable of connecting to the stroller frame at the attachment frame members 17. Though the seat attachment for the stroller is described in relation to a single stroller, the attachment may similarly be attached to a double stroller. Embodiments of the seat attachment may therefore be used to convert a double stroller into a triple stroller, if desired.

[0030] An embodiment of a seat attachment 20 of the invention is shown in Figure 2. The seat attachment of Figure 2 is in an unlocked and folded configuration. The seat attachment 20 comprises a pair of connector portions 21 capable of connecting to the attachment frame members 12, two seat attachment elements 22 capable of supporting a seat; and a wheel 23. In this embodiment, the connector portions are connected to the rear of the seat attachment 20 allowing the seat attachment 20 to be connected to the front of a stroller, such as stroller 10 shown in Figure 1. Other embodiments of the seat attachment may include more than one wheel, one connector portion, one seat support element, or combinations of these elements. In an embodiment of the stroller with one wheel, the attachment frame member may be on the forks of the front wheel, for example.

[0031] The seat attachment 20 comprises a wheel support frame 26 connecting the wheel 23 to the attachment frame member 24 of the attachment 20. Each attachment frame member 24 has a first and a second end. The first end is capable of connecting to a stroller frame and the second end is connected to the seat support element 22. The embodiment of the seat attachment 20 comprises a wheel support frame 26 that is pivotally connected to two attachment frame members 24. The wheel support frame 26 or the attachment frame 24 may span the width of the stroller between the two attachment frame members 17. The pivotal connection 27 allows the seat attachment to be folded and conveniently stored or transported but is not necessary for the invention. The pivotal connection is optional and provides more convenience, however, embodiments of the attachment may comprise a releasably connected wheel support frame or a rigid frame that may be incorporated to produce a seat attachment that has greater strength for use in situations wherein a stronger seat attachment may be desired such as with all-terrain or jogging strollers, for example. The wheel support frame may be connected at any point on the attachment frame, preferably the wheel support frame is connected near the connector portion 21 or near the middle of the attachment frame 24.

[0032] An embodiment of the seat attachment without a wheel may include connector portion 21 or attachment frame member 24, and seat attachment member 22, for example. In such an embodiment, there would be no need for pivotal connection 27, wheel support frame 26, sliding connector 25, or wheel 23.

[0033] The seat attachment 20 comprises a folding mechanism comprising a sliding connector 25 connected to a first end of strut 28. A second end of strut 28 is pivotally connected to wheel support frame 26. In such an embodiment, the sliding connector 25 may be moved between a first position and a second position on the attachment frame member 24. As the sliding connector 25 is moved, strut 28 pushes the wheel support frame 26 from an in-use position to a storage position. The storage position is more compact as shown in Figure 2. In addition, the embodiment of the seat attachment 20 comprises a locking mechanism 27 that is capable of securing the seat attachment 20 to a stroller, such as stroller 10 shown in Figure 1. The locking mechanism 29 is engaged by moving the sliding connector 25 to the in-use position in which the wheel support frame 28 and wheel 23 are extended. In an embodiment of the seat attachment 20 for the stroller 10, the wheel of the seat attachment 20 is pivotally connected to the connector portion and when the wheel is in the in-use position the releasable connection is locked and when the wheel 23 is moved to the storage position, the releasable connection is unlocked allowing the seat attachment 20 to be removed from stroller 10. The seat attachment 20 may be stored and stroller 10 may be conveniently used as a single stroller. As designed, the seat attachment 20 may be reconnected to stroller 10 for use as a double stroller. In any embodiment of the invention, the seat attachment portion may be secured into position on the stroller frame and a locking mechanism may be used with an embodiment with or without the wheel. Either the seat attachment or the stroller frame may comprise a locking mechanism for securing the stroller and seat attachment together. The locking mechanism may be any mechanism capable of securing the components together during use and may be a friction locking device, threaded connection, peg in a hole, or an interference locking device such as a pin in a hole or slot, for example. In embodiment 20 shown in Figure 2, the locking mechanism 29 pivots with wheel support frame 26 as the attachment 20 is moved from an unfolded position to a folded position. The locking mechanism 29 may slide into a hole or notch in the attachment frame member of stroller 10 shown in Figure 1. As such, the attachment 20 may be attached to stroller 10 by positioning attachment portion 21 of attachment 20 in slot 18 of attachment portion 17 of stroller 10. The sliding connector 25 may be moved to the in-use position, wheel support frame is moved and locking mechanism 29 is positioned into locking slot 19 of stroller 10.

[0034] The connector portion 21 of the embodiment of the seat attachment 20 has a cylindrical shape. The connector portion 21 may be inserted into a cylindrical recess 18 of the attachment frame member 17 of stroller 10 of Figure 1 to secure the seat attachment and convert the single stroller into a double stroller, as shown in Figure 3. Other embodiments of

the seat attachment may include any type of connector portion. The connector portion may be of a solid or tubular construction and may be any cross-sectional shape including, but not limited to, circular, polygonal, square, rectangular, and triangular, for example. Other attachment mechanisms may be utilized to connect the seat attachment to the stroller such as, but not limited to, a U-shaped bracket, a U-bolt, a pipe clamp, O-shaped bracket, screw, bolt, or other clamping or attachment means. The attachment frame member of the stroller has a complimentary and cooperating shape that allows the connector portion to be secured to the attachment portion of the stroller.

[0035] In Figure 3, the seat attachment 20 of Figure 2 is shown connected to the single stroller 10 of Figure 1 forming a double stroller. The double stroller configuration is shown with two stroller seats 13 in an inline configuration, though the other configurations, such as a stroller seat and a bassinet or a pram may also be supported on the double stroller. Further, the seat support element of the seat attachment may be capable of supporting the front stroller seat in either a forward or backward position.

[0036] The embodiment of the stroller 10 is shown only as an example of one type of stroller, the frame of the stroller may be any of many possible configurations. Embodiments of the accessory of the invention may be configured to be used on any such configuration of a stroller. For example, a different embodiment of the baby stroller may not include two front wheels, may not include a folding mechanism or may only include only one folding mechanism. In addition, the baby stroller may include additional features not included in baby stroller 10. For example, the stroller may optionally comprise fixed front wheels, an entirely different frame configuration, or a storage basket underneath the seat of the stroller.

[0037] The seat support member may be any configuration capable of supporting the seat on the seat attachment. Another embodiment of a seat support member for use with a car seat or other baby seat is shown in Figure 4. The embodiment of the seat support member 40 of Figure 4 comprises a main support 41. The main support 41 comprises a cradle for supporting a central portion of the seat. Another portion of the seat may rest against support bar 42. In this embodiment, support bar 42 may be adjusted to accommodate seats of different shapes and sizes. Support bar 42 may be slid within aperture 43 and locked in place when in the desired position to support a certain seat. The seat is, therefore, supported on two main supports 41 and support bar 42. The seat may be further secured in the seat attachment member 40 by wrapping belts 44 and 45 around the seat and locking the belts in this position with a buckle or other securing means.

[0038] Another embodiment of a seat attachment for a stroller is shown in Figure 5. The combination 50 comprises stroller 10 and seat attachment 51. Seat attachment 51 is a tricycle-like attachment comprising an connector portion 52, a frame 53 with a seat support element 56, a seat 57, and wheel 55. The tricycle-like attachment may be attached to stroller 10 to allow one child to be pushed in the stroller 10 and one child to ride the seat attachment 51. The seat attachment may be other shapes also such as cars, trucks, or animal shapes, for example.

[0039] The embodiment of the stroller 10 of Figure 5 comprises an additional accessory attachment portion 58. The accessory attachment portion 58 attaches to a frame member of stroller 10. An embodiment of the accessory attachment portion 58 is shown on Figure 6A. This embodiment is particularly useful for attaching a bag or purse 64, as shown in Figure 6B, to stroller 10.

[0040] When using a stroller, parents or guardians typically carry other items, such as purses, grocery bags, cell phones, diapers, cleaning wipes, or other personal or baby related items. Some strollers have bottom storage baskets for placing such items. However, these storage baskets can be inconvenient to access or some light weight strollers do not include such storage. Therefore, users of the stroller may hang purses or shopping bags on the handle of the stroller. This is convenient in that the bag is easy to access, but the weight of the bag on the handle may cause the stroller to be unbalanced and increase the tendency of the stroller to topple backwards. A heavy bag hung from the handle of a stroller may cause the stroller to tip backwards even with a child in the seat. The problem is worse if the stroller is facing uphill, on uneven terrain, being pushed up a curb, or occupied by a small child. The attachment portion may be attached to the frame of a stroller by any of the clamping or attachment methods described above, for example. Preferably, accessory attachment 58 is attached near the center of gravity of the stroller 10 to avoid creating an unbalanced condition of the stroller. An embodiment of the accessory attachment 58 is shown in Figure 6A. Accessory attachment 58 is shown connected to stroller frame 12 of stroller 10 in Figure 1 near the folding mechanism. Embodiments of the accessory comprise a first end 61 for connecting to a stroller frame and a second end 62 for releasably connecting to the accessory. The first end 61 comprises an aperture 64 that may be connected to frame 12 of the stroller 10. In certain embodiments, the aperture 64 is on an angle – such that when the axis of the accessory attachment portion 58 is substantially horizontal. The accessory attachment 58 may, optionally, comprise a rib for securing the accessory to the accessory attachment 58.

The rib as shown in Figure 6A may be replaced with any other locking element or securing means including a friction fitting, a screwed fitting, interference fitting, for example.

[0041] One example of an accessory for attaching to an accessory attachment 58 is shown in Figure 6B. The accessory is a bag or purse 64. The accessory includes an attachment portion 65 that is capable of being secured to the attachment portion 62 on the accessory attachment 58. The bag or purse 64 may be secured on stroller 10 by securing attachment portion 65 to attachment portion 62. The attachment portion 65, as shown, slides over the cylindrical attachment portion 62 of accessory attachment 58. Attachment portion 65 may include an interior annular recess that receives rib 63 securing the bag or purse 58 to stroller 10. The bag or purse 64 is thus secured to the stroller 10 in a center portion of the stroller as viewed from the side. Therefore, the bag or purse 64 is conveniently secured to stroller 10 while not contributing to an unbalanced condition of the stroller 10.

[0042] A further embodiment of the stroller 80 is shown in Figure 8. Stroller 80 may be easily converted from a single stroller comprising one seat to a double stroller comprising two seats without addition of another wheel on the attachment. Stroller 80 comprises a frame 81 capable of supporting the stroller seat 86. In this embodiment, the frame 81 comprises a front wheel support portion 81a, a back wheel support portion 81b, and a handle portion 81c. The frame 81 of the embodiment of the stroller 80 further comprises a folding mechanism 81d that connects front wheel support portion 81a, a back wheel support portion 81b, and a handle portion 81c. The folding mechanism 81d allows the stroller to be folded in a more compact size for storing or transportation. Figure 8A shows stroller 80 in a folded configuration.

[0043] Stroller 80 further comprises at least one front wheel 82 (both front wheels 82 of stroller 80 may be seen in Figure 8A), at least one rear wheel 83 (both rear wheels 83 of stroller 80 may be seen in Figure 8A), a stroller seat 86, and a seat support portion 84 capable of supporting a second seat in front of the stroller seat. The stroller 80 may further comprise a storage basket 87. Seat support portion may be of any design capable of securely supporting a seat on the stroller. For example, the seat support portion 84 may be similar to seat support portion 20 shown in Figure 2 without the wheel 23, the strut 28, pivotal connection 27, and/or the wheel support frame 26. Preferably, the seat support portion is capable of supporting a seat such that a child in the seat is substantially above the frame of the stroller. This provides easier access to the seat, does not block access to the storage basket, allows more versatile configurations of the seats, allows more variety of seats to be

attached to the frame, and allows the parent or other guardian to more easily monitor and see the child in each seat.

[0044] Stroller 80 comprises a stroller seat 86. The stroller seat 86 is located adjacent to handle portion 81c. The stroller seat 86 may be fixedly attached or removably attached to frame 81. In embodiments of the stroller 80 wherein stroller seat 86 is removably attached to frame 81, the stroller seat 86 may be removed and replaced in a backward facing configuration, see Figure 9A, be replaced by a infant carrier 91 or car seat on seat support element 84, see Figure 9C, or replaced with a pram 92 on seat support element 84, see Figure 9D. Embodiments of the stroller 80 may comprise a second seat support element 89 adjacent to the handle portion 81c. A stroller 80 comprising a second seat support element 89 allows the seat to be easily removed and reconfigured to a different orientation or replaced with a different style seat.

[0045] Embodiment of the stroller 80 comprises a first seat support element 84. The seat support element 84 is connected to the stroller 80 front wheel support frame 81a. The seat support element 84 is adjacent to the front wheel support portion 81a of frame 81. The seat support element is capable of supporting a second stroller seat 85 in front of the stroller seat 86. This provides convenience and versatility to a user of stroller 80. Seat support element may be fixedly attached or removably attached to front wheel support portion 81a. The front seat 85 may be positioned substantially over the front wheels so the stroller remains stable. Preferably, the seats should be positioned such that the center of gravity of the stroller is between the front and rear wheels. If not an additional wheel may be placed on the attachment as previously described. Seat support element 84 comprises a seat connector 88. Seat connector 88 may be a multipurpose general connector that allows different seats to interchanged on the seat support element 84. Any style seat may be configured to connect to the seat connector, such as but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example.

[0046] An embodiment of the stroller attachment comprises a connector portion, and a seat support element. The connector portion is capable of connecting the seat attachment to the frame.

[0047] In the embodiment shown in Figure 8, stroller 80 comprises a first stroller seat 86 and a second stroller seat 85. Stroller seat 86 is shown in the forward facing configuration and second stroller seat 85 is shown in a backward facing configuration. The seat support element 84 is capable of supporting the seat above the front wheel 82 connected to the wheel

support portion 81a. Preferably, the front seat is located substantially over the front wheels and the back seat is located substantially over the rear wheels.

[0048] Though it can not be seen in the side view of Figure 8, a typical embodiment of the stroller will comprise two seat connector portions. One seat connector portion will support each side of the seat. The connector portion may be one piece or multiple parts.

[0049] Figures 9A through 9F show various configurations that are possible with the stroller of the invention. These configurations are not to be considered to be all available configurations of the stroller and one skilled in the art would recognize many additional possibilities based upon this specification and set of drawings. From the foregoing it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention is not limited except as by the appended claims.

CLAIMS

1. A seat attachment for a stroller, comprising:

an attachment frame member comprising a connector portion capable of connecting to a stroller frame; and

a seat support element capable of supporting a seat;

2. The seat attachment of claim 1, comprising:

a wheel.

3. The seat attachment for a stroller of claim 2, further comprising a wheel support frame connecting the wheel to the attachment frame member.

4. The seat attachment for a stroller of claim 3, wherein the wheel support frame is pivotally connected to the attachment frame member.

5. The seat attachment for a stroller of claim 4, wherein the wheel support frame is pivotally connected near the middle of the attachment frame member.

6. The seat attachment for a stroller of claim 5, further comprising a folding mechanism.

7. The seat attachment for a stroller of claim 6, wherein the folding mechanism comprises a sliding connector slidingly connected to the attachment frame member and a strut having a first end connected to the sliding member and a second end connected to the wheel support frame.

8. The seat attachment for a stroller of claim 4, wherein the wheel support frame is capable of pivoting from a first position to a second position.

9. The seat attachment for a stroller of claim 8, wherein the first position is a locked and in-use position and the second position is an unlocked and folded position.

10. The seat attachment for a stroller of claim 1, wherein the seat is a baby seat, a car seat, a stroller seat, a bassinet, or a pram.

11. The seat attachment for a stroller of claim 1, wherein the attachment frame member has a first end and a second end.

12. The seat attachment for a stroller of claim 11, wherein the first end is capable of connecting to a stroller frame.

13. The seat attachment for a stroller of claim 12, wherein the second end is connected to the seat attachment member.

14. The seat attachment for a stroller of claim 1, wherein the seat support element is capable of supporting a seat in either a forward or backward position.

15. The seat attachment for a stroller of claim 1, further comprising a stroller seat, wherein the seat support element is capable of supporting the stroller seat in either a forward or backward position.

16. A double stroller, comprising:

a stroller frame comprising wheels, a frame, a first seat and an attachment frame member connected to the frame;

a seat attachment comprising a wheel, a second seat, and a connector portion capable of connecting to the attachment frame member.

17. The double stroller of claim 12, wherein the connector portion is capable of being releasably connected to the attachment frame member.

18. The double stroller of claim 12, wherein the second seat is releasably connected to the seat support element.

19. The double stroller of claim 18, wherein the seat support element is capable of supporting the second seat in either a forward or backward position.

20. A double stroller, comprising:

a first seat attachment capable of removably supporting a child seat; and

a second seat attachment capable of supporting a child seat.

21. The double stroller of claim 20, wherein each seat attachment comprises two seat connector portions.

22. The double stroller of claim 20, wherein the child seat is one of a stroller seat, a baby carrier, a bassinet, a pram, or a car seat.

23. The double stroller of claim 20, comprising a frame, wherein the frame comprises a handle portion, a front wheel support portion and a back wheel support portion.

24. The double stroller of claim 23, wherein a first seat attachment is adjacent to the front wheel support portion.

25. The double stroller of claim 24, wherein the first seat attachment is above at least one front wheel connected to the wheel support portion.

26. The double stroller of claim 25, wherein the second seat attachment is adjacent to the handle portion.

27. The double stroller of claim 23, further comprising a folding mechanism that connects the handle portion, the front wheel support portion, and the back wheel support portion.

28. A stroller, comprising:

a frame;

at least one front wheel;

at least one rear wheel;

a stroller seat; and

a seat attachment portion capable of supporting a second seat in front of the stroller seat.

29. The stroller of claim 28, wherein the seat attachment portion comprises two seat connectors.

30. The stroller of claim 29, wherein the seat attachment portion is removably connected to the frame.

31. The stroller of claim 30, wherein the seat attachment portion comprises two portions each comprising one seat connector.

32. The stroller of claim 30, wherein the frame comprises a sleeve for removably connecting the seat attachment portion to the frame.

33. The stroller of claim 28, wherein the second seat is one seat selected from a stroller seat, an infant carrier, a bassinet, a pram, or a car seat.

34. The stroller of claim 33, wherein the second seat is integral to the seat attachment portion.

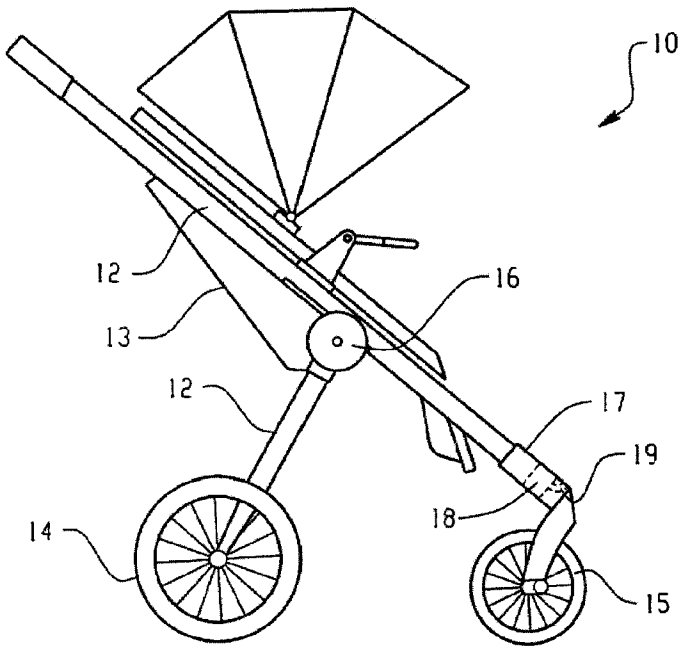

Fig. 1

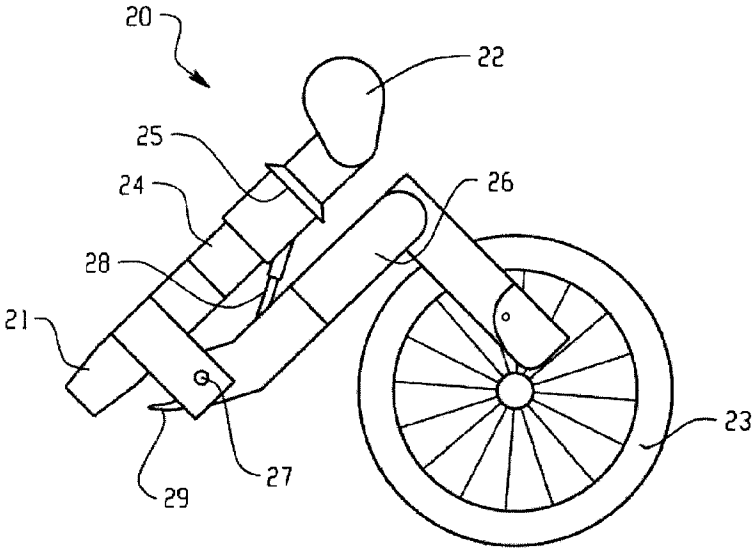

Fig. 2

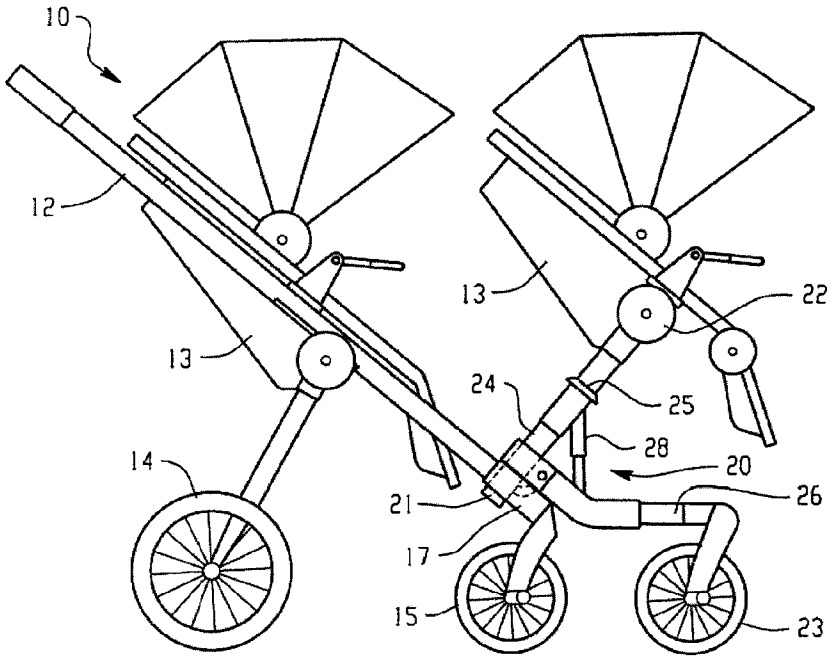

Fig. 3

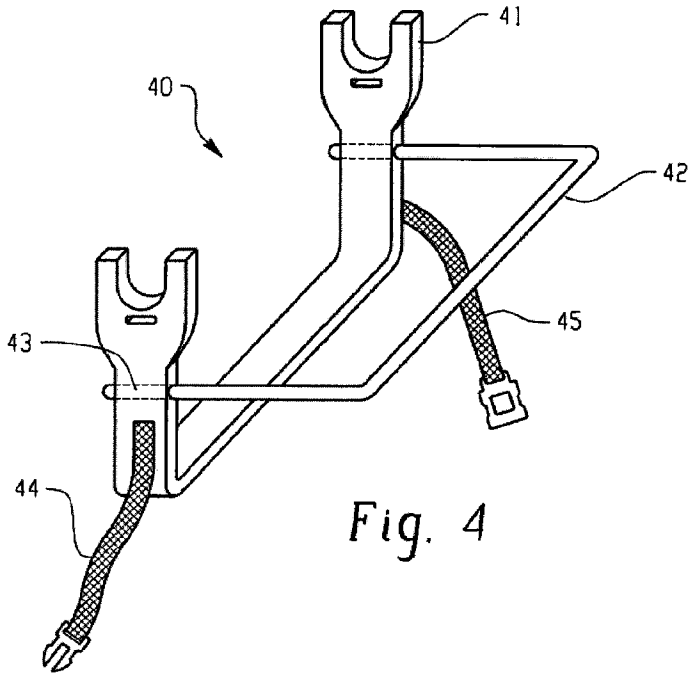

Fig. 4

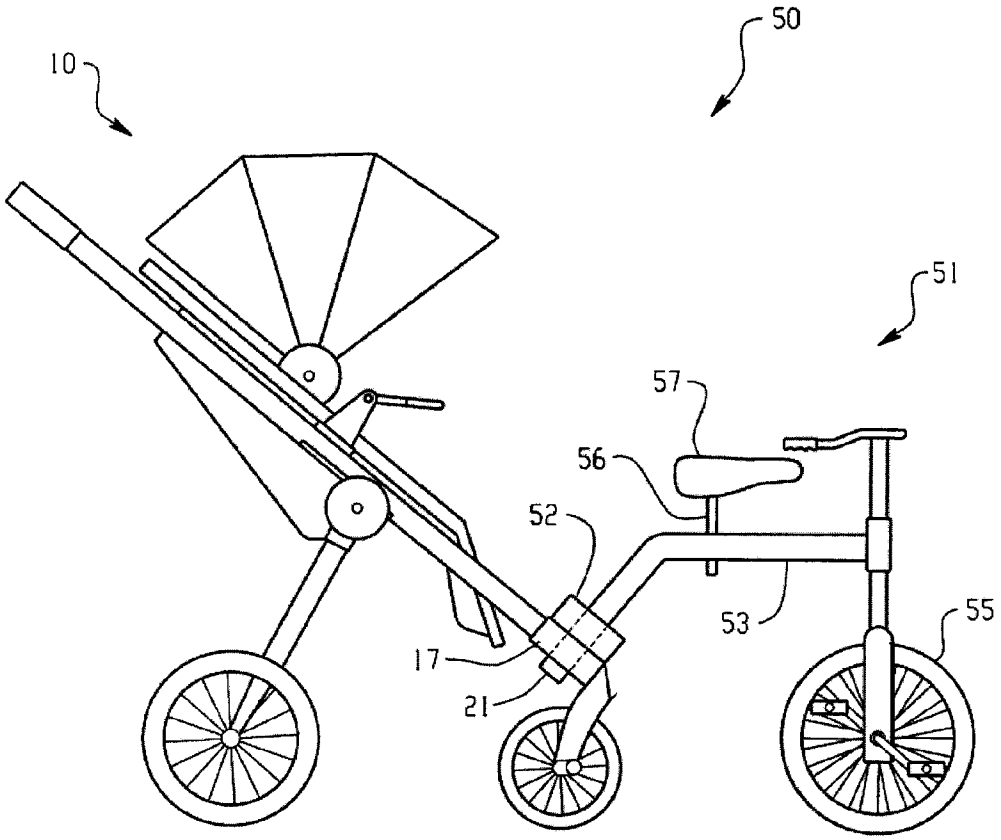

Fig. 5

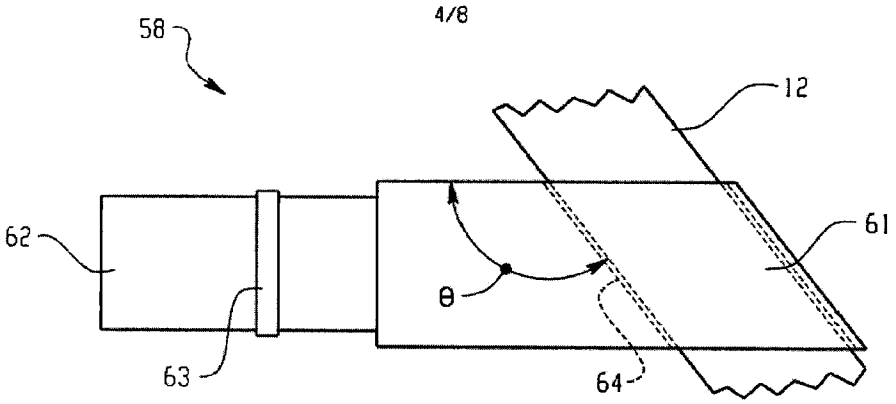

Fig. 6A

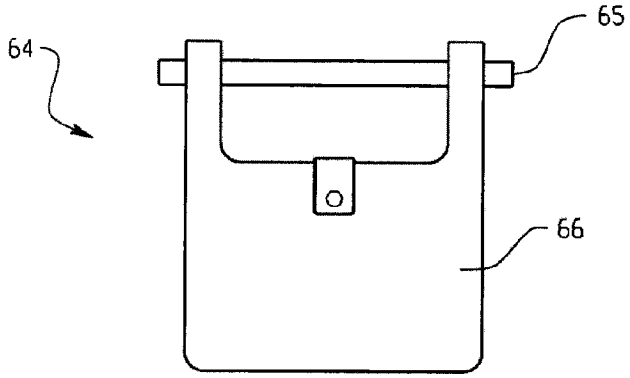

Fig. 6B

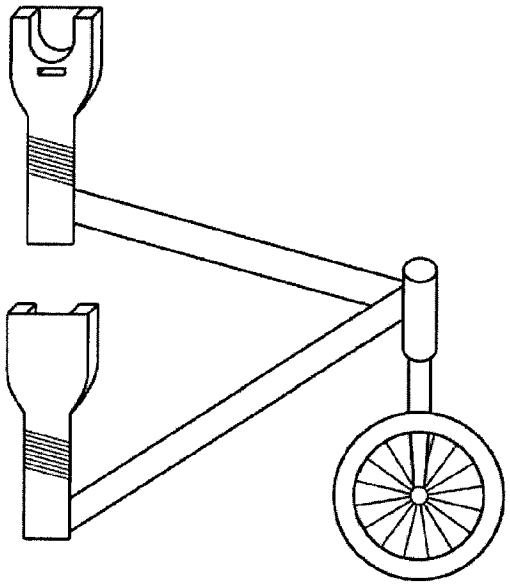

Fig. 7

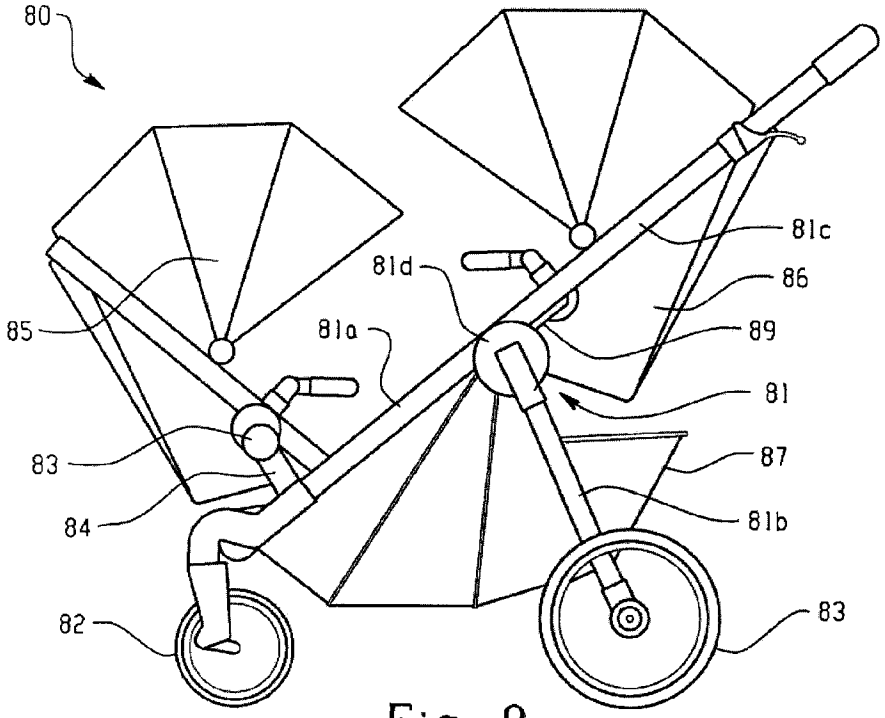
80
81c
81d
86
85
81a
89
81
83
87
84
81b
82
83

Fig. 8

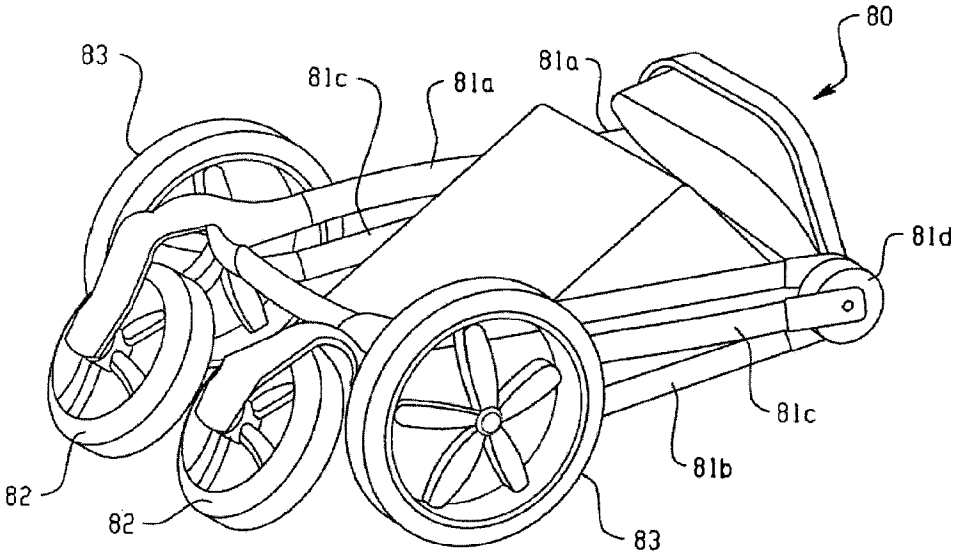
80
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Fig. 8A

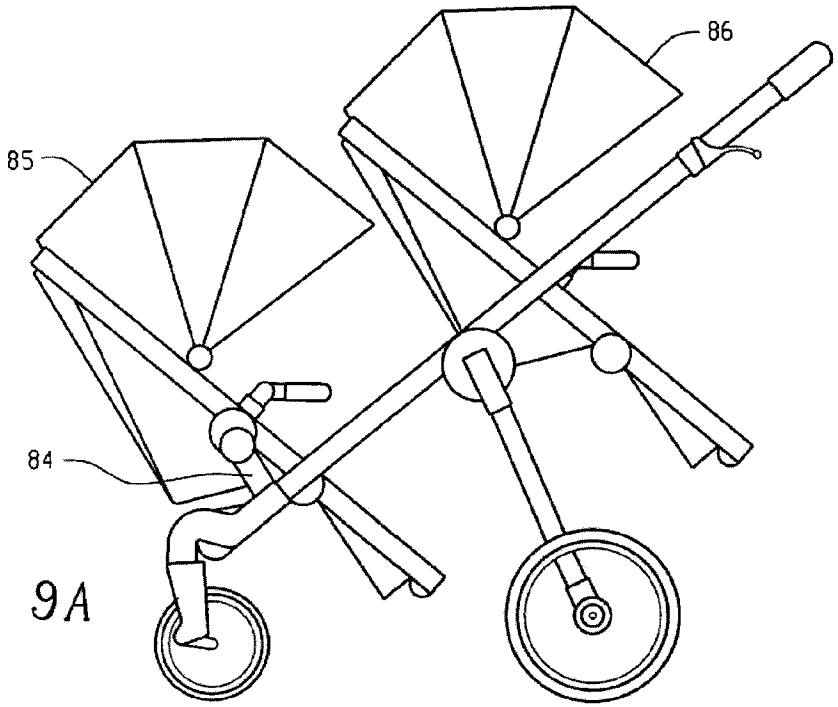

Fig. 9A

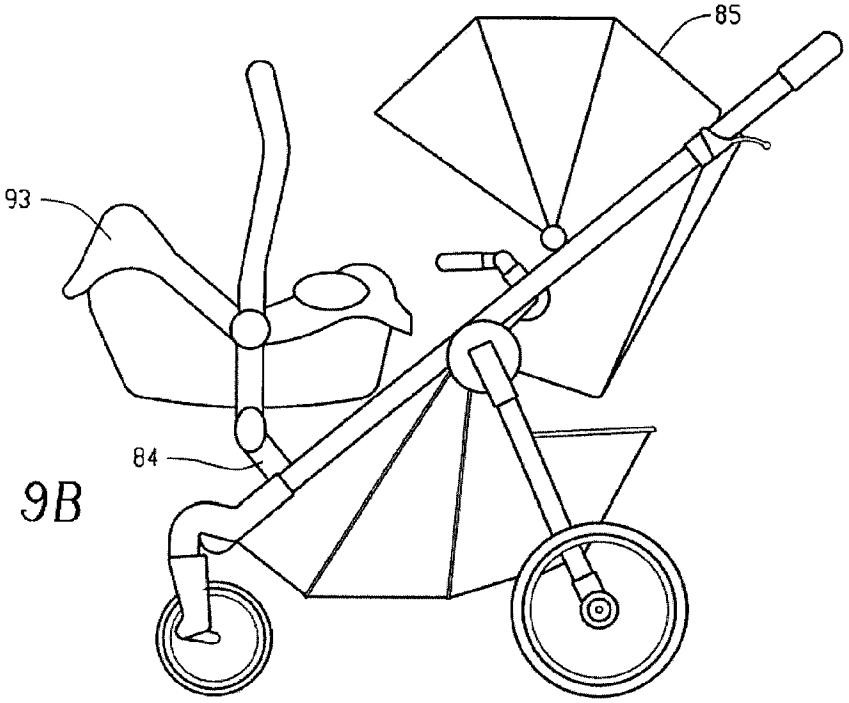

Fig. 9B

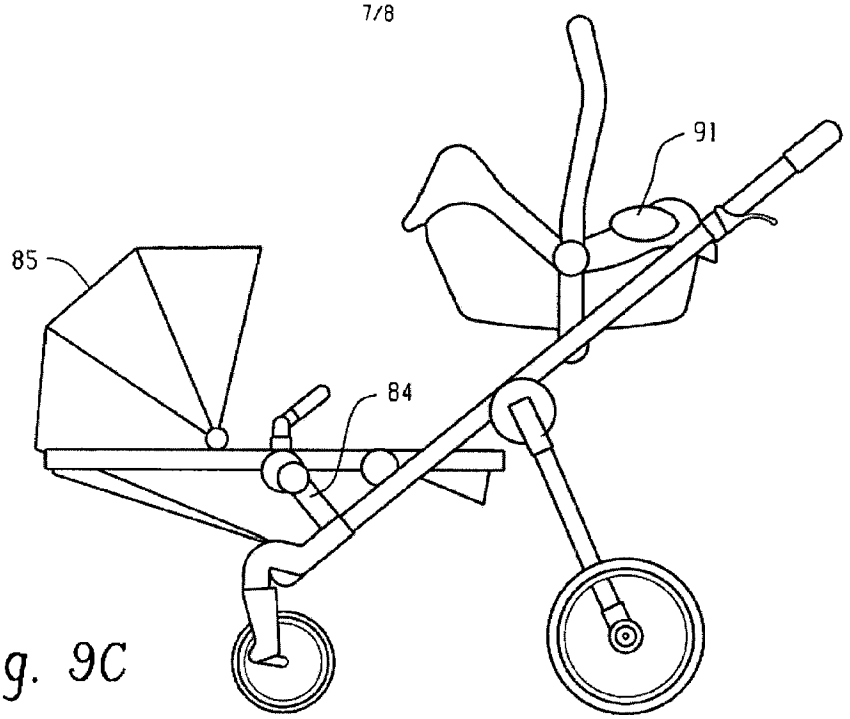

Fig. 9C

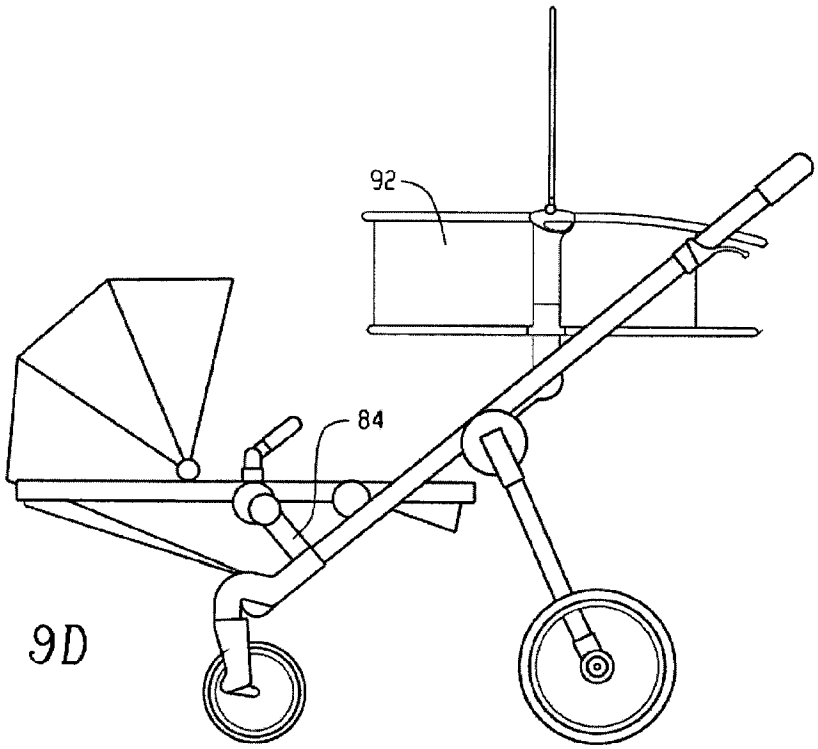

Fig. 9D

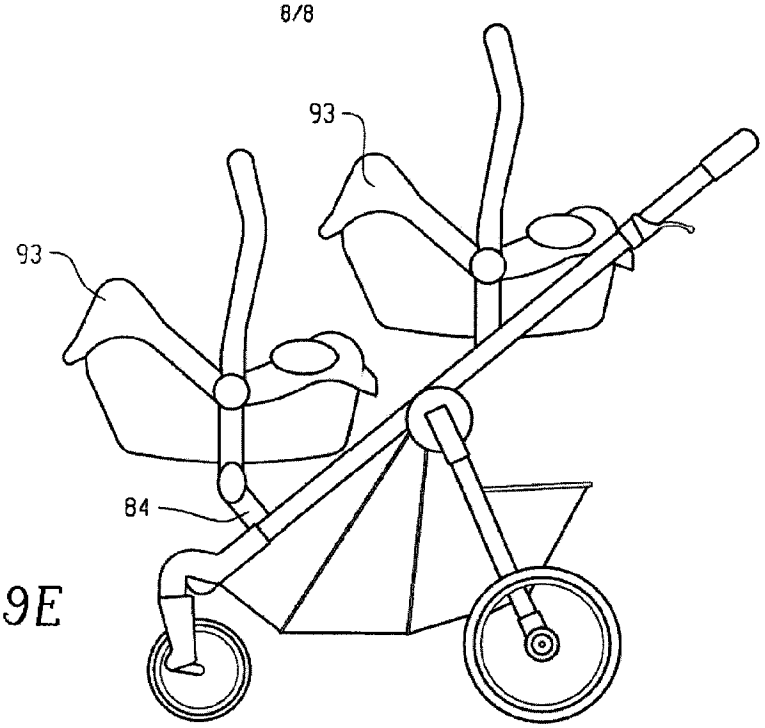

Fig. 9E

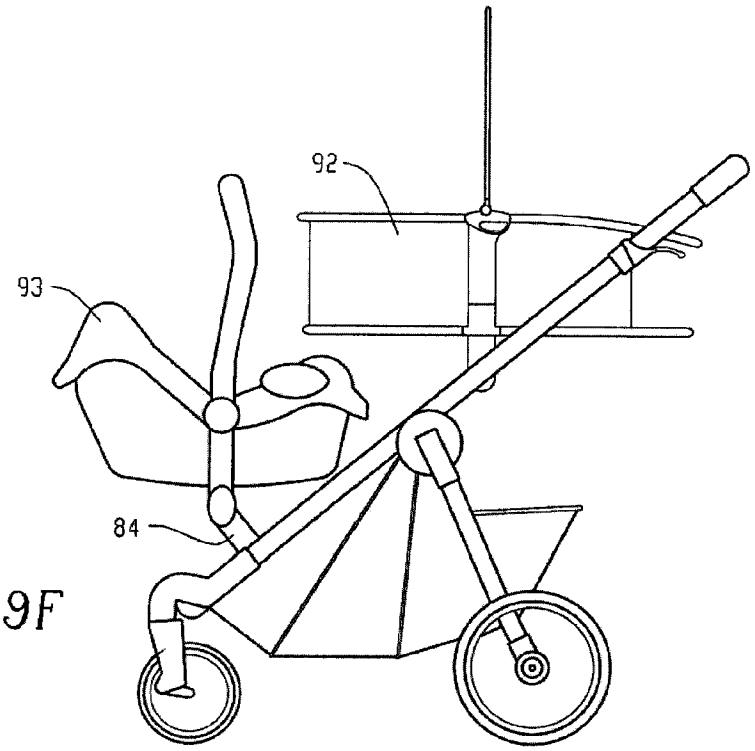

Fig. 9F

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/066817

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B62B 7/00 (2010.01)
USPC - 280/642
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(8) - B62B 7/00; B62D 7/14, 63/00 (2010.01)
USPC - 280/642, 32.7, 47.131, 647, 648, 656, 657

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2007/0114738 A1 (JONES et al) 24 May 2007 (24.05.2007) entire document	1-5, 8, 11-14 --- 6, 7, 9, 10, 15-27
X -- Y	US 2007/0001429 A1 (MACIEJCZYK) 04 January 2007 (04.01.2007) entire document	28-31, 33, 34 --- 6, 7, 9, 10, 15, 24-27, 32
Y	US 5,338,096 A (HUANG) 16 August 1994 (16.08.1994) entire document	16-27
Y	US 2003/0025304 A1 (HAEGGBERG) 06 February 2003 (06.02.2003) entire document	32

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
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"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
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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
20 August 2010	29 JAN 2010
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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(71) Applicant: **WF INTERNATIONAL HOLDING B.V.** [NL/NL]; Kerkpad 1, NL-6675 BC Valburg (NL).

(72) Inventors: **GRIM, Walter**; c/o WF International Holding B.V., Kerkpad 1, NL-6675 BC Valburg (NL). **TOUSSAINT, Fredericus**; c/o WF International Holding B.V., Kerkpad 1, NL-6675 BC Valburg (NL).

(74) Agent: **JANSEN, C.M.**; V.O., Johan de Witlaan 7, NL-2517 JR Den Haag (NL).

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Published:

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

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(54) Title: STROLLER

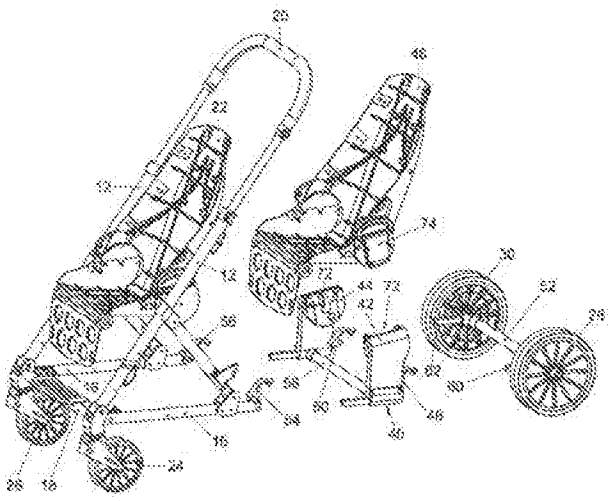

Fig. 8

(57) Abstract: A stroller (10) comprising a frame (12-20) which comprises a push bar (20), a seat (22) which is mounted on the frame, at least one front wheel assembly (24, 26) which is connected to the frame, at least two rear wheel assemblies (28, 30) which are connected to the frame, a distance between the front wheel assemblies and the rear wheel assemblies being referred to as first wheelbase. The rear wheel assemblies (28, 30) are detachably connected to the frame. The stroller (10) further comprises an adapter assembly (40) with at least one receiving unit (42, 44) for an accessory, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board. Rear wheel assemblies may be connected to the adapter assembly. The distance between the front wheel assemblies and the rear wheel assemblies connected to the adapter assembly is referred to as second wheelbase. The second wheelbase is greater than the first wheelbase.

WO 2014/042524 A1

Title: Stroller

FIELD

The invention relates to a stroller.

BACKGROUND OF THE INVENTION

Strollers are generally known and comprise a frame which comprises a push bar. Typically, a seat is mounted on the frame. Further, at least one front wheel assembly is connected to the frame. Most often, there are two front wheel assemblies which are pivotably connected to the frame. A front wheel assembly can comprise a single wheel or a pair of wheels arranged closely next to one another. The known strollers have at least two rear wheel assemblies which are connected to the frame. A rear wheel assembly also can comprise a single wheel or a pair of wheels arranged closely next to one another. In practice, a distance between a rotation axis of the at least one front wheel assemblies and a rotation axis of the rear wheel assemblies is referred to as the wheelbase. Often, for the purpose of putting the stroller in the trunk of a car, the rear wheel assemblies are detachably connected to the frame by means of a quick release, and the frame is collapsible, so that the stroller can be put away so as to take up relatively little space.

From practice, also strollers are known which comprise two seats. Variants are known where the seats, viewed in the driving direction, are arranged one behind the other (see to that end, for instance, EP 2 241 492 A2 and US 2010/0140902). US2010/0140902 mentions an additional frame with its own set of wheels, on which a second seat is fastened. The additional frame can be connected to the front of a normal stroller. In this condition, the known stroller has six wheels, which adversely affects the driving comfort and the maneuverability of the stroller. Moreover, it becomes practically impossible to get the thus extended stroller up onto a

sidewalk because the known stroller can hardly if at all be tilted backwards anymore. Other variants shown in that publication involve additional fastening brackets, which are already provided on the frame and with which a second seat can be mounted on the frame. However, this leads to a relatively unstable stroller as the frame is mainly dimensioned for use with one seat. Moreover, the additional fastening brackets lead to a higher cost price of the stroller which is not worthwhile when, in practice, it appears that no second seat needs to be attached, for instance because there will not be a second infant or because a second infant is born by the time the first infant is already able to walk.

For ES-2 253 093 and US2007/0045972, similar drawbacks hold true, i.e: (i) the driving comfort and the maneuverability of the stroller are not good due to the presence of six or eight wheel assemblies, and (ii) it is practically impossible to get the thus extended stroller up onto a sidewalk because the known stroller can hardly if at all be tilted backwards anymore. Moreover, the last-mentioned publications require the purchase of two strollers which are each independently useful for a single infant. Such a double purchase is of course costly and hence unfavorable from an economic viewpoint.

Also, a stroller is known where the seats, viewed in the driving direction, are arranged next to each other (see, to that end, for instance US2011/272925). It is true that with such a stroller the stability issues have improved compared to the variants known from US2010/0140902. With the stroller known from US2011/272925, the track width between the front wheel assemblies mutually and the rear wheel assemblies mutually can be increased in that the crossbars in the frame are of telescopic design. Such a construction is relatively costly. When it is uncertain whether there will be a second infant in the short term, the cost price of this stroller is a barrier. After all, there may not be a second infant or the second infant may be born by the time the first infant is no longer transported in a stroller. In those

circumstances a stroller with double seat is not needed and the telescopic provisions on the stroller remain unused. More than that, the telescopic provisions are then actually undesirable because they only add to the weight and the price of the stroller.

SUMMARY OF THE INVENTION

An object of the invention is to provide a stroller which is very suitable to be purchased for one infant, because its look, that is, the overall appearance, the weight, the dimensions, and the cost price substantially correspond to a normal single stroller. Another object of the invention is to provide a stroller which can be made suitable for fitting an accessory thereon, such as a second seat, so that, when there is a second infant, it can be transported with the same stroller. It is then envisaged that, also in the condition where two seats are provided, the stroller offers a good stability and also remains properly maneuverable and has a comfortable driving performance.

To that end, the invention provides a stroller comprising:

- a collapsible frame which comprises a push bar;
- a seat which is mounted on the frame;
- at least one front wheel assembly which is connected to the frame;
- at least two rear wheel assemblies which, in a first condition of the stroller, are connected to the frame, wherein a distance between a rotation axis of the at least one front wheel assembly and a rotation axis of the rear wheel assemblies is referred to as first wheelbase, wherein the rear wheel assemblies are detachably connected to the frame;
- an adapter assembly which is connectable to the frame when the rear wheel assemblies are detached from the

frame for bringing the stroller into a second condition, which adapter assembly comprises:

- a receiving provision for an accessory, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board;

and wherein the adapter assembly comprises:

- a fastening provision for the rear wheel assemblies; or:
- its own set of rear wheel assemblies,

wherein, in the second condition of the stroller, a distance between the rotation axis of the at least one front wheel assembly and a rotation axis of the rear wheel assemblies connected to the adapter assembly is referred to as second wheelbase, wherein the second wheelbase is greater than the first wheelbase and wherein the stroller in the condition where the adapter assembly is connected to the frame has only two rear wheel assemblies and one or two front wheel assemblies.

In this context, a front wheel assembly and a rear wheel assembly are understood to mean not only a single front wheel or a single rear wheel, respectively, but also one front wheel pair or one rear wheel pair, respectively. The wheels of a front wheel pair or rear wheel pair are arranged closely next to one another and always remain coaxial. When a front wheel pair or the rear wheel pair is pivotally connected to the frame, both wheels from the pair will pivot together.

Such a stroller has the advantage that initially it can be bought without adapter assembly in case of a first infant. In effect, a conventional stroller is then involved, albeit that the wheels, optionally in combination with the wheel crossbar, are detachable therefrom. The wheelbase and the track width of the thus purchased stroller are as is customary and the weight is also as is customary nowadays for a single stroller. The fact that the rear wheel assemblies are detachable is advantageous from a viewpoint

of space occupancy during storage of the stroller. This property is further enhanced in that the frame is collapsible in the usual manner. To the consumer, both in overall appearance and in cost price, the stroller without adapter assembly does not visibly differ from a normal stroller. When a second infant is born, or when a need arises to provide the stroller with an additional accessory, at a later stage, a cot, a car seat, a second seat, a baggage box and/or a basket can be purchased as accessories together with the adapter assembly. As the original rear wheel assemblies are removed from the stroller for placing the adapter set, and to the adapter set a replacement set of rear wheel assemblies is or will be connected, a stroller can be formed having a second wheelbase which is greater than the first wheelbase. This enlarged wheelbase provides the thus adapted stroller with additional stability against tilting in rearward direction. Further, the driving comfort remains particularly good because, as in conventional cases, only two rear wheel assemblies and one or two front wheel assemblies are involved. As, further, the adapter assembly and the accessory connected thereto are fastened behind the seat of the stroller that is already present, it remains possible to lift the front wheel assemblies with relatively little additional effort, so that the stroller can be brought with comparative ease from a lower level to a higher level, for instance from the roadway onto a sidewalk. Furthermore, the costs of an adapter assembly having, for instance, a second seat as an accessory can be kept considerably lower than the costs of a second stroller. At a relatively small investment – i.e. an investment that is considerably lower than that of a single stroller – a user can convert his originally normally priced single stroller into a double stroller with excellent driving properties and stability.

Further elaborations of the invention are described in the subclaims and will be further clarified in the following on the basis of an exemplary embodiment with references to the drawing.

BRIEF DESCRIPTION OF THE FIGURES

Fig. 1 shows a perspective view of an exemplary embodiment of a stroller in a first condition;

Fig. 2 shows detail II of Fig. 1;

Fig. 3 shows the exemplary embodiment of Fig. 1 in exploded view;

Fig. 4 shows detail IV of Fig. 3;

Fig. 5 shows an exemplary embodiment of the adapter assembly;

Fig. 6 shows a perspective exploded view of the exemplary embodiment of the stroller of Fig. 1 with the adapter assembly and a second seat as accessory;

Fig. 7 shows the exemplary embodiment of Fig. 6 in assembled condition;

Fig. 8 shows the exemplary embodiment of Fig. 1 in side view without adapter assembly and without seat; and

Fig. 9 shows the exemplary embodiment of Fig. 7 in side view with adapter assembly and with seat.

DETAILED DESCRIPTION

In the following, various embodiments of the invention are described. Here, reference is made to the exemplary embodiment which is shown in the figures. In this exemplary embodiment, various embodiments of the invention are embodied. However, the embodiments can also be embodied in a different manner than represented in the example shown. Therefore, the exemplary embodiment which is represented in the drawing serves only for clarification and the invention is not limited to the exemplary embodiment described.

In the most general terms, the invention provides a stroller 10, comprising a frame 12-20 which includes a push bar 20. On the frame 12-20, a seat 22 is mounted. To the frame 12-20 is connected at least one front

wheel assembly 24, 26. In the exemplary embodiment shown, these are two front wheel assemblies 24, 26 pivotable about two vertical pivots. In an alternative embodiment, however, a single centrally positioned front wheel assembly is also an option. It is also possible that a single front wheel assembly 24, 26 comprises a pair of wheels which are arranged closely next to one another and coaxially. The stroller 10 further comprises at least two rear wheel assemblies 28, 30 which are connected to the frame 12-20. As is the case with the front wheel assemblies 24, 26, it is also possible that a single rear wheel assembly 24, 26 comprises a pair of wheels which are arranged closely next to one another and coaxially. A distance between a rotation axis $L_{front\ wheels}$ of the at least one front wheel assembly 24, 26 and a rotation axis $L_{rear\ wheels}$ of the rear wheel assemblies 28, 30 is hereinafter referred to with the terminology "first wheelbase W_1" (see Fig. 8). The rear wheel assemblies 28, 30 are detachably connected to the frame 12-20. Characteristic of the stroller 10 according to the invention is that it comprises an adapter assembly 40 which is connectable to the frame 12-20 when and after the rear wheel assemblies 28, 30 have been detached from the frame 12-20. Fig. 1 shows the exemplary embodiment of the stroller 10 when it is in the first condition, i.e. in a condition with one seat 22 and no accessory 46 mounted thereon. The adapter assembly 40 is not yet present therein either.

In Fig. 3, the rear wheel assemblies 28, 30 are detached from the frame 12-20.

Figs. 5 and 6 show an example of an embodiment of an adapter assembly 40. The adapter assembly 40 comprises at least one receiving unit 42, 44 for an accessory 46, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board. The adapter assembly 40 further comprises a fastening provision 48, 50 for the rear wheel assemblies 28, 30. In an alternative embodiment of the invention, the adapter assembly 40 can comprise its own set of rear wheel assemblies. In this latter case, the

removed rear wheel assemblies 28, 30 are not used when the adapter assembly 40 and the accessory 46 are part of the stroller 10. A distance between the rotation axis $L_{front\ wheels}$ of the at least one front wheel assembly 24, 26 and a rotation axis $L_{adapter\ wheels}$ of the rear wheel assemblies 28, 30 connected to the adapter assembly 40, is referred to as second wheelbase W2 (see Fig. 9). Characteristically, the second wheelbase W2 is greater than the first wheelbase W1. This clearly appears from a comparison of the two conditions of the exemplary embodiment which are shown in the side views in Figs. 8 and 9. As a result, also when the accessory 46, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board, is part of the stroller 10, an excellent stability is obtained. The risk of the stroller 10 tilting inadvertently backwards is considerably reduced in that also when two infants are transported in the stroller, the common center of gravity of the infants is between the front wheel assemblies 24, 26 and the rear wheel assemblies 28, 30. As the stroller 10 only has three or four wheel assemblies, proper driving performance and good maneuverability are maintained. Owing to the presence of the at least one receiving unit 42, 44, the same adapter assembly 40 can be used for mounting various accessories 46 thereon. In the exemplary embodiment shown, as an accessory, a second seat 46 is shown. As stated, the adapter assembly 40 can also serve for fastening thereto a cot, a car seat, a baggage box, a basket or a step up board.

Fig. 7 shows the second condition of the stroller 10 in which the adapter assembly 40 is connected to the frame 12-20 and in which the rear wheel assemblies 28, 30 are connected to the adapter assembly 40. Further, in Fig. 7, the accessory 46, in an embodiment as second seat, is placed on the adapter assembly 40. In particular in Fig. 9, it is clearly visible that the center of gravity of an infant in the first seat 22 and the center of gravity of an infant in the second seat 46 is between the front wheel assemblies 24, 26

and the rear wheel assemblies 28, 30. Even if the foremost infant were to step from his/her front seat 22, the stroller 10 does not tilt backwards.

In one embodiment, of which an example is shown in the figures, the rear wheel assemblies 28, 30 can be connected to a wheel crossbar 52, which wheel crossbar 52 is detachably connectable to the frame 12-20 by a first snap connection 54, 56.

In an alternative embodiment, the rear wheel assemblies 28, 30 could also be provided with axle stubs which can be inserted into bearing openings in the frame 12-20. The embodiment with wheel crossbar 52 has the advantage of a quicker assembly and disassembly of the rear wheel assemblies 28, 30 as both rear wheel assemblies 28, 30 can be connected to the frame 12-20 and be detached from the frame 12-20 in one operation. What is more, the wheel crossbar 52 provides the frame 12-20 with additional strength in that it forms a cross connection. In an alternative variant, it is also possible that the adapter assembly comprises two separate adapter parts which are connected to the frame 12-20 and that to these separate adapter parts rear wheel assemblies are, or are to be, connected. These adapter parts could also form the two receiving units in which the accessory can be placed. However, in this variant also, it is important that after the adapter parts are mounted the wheelbase W2 is greater than the wheelbase W1 in the first condition of the stroller 10 without adapter parts.

In one embodiment, of which an example is shown in the figures, the wheel crossbar 52 can be detachably connectable to the adapter assembly 40 by the fastening provision 48, 50 which is designed as a second snap connection 48, 50. This second snap connection is clearly visible in Figs. 5 and 6.

In one embodiment, of which an example is shown in the figures, the adapter assembly 40 can comprise at least one receiving unit 42, 44 which is connected to an adapter assembly crossbar 58. The adapter assembly crossbar 58 may then be detachably connectable to the frame

12-20 by a snap connection 54, 56. In the exemplary embodiment shown, the adapter assembly 40 comprises two receiving units 42, 44. However, a single receiving unit is also possible or more than two receiving units are also an option.

In one embodiment, of which an example is shown in the figures, the snap connection 54, 56 for detachably connecting the adapter assembly crossbar 58 to the frame 12-20 can be formed by the first snap connection 54, 56 which also serves for connecting the wheel crossbar 52 to the frame 12-20. This is simple and favorable from a viewpoint of costs. However, in an alternative embodiment, also a snap connection of a different type could be used. An alternative snap connection can be formed by generally known telescopically extensible and compressible, slideable tubes, the outer tube provided with a series of spaced apart openings and the inner tube provided with a compressible ball biased towards an outermost position, which can snap into the openings. The advantage of the exemplary embodiment shown is a great stability with which a virtually clearance free connection is obtained.

According to a further elaboration of the invention, of which an example is shown in the figures, the first snap connection 54,56 can comprise two brackets 54, 56 pivotably connected to the frame 12-20. Each bracket 54, 56 comprises a substantially hook-shaped end 54a, 56a which has some elasticity and which can be snapped over the wheel crossbar 52 when the rear wheel assemblies 28,30 are mounted to the frame 12, 20. The brackets 54, 56 can further be snapped in a corresponding manner over the adapter assembly crossbar 58 when the adapter assembly 40 is mounted on the frame 12-20. The first snap connection 54, 56 thus has a double function, i.e. detachably connecting the rear wheel assemblies 28, 30 to the frame 12-20 and detachably connecting the adapter assembly 40 to the frame 12-20.

In one embodiment, of which an example is shown in the figures, the wheel crossbar 52 can comprise two parallel mounting bars 60, 62 extending perpendicularly to the wheel crossbar 52, and which are slideably receivable in associated openings 64, 66 in the frame 12-20 and which are slideably receivable in associated openings 68, 70 in the adapter assembly 40. These mounting bars 60, 62 provide a sturdy, demountable connection between the wheel crossbar 52 and the frame 12-20. Furthermore, the mounting bars 60, 62 provide a sturdy demountable connection between the wheel crossbar 52 and the adapter assembly 40.

According to an embodiment of the invention, of which an example is shown in the figures, the second snap connection 48, 50 can comprise two brackets 48, 50 pivotably connected to the adapter assembly 40. These brackets 48,50 too can each comprise a substantially hook-shaped end 48a, 50a having some elasticity and being snappable over the wheel crossbar 52 when the rear wheel assemblies 28, 30 are mounted on the adapter assembly 40.

By designing the second snap connection 48, 50 similarly to the first snap connection 54, 56 the user can learn the operation of the stroller 10 with minimal effort.

According to a further elaboration of the invention, of which an example is shown in the figures, it is possible that the at least one receiving unit 42, 44 comprises a receiving slot 72 in which a support bracket 74 is slideably receivable, which support bracket 74 is connected to the accessory 46 to be mounted, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board.

In one embodiment, of which an example is shown in the figures, the configuration of the adapter assembly 40 with the accessory 46 is designed such that in mounted condition, the accessory 46 is located behind the first seat 22.

Figs. 1, 3, 6, and 7 show the successive steps of the conversion of the stroller 10 from the first condition with one seat 22 to the second condition with a seat 22 and an accessory 46, in this case a second seat 46. In Fig. 1, the wheel crossbar 52 is still connected to the frame 12-20. The brackets 54, 56 of the first snap connection are already folded up so that the rear wheel assemblies 28, 30 can be detached with the wheel crossbar 52 from the frame 12-20. Clearly, in normal use of the stroller 10 in the first condition, these brackets 54, 56 are folded down and the hook-shaped end 54a, 56a is in engagement with the wheel crossbar 52. In Fig. 3, the mounting bars 60, 62 are pulled from the associated openings 64, 66 in the frame 12-20 and the wheel crossbar 52 with the rear wheel assemblies 28, 30 connected thereto is taken from the frame 12-20. Fig. 6 shows the adapter assembly 40, the accessory 46 in the embodiment of the second seat, and the wheel crossbar 52 with mounting bars 60, 62 in a condition prior to mounting. Next, Fig. 7 shows the stroller 10 in the second condition in which the adapter assembly 40, the accessory 46 and the rear wheel assemblies 28, 30 with the wheel crossbar 52 are mounted. As already stated hereinabove, instead of a seat, the accessory 46 could also be formed by a cot, a car seat, a baggage box, a basket or a step up board.

With the invention, a stroller 10 is provided with relatively low initial purchase costs. In the first condition, the stroller 10 has the properties of a normal single stroller, also as regards appearance, design, weight and costs. At relatively low cost, the stroller 10 is expandable into a double stroller 10 which has first rate driving performance and excellent stability, which is of great importance from a viewpoint of safety.

While the invention has been represented and described in detail with reference to the drawing, this drawing and the description should be considered to be merely an example. The invention is not limited to the embodiments described. Features that are described in subclaims can be

mutually combined. Reference numerals in the claims should not be construed as limitations of the claims but serve merely for clarification.

Claims

1. A stroller (10) comprising:
   - a collapsible frame (12-20) which comprises a push bar (20);
   - a seat (22) which is mounted on the frame (12-20);
   - at least one front wheel assembly (24, 26) which is connected to the frame (12-20);
   - at least two rear wheel assemblies (28, 30) which, in a first condition of the stroller (10), are connected to the frame (10-20), wherein a distance between a rotation axis ($L_{front\ wheels}$) of the at least one front wheel assembly (24, 26) and a rotation axis ($L_{rear\ wheels}$) of the rear wheel assemblies (28, 30) is referred to as first wheelbase (W_1), wherein the rear wheel assemblies are detachably connected to the frame (12-20);

characterized by

   - an adapter assembly (40) which is connectable to the frame (12-20) when the rear wheel assemblies (28, 30) are detached from the frame (12-20) for bringing the stroller (10) into a second condition, which adapter assembly (40) comprises:
     - at least one receiving unit (42, 44) for an accessory (46), such as, for instance, a second seat, a cot, a car seat, a baggage box, a basket or a step up board;

   and wherein the adapter assembly (40) comprises
     - a fastening provision (48, 50) for the rear wheel assemblies (28, 30); or
     - its own set of rear wheel assemblies,

wherein, in the second condition of the stroller (10), a distance between the rotation axis ($L_{front\ wheels}$) of the at least one front wheel assembly (24,26) and a rotation axis ($L_{adapter\ wheels}$) of the rear wheel assemblies (28, 30) connected

to the adapter assembly (40) is referred to as second wheelbase (W_2), wherein the second wheelbase (W_2) is greater than the first wheelbase (W_1), and wherein the stroller (10) in both the first condition and the second condition has only two rear wheel assemblies and one or two front wheel assemblies.

2. The stroller according to claim 1, wherein the rear wheel assemblies (28, 30) are connected to a wheel crossbar (52), which wheel crossbar (52) is detachably connectable to the frame (12-20) by a first snap connection (54, 56).

3. The stroller according to claim 2, wherein the wheel crossbar (52) is detachably connectable to the adapter assembly (40) by the fastening provision (48, 50) which is designed as a second snap connection (48, 50).

4. The stroller according to claims 2 or 3, wherein the adapter assembly (40) comprises at least one receiving unit (42, 44) which is connected to an adapter assembly crossbar (58), which adapter assembly crossbar (58) is detachably connectable to the frame (12-20) by a snap connection (54, 56).

5. The stroller according to claim 4, wherein the snap connection (54, 56) for detachably connecting the adapter assembly crossbar (58) to the frame (12-20) is the first snap connection (54, 56).

6. The stroller according to claim 5, wherein the first snap connection (54, 56) comprises two brackets (54, 56) pivotably connected to the frame (12-20), which each comprise a substantially hook-shaped end (54a, 56a) which has some elasticity and which is snappable over the wheel crossbar (52) when the rear wheel assemblies (28, 30) are mounted on the

frame (12-20), and which is snappable over the adapter assembly crossbar (58) when the adapter assembly (40) is mounted on the frame (12-20).

7. The stroller according to any one of claims 2-6, wherein the wheel crossbar (52) comprises two parallel mounting bars (60, 62) extending perpendicularly to the wheel crossbar (52), and which are slideably receivable in associated openings (64, 66) in the frame (12-20) and which are slideably receivable in associated openings (68, 70) in the adapter assembly (40).

8. The stroller according to claim 7, wherein the stroller (10) also has the features of claims 3 and 4, wherein the second snap connection (48, 50) comprises two brackets (48, 50) pivotably connected to the adapter assembly (40) and which each comprise a substantially hook-shaped end (48a, 50a) which has some elasticity and which is snappable over the wheel crossbar (52) when the rear wheel assemblies (28, 30) are mounted on the adapter assembly (40).

9. The stroller according to any one of the preceding claims, wherein the at least one receiving unit (42, 44) comprises a receiving slot (72) in which a support bracket (74) is slideably receivable, which support bracket (74) is connected to the accessory (46) to be mounted, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board.

10. The stroller according to any one of the preceding claims, wherein the configuration of the adapter assembly (40) with the accessory (46) is designed such that the accessory (46) in mounted condition is located behind the first seat (22).

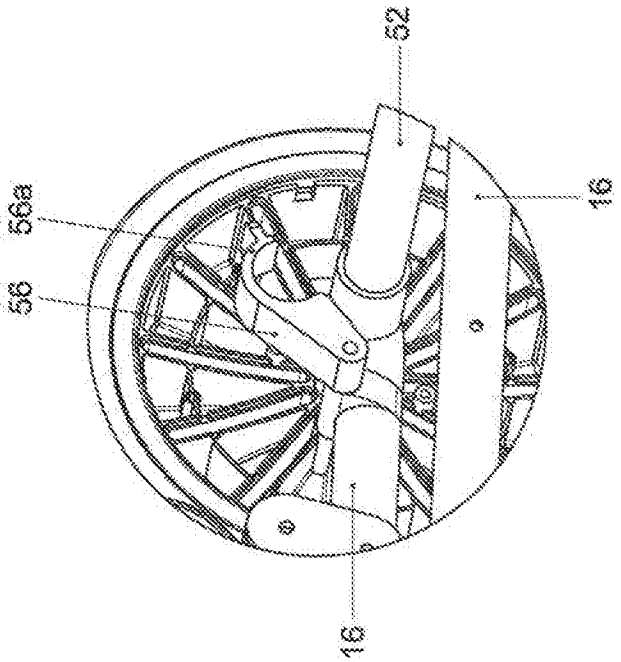

Fig. 2

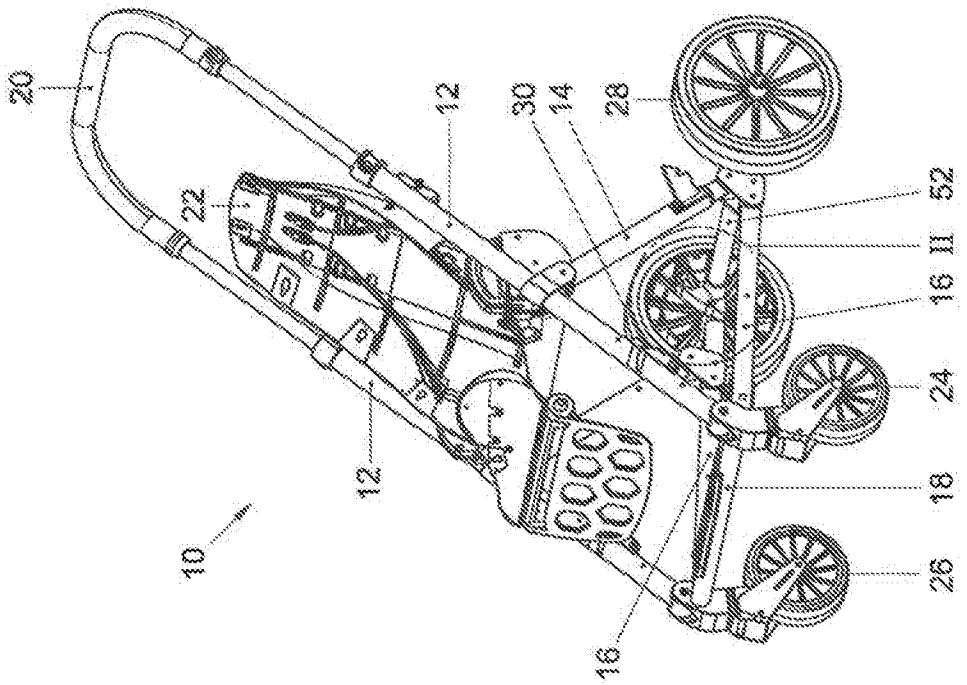

Fig. 1

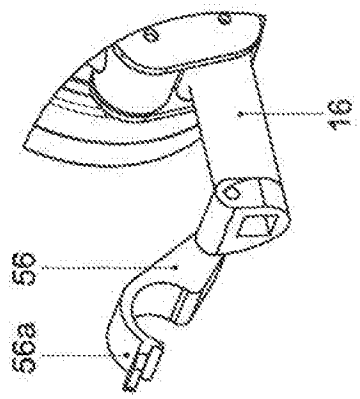

Fig. 4

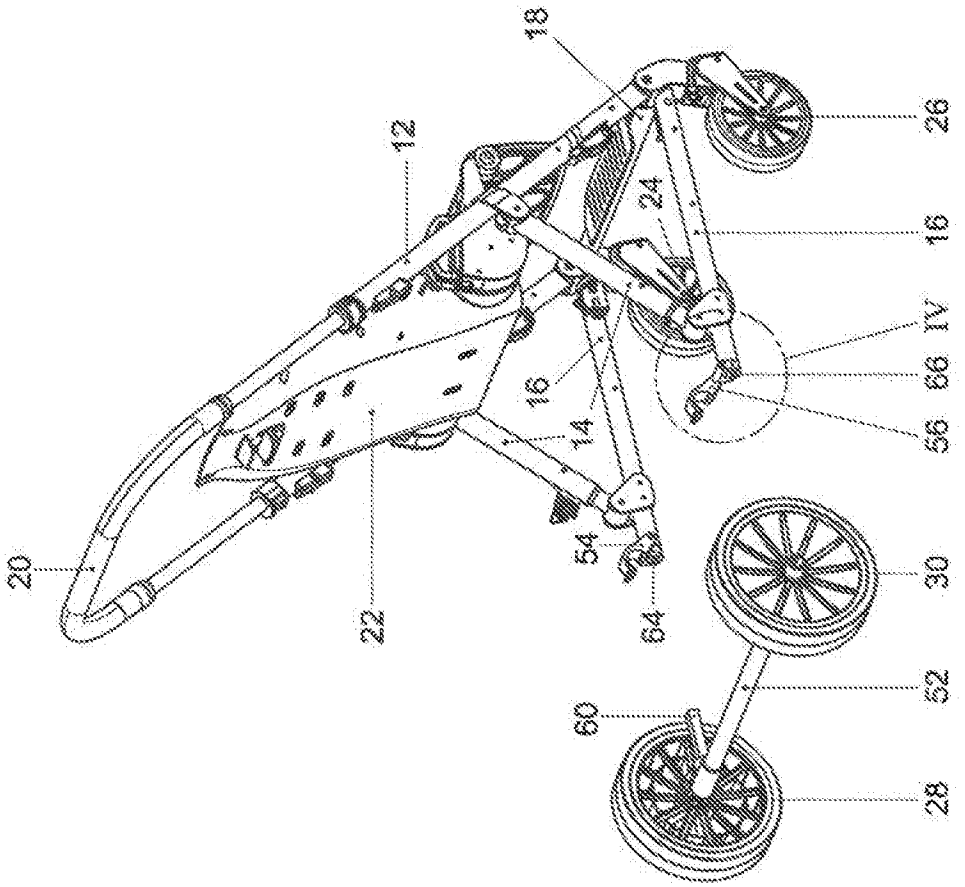

Fig. 3

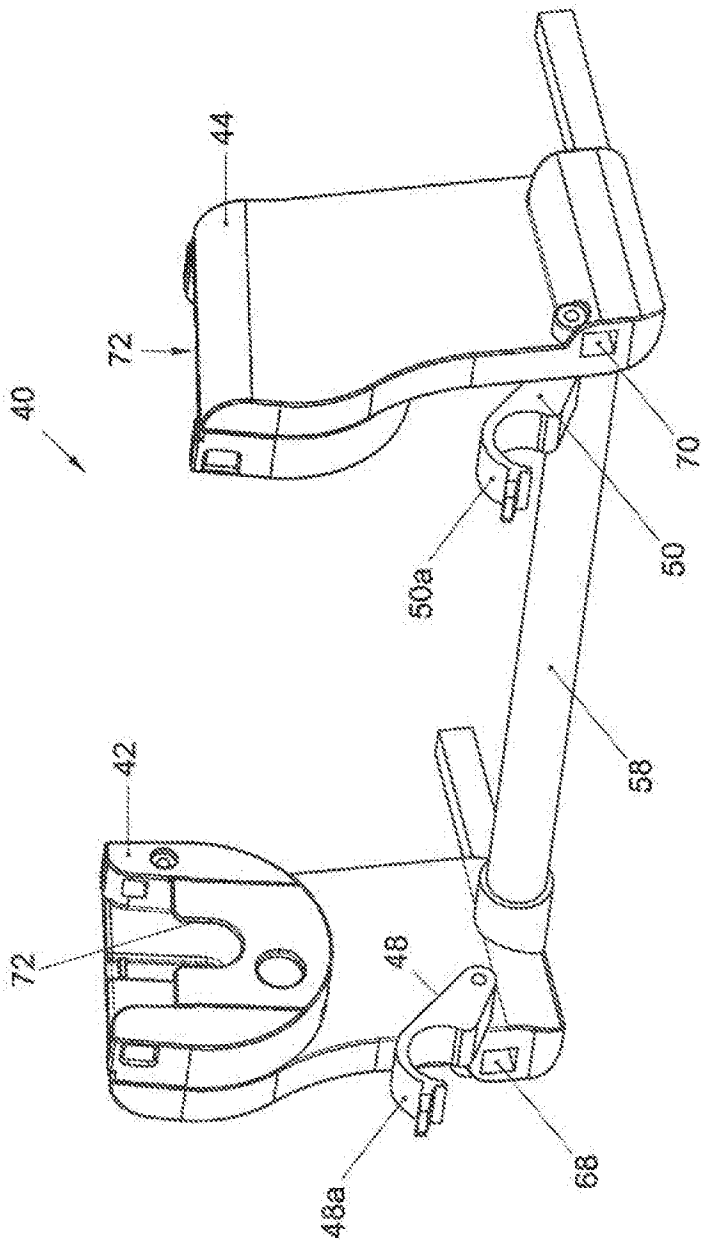

Fig. 5

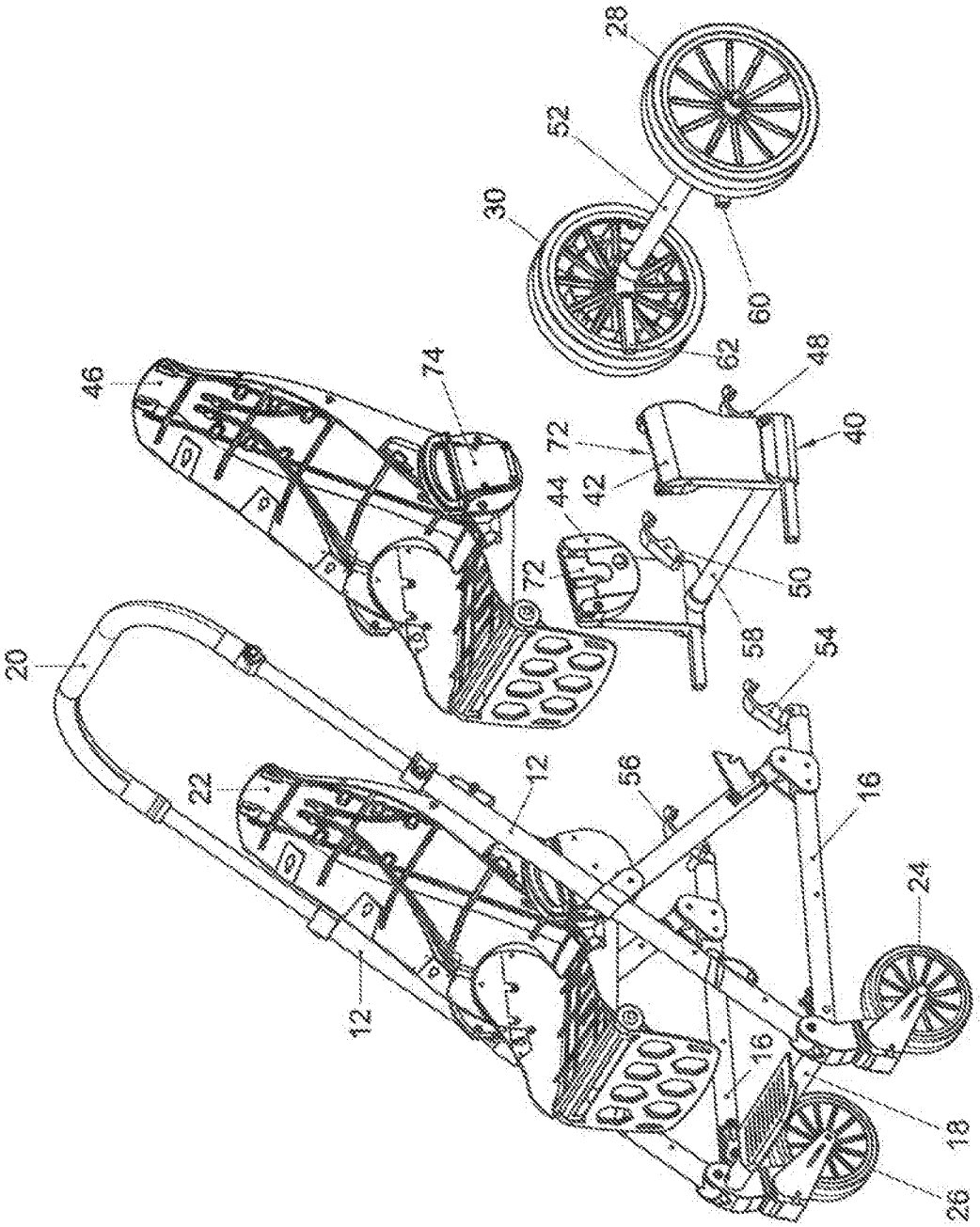
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Fig. 6

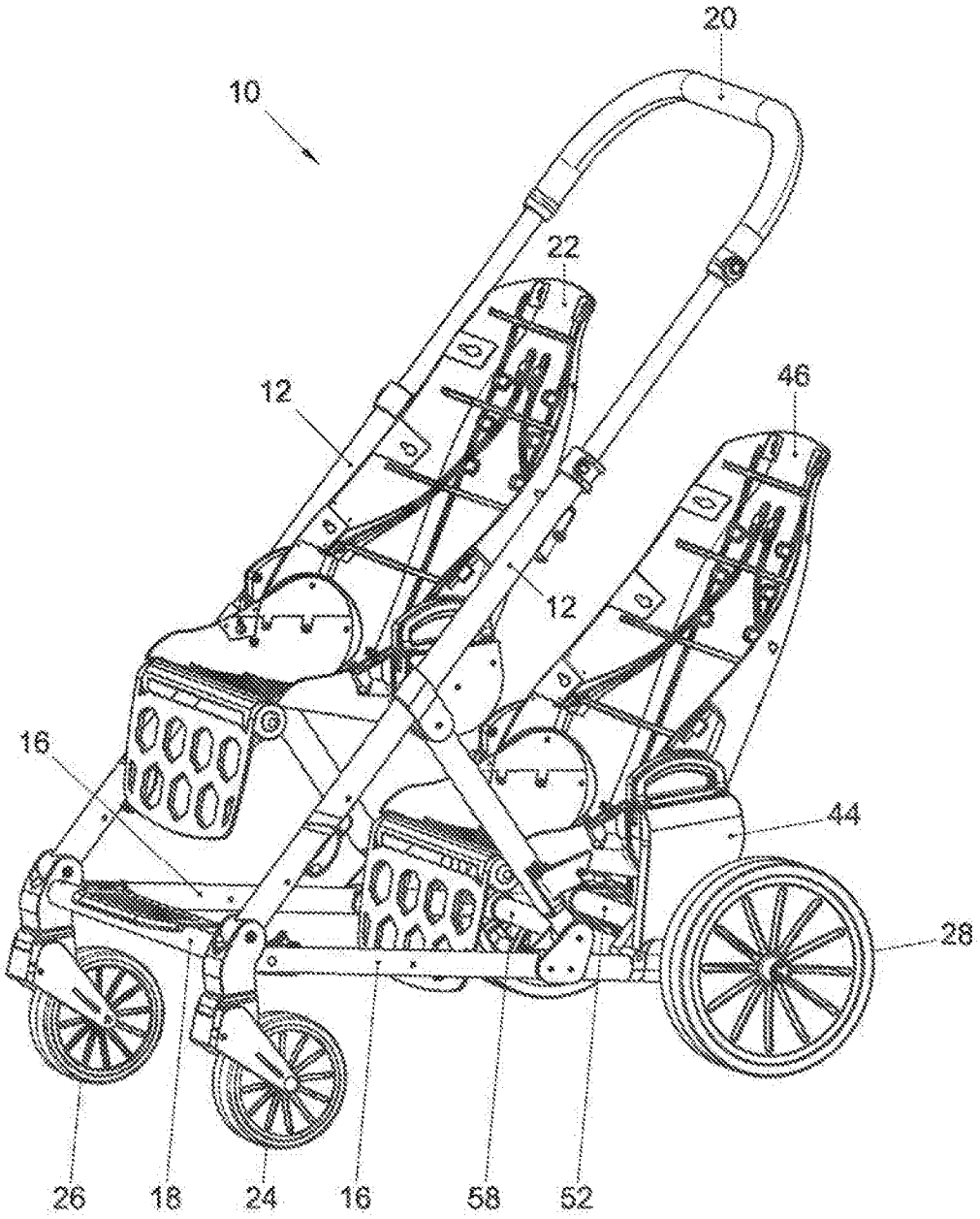

Fig. 7

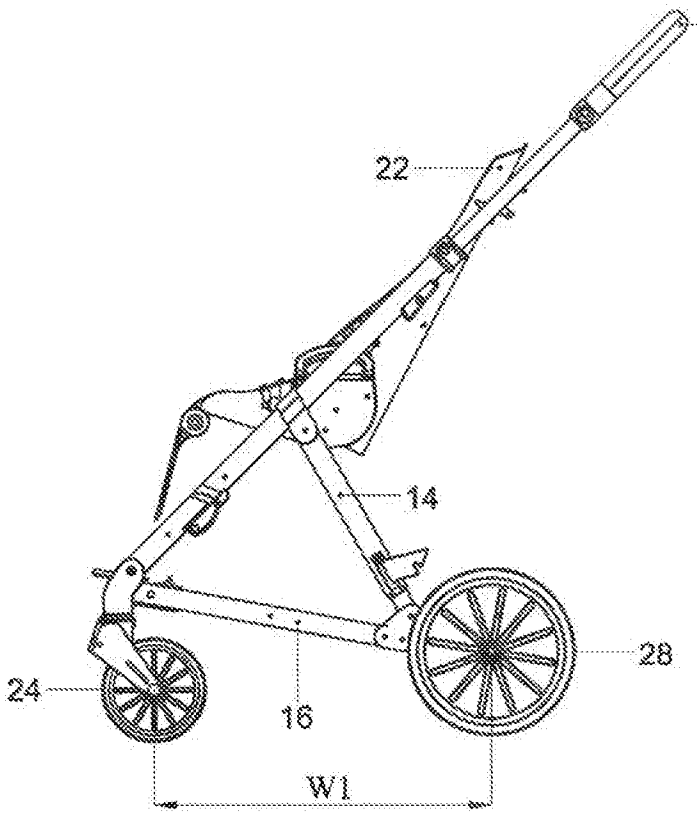

Fig. 8

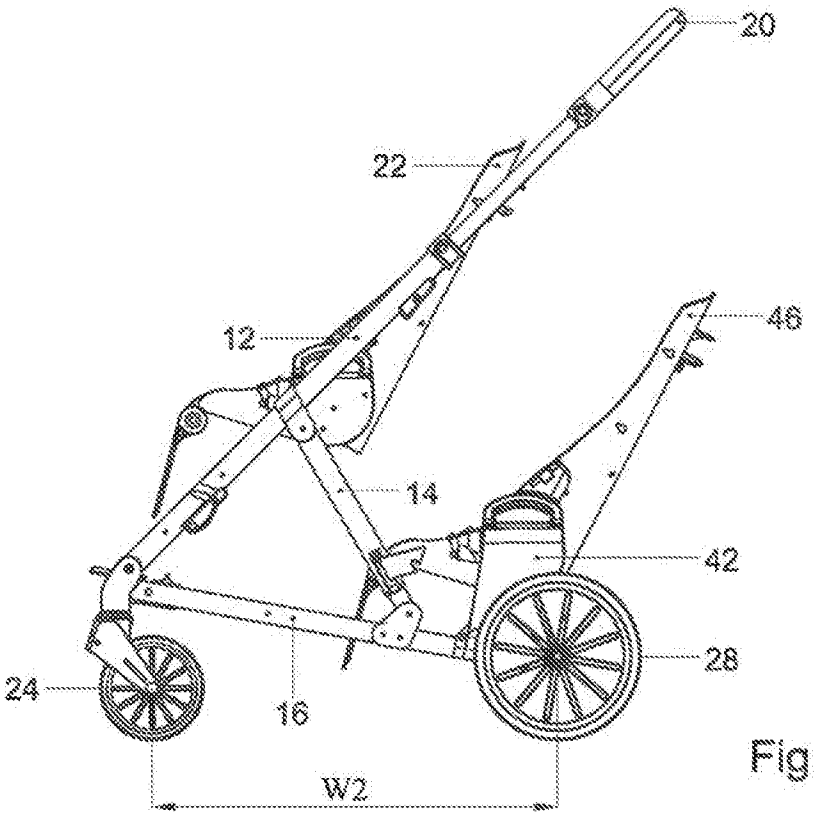

Fig. 9

INTERNATIONAL SEARCH REPORT

International application No
PCT/NL2013/050651

A. CLASSIFICATION OF SUBJECT MATTER
INV. B62B9/28 B62B9/12
ADD.

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)
B62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ES 2 253 093 A1 (PLAY SA [ES]) 16 May 2006 (2006-05-16)	1-5,7,9, 10
A	the whole document	6,8

X	US 2007/045972 A1 (THOMPSON JULIE T [US] THOMPSON JULIE TABOR [US]) 1 March 2007 (2007-03-01)	1,10
A	paragraph [0037] - paragraph [0038]; figure 3	2-9

X	WO 2008/135974 A2 (KATZ GEVA [IL]; LAZAROVICH ORON [IL]) 13 November 2008 (2008-11-13)	1,10
A	abstract; figures 7, 8, 13-16, 19	2-9

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[X] Further documents are listed in the continuation of Box C. [X] 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	Date of mailing of the international search report
8 January 2014	15/01/2014

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Wochinz, Reinmar

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No
PCT/NL2013/050651

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2008/179863 A1 (SCHONFELD JULIA DINAH [US]) 31 July 2008 (2008-07-31) paragraph [0008] - paragraph [0015]; figures 3-4c	1-10
A	US 6 443 467 B1 (BLACK DAVID A [US]) 3 September 2002 (2002-09-03) claims 1-13; figure 2	1-10
A	US 2008/315563 A1 (CRISP DAVID J [GB]) 25 December 2008 (2008-12-25) the whole document	1-10

Form PCT/ISA/210 (continuation of second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/NL2013/050651

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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US 2007045972 A1	01-03-2007	US 2007045972 A1	01-03-2007
		US 2010072731 A1	25-03-2010
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		US 2010301585 A1	02-12-2010
		WO 2008135974 A2	13-11-2008
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US 6443467 B1	03-09-2002	NONE	
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		US 2008315563 A1	25-12-2008
		WO 2007049071 A2	03-05-2007

Electronic Acknowledgement Receipt

EFS ID:	40013863
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	Christopher Chan/LaYonda Prue
Filer Authorized By:	Christopher Chan
Attorney Docket Number:	34757-2430
Receipt Date:	15-JUL-2020
Filing Date:	27-MAR-2020
Time Stamp:	19:11:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		34757-2430_Response_to_Restriction_Requirement.pdf	46693 c81deeb1db964f44853dc82b333da3d5c5fae500	yes	9

	Multipart Description/PDF files in .zip description			
	Document Description	Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1	
	Claims	2	7	
	Applicant Arguments/Remarks Made in an Amendment	8	9	

Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	34757-2430_IDS-pt_1.pdf	1037544 c41c9e13599db6a17c47676de610ce80ab321989	no	13
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4	Non Patent Literature	Australian_OA_1.pdf	782981 da8a033352b5e23fe3ebe6f9ec7bd56f5a654ab8	no	5
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5	Non Patent Literature	Australian_OA_2.pdf	478318 00210fd07c715ae125a8fe46a5814a4426528a3e	no	4
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6	Non Patent Literature	Canadian_OA.pdf	440250 82476058f5b12df32df2eb753a29700c48199529	no	3
Warnings:					
Information:					

7	Non Patent Literature	Chinese_Office_Action.pdf	3521911 55b0c5b542efe2cfe1967e3e6bbcd02b3aeb2de2	no	11
Warnings:					
Information:					
8	Non Patent Literature	CN_OA_06_08_2013.pdf	1403573 732c5b08efee6ba31681daab8be065451fa4849e	no	11
Warnings:					
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9	Non Patent Literature	CN_OA_09_06_2015.pdf	774083 bcf8909aecfed50736a11c8e778ff31f9fa161ba	no	9
Warnings:					
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10	Non Patent Literature	CN_OA_10_31_2012.pdf	1982577 fd4db0e212c04d63cb7c7545b1d82a03e6a0e97c	no	17
Warnings:					
Information:					
11	Non Patent Literature	CN_OA_11_18_2013.pdf	466002 255ac3bbd1df1a3788aebea193b2a16cdc133d6a	no	5
Warnings:					
Information:					
12	Foreign Reference	CN1978264A.pdf	3232904 21b90be9cf217390fa35579039dc0d4cc88e196a	no	22
Warnings:					
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13	Foreign Reference	CN2784272Y.pdf	1173849 21726a96d1df92eddca020222ab18c21d4c248c4	no	11
Warnings:					
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14	Foreign Reference	CN2918181Y.pdf	2778756 cb73c1921150b7dc9b13a021c2e3a50688106b2d	no	20
Warnings:					
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15	Foreign Reference	CN102256856A.pdf	3499499 e64504bf86281b46a305f8cadbd7492a1207b4e9	no	20
Warnings:					
Information:					
16	Foreign Reference	CN103909960A.pdf	7876182 d8586754e5bc39d4fba5fd7291f0397549c995d8	no	47
Warnings:					
Information:					
17	Foreign Reference	CN103921830A.pdf	3313950 805d174a327e155c81ed7c6c30be3eed7091559e	no	21
Warnings:					
Information:					
18	Foreign Reference	CN201626448U.pdf	814922 ed0789727b10e7a3f42c0e9a146c676f874a9827	no	8
Warnings:					
Information:					
19	Information Disclosure Statement (IDS) Form (SB08)	CN201646823U.pdf	874409 2b28cda01f10075b723b4fe4f8606caf6d12f312	no	8
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
20	Non Patent Literature	EESR_EP17161947.pdf	1222579 a9a60ed4677dbd83f8c737d3ca89b8385d1fc617	no	9
Warnings:					
Information:					

21	Non Patent Literature	EP_94_3_Comm_09831215_01_13_2016.pdf	452006 bb3423349a03fb3ecfb11457584636c33b43e3dc	no	5
Warnings:					
Information:					
22	Foreign Reference	ES2253093A1.pdf	882087 d1aa964fe0890f92ae9e1ef3c28b3b8d40eb0515	no	9
Warnings:					
Information:					
23	Non Patent Literature	ESR_and_Search_Opinion_09831215.pdf	674009 d5fa66a68b7ea629779fe3cb4c5bc67c8d50c57b	no	7
Warnings:					
Information:					
24	Foreign Reference	GB2309203A.pdf	320674 2b20c5223941780006163c643b398f2500512d99	no	9
Warnings:					
Information:					
25	Non Patent Literature	IPRP.pdf	277865 b1e9cbc441f58ba484a3ecb1bdc5ff262cca2415	no	5
Warnings:					
Information:					
26	Non Patent Literature	ISRandWO.pdf	937978 8b848cc0f3df4919ea2b91e06266f17d88f39a27	no	6
Warnings:					
Information:					
27	Foreign Reference	WO2005105545A1.pdf	938811 c48d898c1e844cbaa428f82eb7245bd52027663a	no	26
Warnings:					
Information:					

28	Foreign Reference	WO2005105546A1.pdf	2515651 fe18a2ed56be47711bede67586c07a37c4f16228	no	69
Warnings:					
Information:					
29	Foreign Reference	WO2010065884A1.pdf	1210469 6e453232e81a0d362e1adab94c0abd08a23bb0e3	no	28
Warnings:					
Information:					
30	Foreign Reference	WO2014042524A1.pdf	3726452 68383d4470a604f786ec58ce326ce9d74f2247d0	no	26
Warnings:					
Information:					
			Total Files Size (in bytes):	48692297	

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/832,429	03/27/2020	Jon Hee Lee	34757-2430

CONFIRMATION NO. 8948

134811
Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

PUBLICATION NOTICE

OC000000118511983

Title:REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Publication No.US-2020-0223470-A1
Publication Date:07/16/2020

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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From: PAIR_eOfficeAction@uspto.gov
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Jul 17, 2020 03:55:10 AM

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UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 134811 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16832429	NTC.PUB	07/16/2020	34757-2430

To view your correspondence online or update your email addresses, please visit us anytime at https://sportal.uspto.gov/secure/myportal/privatepair.

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/832,429	Filing Date 03/27/2020	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $460 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	07/16/2020	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $460 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/DENISE T LILES/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

134811 7590 09/22/2020

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

EXAMINER	
DOLAK, JAMES M	

ART UNIT	PAPER NUMBER
3618	

NOTIFICATION DATE	DELIVERY MODE
09/22/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@eversheds-sutherland.com

Office Action Summary	Application No. 16/832,429	Applicant(s) Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 7/15/2020.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-20 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☑ Claim(s) 1-20 are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 3/27/2020 is/are: a)☐ accepted or b)☑ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Response to Amendment

2. The reply filed on 3/11/2019 cancelled claims 5, 13, and 20, and amended claims 1-4, 6, 11, and 18. Claims 1-4, 6-12, 14-19 are currently pending herein.

Election/Restrictions

3. Applicant's election without traverse of Species F (Fig.8A-H) in the reply filed on 7/15/2020 is acknowledged.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on 7/15/2020 were filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

5. Applicant is advised that the M.P.E.P. states the following with respect to large information disclosure statements (such as the one filed 7/15/2020): Although a concise explanation of the relevance of information is not required for English language information, applicants are encouraged to provide a concise explanation of why the English-language information is being submitted. Concise explanations (especially those that point out the relevant pages and lines) are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more is highly relevant to patentability (M.P.E.P. § 609)

6. Therefore it is recommended that if any information that has been cited by Applicant in the disclosure statement is known to be material for patentability as defined by 37 CFR 1.56, Applicant should present a concise statement as to the relevance of that/those particular documents therein cited. The references cited by applicants in the IDS and listed on the numerous 1449s have been made of record.

7. While the statements filed clearly do not comply with the guidelines set forth in MPEP 2004 regarding both the number of references cited and the elimination of clearly irrelevant art and marginally cumulative information, compliance with these guidelines is not mandatory. Furthermore, 37 CFR 1.97 and 1.98 do not require that the information be material, rather they allow for submission of information regardless of its pertinence to the claimed invention. Also, there is no requirement to explain the materiality of the submitted references, however, the cloaking of a clearly relevant reference by inclusion in a long list of citations may not comply with Applicant's duty of disclosure, see Penn Yan Boats, Inc. V. Sea Lark boats Inc., 359 F. Supp. 948, aff'd 479 F. 2d. 1338.

Drawings

8. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “first end” and “distal/second end” (Claim 6/14/18/12) and similarly in relation to the handle element “an end” (Claim 9/19) must all be shown and labeled or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

9. Claims 1 and 10 are is objected to because of the following informalities: "a first seat attachment adapter coupled the first" (Claim 1, line 16 & Claim 10, line 13) should most likely be rewritten as: "a first seat attachment adapter coupled **to** the first." Appropriate correction is required.

10. Claim 6 is objected to because of the following informalities: "the second seat" should most likely be rewritten as: "the first seat." Appropriate correction is required.

Claim Rejections - 35 USC § 112

11. The following is a quotation of 35 U.S.C. 112(b):

> (b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

> The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-20 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention. Regarding the claims, each independent claim recites "adjustable/rotatable with respect to" (Claim 1/10/17), which is unclear and therefore renders the claims indefinite. Appropriate correction is required.

13. Claims 6, 14, and 18 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention. Regarding claim 6/14/18, the claim recites the open-ended clause "configured to be removably coupled", which renders the claim indefinite, since it's not clear whether the claimed "coupling" is actually taking place or not. It has been held that the open-ended recitations stating that an element is capable to perform a function (e.g., "configured to", "adapted to", etc.) are not the positive limitations but only require the ability to so perform. They do not constitute a limitation in any patentable sense. See In re Hutchinson, 69 USPQ 138. Just because something is "configured to" do something (i.e. is "capable of" doing something), doesn't actually mean it does it. "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v.Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). The Office hereby notes that "configured to" does not explicitly denote how features(s) are constructed and/or associated with other claimed limitations; whereas the claim is amenable to two or more plausible claim constructions. If a claim is amenable to two or more plausible claim constructions, then

the claim may be deemed indefinite. See Ex parte Miyazaki, 89 USPQ2d 1207 (Bd. Pat. App. & Inter. 2008) (precedential). Applicant is required to use definitive and positive statements while reciting the structure and functions of the claimed apparatus (e.g. "a locking arm chamfer [that is configured to engage] --engaging-- the lock pin chamfer"). Appropriate correction is required.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. **Claims 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheng (US 7,475,900 B2)**.

[Claim 17] Regarding Claim 17, Cheng discloses:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421);

a first back wheel support frame (See, e.g., Fig. 4-8, 32); a second back wheel support frame (See, e.g., Fig. 4-8, 32); a first front wheel support frame (See, e.g., Fig. 4-8, 31); a second front wheel support frame (See, e.g., Fig. 4-8, 31);

a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 72) coupled to the stroller frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment housing (See, e.g., Fig. 4-8, 410) disposed adjacent the first front wheel support frame (See, e.g., Fig. 4-8); a second seat attachment housing (See, e.g., Fig. 4-8, 410) disposed adjacent the second front wheel support frame (See, e.g., Fig. 4-8); a first seat attachment adapter (See, e.g., Fig. 4-8, 71) coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 71) coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame (See, e.g., Fig. 4-8) and wherein a second seat (See, e.g., Fig. 4-8, 71) is removably coupled to the first seat attachment adapter and the second seat attachment adapter (See, e.g., Fig. 4-8)

[Claim 20] Regarding Claim 20, Cheng further discloses: further comprising: further comprising: a third seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the first upper tube support frame (See, e.g., Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the second upper tube support frame (See, e.g., Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Fig. 4-8, 420).

Claim Rejections - 35 USC § 103

16. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. This application currently names joint inventors. In considering patentability of the claims under pre-AIA 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of pre-AIA 35 U.S.C. 103(c) and potential pre-AIA 35 U.S.C. 102(e), (f) or (g) prior art under pre-AIA 35 U.S.C. 103(a).

19. Claims 1-5, 7-13, 15, 16, and 19, are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng (US 7,475,900 B2) and further in view of Liao (US D593,459S)

[Claim 1] Regarding Claim 1, Cheng teaches:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421); a first front wheel support frame (See, e.g., Fig. 4-8, 31) adjustable with respect to the first upper tube support frame (See, e.g., Fig. 4-8); a second front wheel support frame (See, e.g., Fig. 4-8, 31) adjustable with respect to the second upper tube support frame (See, e.g., Fig. 4-8); a first back wheel support frame (See, e.g., Fig. 4-8, 32) rotatable with respect to the first upper tube support frame (See, e.g., Fig. 4-8); and a second back wheel support frame (See, e.g., Fig. 4-8, 32) rotatable with respect to the second upper tube support frame (See, e.g., Fig. 4-8);

a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 71) coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the stroller frame below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8);

wherein a second seat (See, e.g., Fig. 4-8, 72) is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position (See, e.g., Fig. 4-8) and wherein the second vertical position and the third vertical position are at a same vertical height (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first seat attachment adapter is coupled to the first front wheel support frame, and wherein the second seat attachment adapter is coupled to the second front wheel support frame.

However, Liao teaches a similar stroller with seat attachment (See, e.g., Liao: Fig.1-13) wherein a first seat attachment adapter is coupled to the first front wheel support frame (See, e.g., Liao: Fig.1-13), and wherein a second seat attachment adapter is coupled to the second front wheel support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide seat attachment adapters coupled to the front wheel support frame of the stroller. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the seat attachment adapters coupled to the front wheel support frame such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to mount the front stroller seat at a position that is lower to the ground level thereby not requiring a parent to hoist the heavy baby seat up as high off the ground when mounting/dismounting from the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 2] Regarding Claim 2, the combination of Cheng in view of Liao further teaches: further comprising: a first seat attachment housing (See, e.g., Fig. 4-8, 71) disposed adjacent the first front wheel support frame at the second vertical position (See, e.g., Fig. 4-8); a second seat attachment housing (See, e.g., Fig. 4-8, 71) disposed adjacent the second front wheel support frame at the third vertical position

(See, e.g., Fig. 4-8); wherein the first seat attachment adapter is coupled to the first seat attachment housing (See, e.g., Fig. 4-8) and the second seat attachment adapter is coupled to the second seat attachment housing (See, e.g., Fig. 4-8).

[Claim 3] Regarding Claim 3, the combination of Cheng in view of Liao further teaches: wherein the first seat attachment housing extends into the first front wheel support frame (See, e.g., Liao: Fig.1-13) and the second seat attachment housing extends into the second front wheel support frame (See, e.g., Liao: Fig.1-13).

[Claim 4] Regarding Claim 4, the combination of Cheng in view of Liao further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end (See, e.g., Fig. 4-8, 410).

[Claim 5] Regarding Claim 5, the combination of Cheng in view of Liao further teaches: wherein the first end comprises a connector portion (See, e.g., Fig. 4-8, 410) and is coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Fig. 4-8).

[Claim 7] Regarding Claim 7, the combination of Cheng in view of Liao further teaches: wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram (See, e.g., Fig. 4-8, 71) and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram (See, e.g., Fig. 4-8, 72).

[Claim 8] Regarding Claim 8, the combination of Cheng in view of Liao further teaches: further comprising: a third seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the stroller frame at the first vertical position (See, e.g., Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the stroller frame at

the first vertical position (See, e.g., Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Fig. 4-8).

[Claim 9] Regarding Claim 9, the combination of Cheng in view of Liao further teaches: further comprising a handle (See, e.g., Fig. 4-8, 10+24) comprising a first end and a distal second end (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: where the handle first end is coupled to the first upper tube support frame and the distal second end is coupled to the second upper tube support frame.

However, Liao teaches a similar stroller with seat attachments (See, e.g., Liao: Fig.1-13) wherein a handle (See, e.g., Liao: Fig.1-13) is provided along an end of a first upper tube support frame and an end of a second upper tube support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide a handle coupled to upper tube support frames where the second seat is mounted. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the handle coupled to the upper tube support frames such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to push the stroller from a position where the handle adds the greatest mechanical advantage to the system thereby not requiring a parent to struggle to move the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 10] Regarding Claim 10, Cheng discloses:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421); a front wheel support frame (See, e.g., Fig. 4-8, 31) adjustable with respect to the first upper tube support frame (See, e.g., Fig. 4-8); a back wheel support frame (See, e.g., Fig. 4-8, 32) rotatable with respect to the first upper tube support frame (See, e.g., Fig. 4-8); and a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 71) coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8);

wherein a second seat (See, e.g., Fig. 4-8, 72) is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first seat attachment adapter is coupled to the front wheel support frame, and wherein the second seat attachment adapter is coupled to the front wheel support frame.

However, Liao teaches a similar stroller with seat attachment (See, e.g., Liao: Fig.1-13) wherein a first seat attachment adapter is coupled to the front wheel support frame (See, e.g., Liao: Fig.1-13), and wherein a second seat attachment adapter is coupled to the front wheel support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide seat attachment adapters coupled to the front wheel support frame of the stroller. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the seat attachment adapters coupled to the front wheel support frame such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to mount the front stroller seat at a position that is lower to the ground level thereby not requiring a parent to hoist the heavy baby seat up as high off the ground when mounting/dismounting from the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 11] Regarding Claim 11, the combination of Cheng in view of Liao further teaches: wherein the front wheel support frame comprises a first front wheel support frame member (See, e.g., Fig. 4-8, 31) and a second front wheel support frame member (See, e.g., Fig. 4-8, 31).

[Claim 12] Regarding Claim 12, the combination of Cheng in view of Liao further teaches: wherein the back wheel support frame comprises a first back wheel support member (See, e.g., Fig. 4-8, 32) and a second back wheel support member (See, e.g., Fig. 4-8, 32).

[Claim 13] Regarding Claim 13, the combination of Cheng in view of Liao further teaches: further comprising: a first seat attachment housing (See, e.g., Fig. 4-8, 71) disposed adjacent the front wheel support frame at the second vertical position (See, e.g., Fig. 4-8); a second seat attachment housing (See, e.g., Fig. 4-8, 71) disposed adjacent the front wheel support frame at the third vertical position (See, e.g., Fig. 4-8); wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing (See, e.g., Fig. 4-8).

[Claim 15] Regarding Claim 15, the combination of Cheng in view of Liao further teaches: wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram (See, e.g., Fig. 4-8, 71) and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram (See, e.g., Fig. 4-8, 72).

[Claim 16] Regarding Claim 16, the combination of Cheng in view of Liao further teaches: further comprising: further comprising: a third seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the first upper tube support frame at the first vertical position (See, e.g., Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the second upper tube support frame at the first vertical position (See,

e.g., Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Fig. 4-8).

[Claim 19] Regarding Claim 19, Cheng further teaches: further comprising a handle (See, e.g., Fig. 4-8, 10+24) comprising a first end and a distal second end (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: where the handle first end is coupled to the first upper tube support frame and the distal second end is coupled to the second upper tube support frame.

However, Liao teaches a similar stroller with seat attachments (See, e.g., Liao: Fig.1-13) wherein a handle (See, e.g., Liao: Fig.1-13) is provided along an end of a first upper tube support frame and an end of a second upper tube support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide a handle coupled to upper tube support frames where the second seat is mounted. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the handle coupled to the upper tube support frames such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to push the stroller from a position where the handle adds the greatest mechanical advantage to the system thereby not requiring a parent to struggle to move the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007))

20. **Claim 6, 14, and 18 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng and further in view of Cone, II al. (US 6,286,844 B1)**.

[Claim 6/14/18] Regarding Claim 6/14/18, Cheng further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter comprises: a first end comprising a connector portion (See, e.g., Cheng: Fig. 4-8, 71) configured to be coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8) [Claim 14/18] and a distal second end (See, e.g., Fig. 4-8, 71), wherein the second seat is configured to be coupled to the second end (See, e.g., Cheng: Fig. 4-8) [Claim 6/14/18].

Cheng fails to explicitly teach: wherein the distal second end is removably coupled to the second seat.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1 -13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with seat attachment adapters (See, e.g., Cone: Fig.1-13, 250) having a first end connected to the stroller frame and a second end releasably coupled to a seat (See, e.g., Cone: Fig.1-13, 12).

Cone teaches that it is well known in the art of stroller seat design to provide a seat attachment adapters that releasably connect to a seat and a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng with a seat attachment adapter that has a distal second end that is releasably coupled to the seat such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be

connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, and can be found on the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES M DOLAK whose telephone number is (571)270-7757. The examiner can normally be reached on 9-530 EST Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J ALLEN SHRIVER can be reached on 303-297-4337. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES M DOLAK/
Primary Examiner, Art Unit 3618.

Notice of References Cited	Application/Control No. 16/832,429	Applicant(s)/Patent Under Reexamination Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	Page 1 of 1

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*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
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*	B	US-6286844-B1	09-2001	Cone, II; Richard E.	B62B9/28	280/47.41
*	C	US-7475900-B2	01-2009	Cheng; Huang-Yi	B62B7/08	280/47.38
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	F					
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

CPC - Searched*		
Symbol	Date	Examiner
B62B7/008,00,006,14,142,145	09/10/2020	JMD
B62B9/12,28,102	09/10/2020	JMD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Inventor Search	09/10/2020	JMD
EAST text search	09/10/2020	JMD

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/JAMES M DOLAK/ Primary Examiner.Art Unit 3618	/JAMES M DOLAK/ Primary Examiner, Art Unit 3618

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/15/2020								
	1	✓								
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	19	✓								
	20	✓								

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	16832439
Filing Date	2020-03-27
First Named Inventor	John Hee Lee
Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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	2	10556610	B2	2020-02-11	Rolicki et al.	
	3	10449987	B2	2019-10-22	Gibson	
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	8	9849903	B1	2017-12-26	Lai	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	16832439
	Filing Date	2020-03-27
	First Named Inventor	John Hee Lee
	Art Unit	3618
	Examiner Name	James M. Dolak
	Attorney Docket Number	34757-2430

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	11	10023218	B2	2018-07-17	Paxton	
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	14	D593459	S	2009-06-02	Liao	

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	1	20100140902	A1	2010-06-10	Zehfuss	Corresponds to CN 103921830 A.
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Application Number	16832439
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First Named Inventor	John Hee Lee
Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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	4	201626448	CN	U	2010-11-10	GE LUO		
	5	201646823	CN	U	2010-11-24	GOODBABY CHILD PRODUCTS CO LTD		

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	1	OFFICE ACTION issued in Chinese Application No. 201710169826.4, dated October 31, 2018, 11 pages.	

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EXAMINER SIGNATURE

Examiner Signature	/JAMES M DOLAK/	Date Considered	09/10/2020

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	16832439
	Filing Date	2020-03-27
	First Named Inventor	John Hee Lee
	Art Unit	3618
	Examiner Name	James M. Dolak
	Attorney Docket Number	34757-2430

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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Signature	/Christopher J. Chan/	Date (YYYY-MM-DD)	2020-07-15
Name/Print	Christopher J. Chan	Registration Number	44070

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
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Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	1707186	A	1929-03-26	Chatfield	
	2	3000645	A	1961-09-19	Schmidt	
	3	4542915	A	1985-09-24	Wheeler, III et al.	
	4	5201535	A	1993-04-13	Kato et al.	
	5	5338096	A	1994-08-16	Huang	
	6	5567008	A	1996-10-22	Richard	
	7	6045145	A	2000-04-04	Lan	
	8	6209892	B1	2001-04-03	Schaaf et al.	

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	9	6286844	B1	2001-09-11	Richard et al.	
	10	6378892	B1	2002-04-30	Hsia	
	11	6443467	B1	2002-09-03	Black	
	12	6513827	B1	2003-02-04	Barenbrug	
	13	6561526	B1	2003-05-13	Towns	
	14	6676140	B1	2004-01-13	Gondobintoro	
	15	6752405	B1	2004-06-22	Wright	
	16	6851693	B2	2005-02-08	Haeggberg	
	17	6923467	B2	2005-08-02	Hsia	
	18	7249779	B2	2007-07-31	Ehrenreich et al.	
	19	7311323	B1	2007-12-25	Lan	

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	20	7320471	B2	2008-01-22	Maciejczyk	
	21	7367581	B2	2008-05-06	Yang	
	22	7377537	B2	2008-05-27	Li	
	23	7401803	B1	2008-07-22	Lai	
	24	7475900	B2	2009-01-13	Cheng	
	25	7481439	B2	2009-01-27	Thompson	
	26	7497461	B2	2009-03-03	Emerson	
	27	7677585	B2	2010-03-16	Rohl	
	28	7681894	B2	2010-03-23	Santamaria	
	29	7766366	B2	2010-08-03	Li	
	30	7832755	B2	2010-11-16	Nolan et al.	

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	31	7896384	B2	2011-03-01	Schonfeld	
	32	7938435	B2	2011-05-10	Sousa et al.	
	33	8029007	B2	2011-10-04	Jones et al.	
	34	8029014	B2	2011-10-04	Ahnert et al.	
	35	8033554	B2	2011-10-11	Vieira et al.	
	36	8061732	B1	2011-11-22	Song et al.	
	37	8157273	B2	2012-04-17	Bar-Lev	
	38	8231136	B2	2012-07-31	Fiore, Jr.	
	39	8251382	B2	2012-08-28	Chen et al.	
	40	8262103	B2	2012-09-11	Enserink et al.	
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	42	8444171	B2	2013-05-21	Smith et al.	
	43	8458880	B2	2013-06-11	Fiore, Jr.	
	44	8585075	B2	2013-11-19	Zhong	
	45	8596670	B2	2013-12-03	di Carimate et al.	
	46	8696016	B2	2014-04-15	Homan et al.	
	47	8733784	B2	2014-05-27	Kobayashi	
	48	8764048	B1	2014-07-01	Ahnert et al.	
	49	8882134	B2	2014-11-11	Rolicki et al.	
	50	8905427	B2	2014-12-09	Katz et al.	
	51	8936261	B2	2015-01-20	Yuan	
	52	9010773	B2	2015-04-21	Horst et al.	

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	53	9108654	B2	2015-08-18	Kozinski	
	54	9108659	B2	2015-08-18	Sparling	
	55	9119483	B1	2015-09-01	Heisey	
	56	9199659	B2	2015-12-01	Chen et al.	
	57	9200746	B2	2015-12-01	Xiao	
	58	9227650	B2	2016-01-05	Gillett	
	59	9242665	B2	2016-01-26	Offord	
	60	9260127	B2	2016-02-16	Rolicki et al.	
	61	9260128	B2	2016-02-16	Liu	
	62	9517787	B2	2016-12-13	Zehfuss et al.	
	63	9561817	B2	2017-02-07	Laffan et al.	

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	64	9701333	B2	2017-07-11	Liu	
	65	9725106	B2	2017-08-08	Pos	
	66	9771095	B2	2017-09-26	Laffan et al.	
	67	9776652	B2	2017-10-03	Zhong	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20010033069	A1	2001-10-25	Ivers	
	2	20020109321	A1	2002-08-15	Turner et al.	
	3	20030025304	A1	2003-02-06	Haeggberg	
	4	20060001226	A1	2006-01-05	Refsum	
	5	20060131841	A1	2006-06-22	Huang	

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	6	20060290107	A1	2006-12-28	Powers	
	7	20070001429	A1	2007-01-04	Maciejczyk	
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	10	20070114738	A1	2007-05-24	Jones et al.	
	11	20080224451	A1	2008-09-18	Vegt	
	12	20080231022	A1	2008-09-25	Hu et al.	
	13	20090302578	A1	2009-12-10	White et al.	
	14	20140191483	A1	2014-07-10	Rolicki et al.	
	15	20160046315	A1	2016-02-18	Zehfuss et al.	

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	1	1978264	CN	A	2007-06-13	HAOHAIZI CHILDREN S ARTICLES C	(Abstract)	☒
	2	2784272	CN	Y	2006-05-31	GOODBABY CHILD PRODUCTS CO LTD	(Abstract)	☒
	3	2918181	CN	Y	2007-07-04	DONGGUAN LIAOBUQI DAILY PRODUC	(Abstract)	☒
	4	2253093	ES	A1	2006-05-16	PLAY SA	(Abstract)	☒
	5	2309203	GB	A	1997-07-23	JANE SA		☐
	6	2005/105545	WO	A1	2005-11-10	STEPHANIE ROHL		☐
	7	2005/105546	WO	A1	2005-11-10	STEPHANIE ROHL		☐
	8	2010/065884	WO	A1	2010-06-10	DYNAMIC BRANDS LLC		☐
	9	2014/042524	WO	A1	2014-03-20	WF INTERNATIONAL HOLDING BV		☐

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	European Search Report and Search Opinion for European Application No. 09831215, dated November 4, 2013 (7pgs).	
	2	Extended European Search report issued in EP Application No. 17161947.1, mailed August 29, 2017 (9 pages).	
	3	International Search Report and Written Opinion for International Application No. PCT/US2009/066817, dated January 29, 2010 (6 pages).	
	4	International Preliminary Report on Patentability for International Application No. PCT/US2009/066817, dated June 7, 2011 (5 pages).	
	5	Office Action from Australian Patent Application 2009322149, dated April 1, 2014 (5pgs).	
	6	Office Action from Australian Patent Application No. 2009322149, dated December 2, 2014 (4pgs).	
	7	Office Action from Canadian Patent Application No. 2,745,914, dated December 17, 2015 (3pgs).	
	8	Office Action from Chinese Patent Application No. 200980148829.3 dated October 31, 2012 (17pgs., including 8 pgs. English translation).	
	9	Office Action from Chinese Patent Application No. 200980148829.3, dated June 8, 2013 (11 pgs. including, 5 pgs. English translation).	
	10	Office Action from Chinese Patent Application No. 200980148829.3, dated November 18, 2013 (5pgs, including 2pg English translation).	

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	11	Office Action from Chinese Patent Application No. 201410187239.4, dated September 6, 2015 (9pgs, including 4 pg. English translation)	
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Bibliographic Data

Application No: 16/832,429

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /JAMES M DOLAK/ Examiner's Signature | Initials

Title: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/27/2020	280	3618	34757-2430
RULE			

APPLICANTS

BABY JOGGER, LLC, Richmond, VA,

INVENTORS

Jon Hee Lee, Highwood, IL, UNITED STATES

Megan Roe, Kalamazoo, MI, UNITED STATES

Stacy Noel Simpson, Portage, MI, UNITED STATES

Mark Zehfuss, Glen Allen, VA, UNITED STATES

CONTINUING DATA

This application is a CON of 15912901 03/06/2018 PAT 10730543

15912901 is a CON of 15225326 08/01/2016 PAT 9944305

15225326 has PRO of 62311224 03/21/2016

15225326 is a CIP of 14597420 01/15/2015 PAT 9403550

14597420 is a CON of 14261558 04/25/2014 PAT 8955869

14261558 is a CON of 12631375 12/04/2009ABN

12631375 has PRO of 61119920 12/04/2008

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

04/07/2020

STATE OR COUNTRY

UNITED STATES

ADDRESS

Eversheds Sutherland (US) LLP/NWL

999 Peachtree Street

Suite 2300

Atlanta, GA 30309

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/03/01 23:01
		(Simpson near2 (Stacy and Noel).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:36
		(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:36
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:35

		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:24
		S78 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		S27 and ((wheel and seat) same add$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
		S10 and (seat near2 (attach$4 and convert$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
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S2	1	("20100140902").PN.	US-PGPUB;	OR	OFF	2011/11/10 17:55

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S3	4	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:03
S4	8	("20030025304" | "20070001429" | "20070114738" | "5338096").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:10
S5	15	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:19
S6	1	("7320471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/21 11:26
S7	3	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:26
S8	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/27 15:43
S9	37,502,244	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:43
S10	1,861	S8 and S9	US-PGPUB; USPAT; USOCR;	OR	ON	2012/06/27 15:44

			FPRS; EPO; JPO; DERWENT			
S11	1,537	S10 and seat	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S12	827	S10 and (seat same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S13	427	S10 and (seat near2 attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S14	51	S10 and (seat near2 (attach$4 and convert$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
S15	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 19:10
S16	37,502,315	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/06/28 19:17

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S17	1,076	S15 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S18	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 19:17
S19	1,861	S18 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S20	35	S17 and S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S21	2,902	S17 or S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:20
S22	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:15
S23	37,502,315	@ad<="20081204"	US-PGPUB;	OR	ON	2012/06/28 23:15

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S25	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:15
S26	1,861	S25 and S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S27	2,902	S24 or S26	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S28	657	S27 and ((wheel and seat) same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S29	1	("6209892").PN.	US-PGPUB;	OR	OFF	2012/06/28 23:16

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S30	44	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:16
S31	115	S28 and expand$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:20
S32	58	("5564786" | "0733889" | "6443467" | "0329579" | "5611560" | "3235279" | "0292933" | "6017051" | "0781495" | "2305719" | "1707186" | "4989890" | "6220621" | "6676140" | "1168896" | "2517443" | "20030075903" | "0647165").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:22
S33	33	("2769482" | "2857953" | "2993702" | "3235279" | "3309101" | "3330575" | "3738700" | "4725071" | "5018754" | "5263730" | "5338096" | "5417449" | "5653460" | "5664795" | "5911432" | "6045145" | "6068087" | "6378892" | "D321850" | "D359937").PN. OR ("6676140").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:24
S34	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:25
S35	15	("1707186").URPN.	USPAT	OR	ON	2012/06/28 23:28
S36	14	("20030111825" | "5333893" | "6209892" | "6513827" | "6863286" | "7032922" | "7367581" | "7377537" | "D429664" | "D430076").PN. OR ("7475900").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:31
S37	44	S31 and (wheel near2 remov$4)	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/06/28 23:35

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S38	22	("3738600" | "3876046" | "4570956" | "4750783" | "5188389" | "5234224" | "5499831" | "5536027" | "5562300" | "5876046" | "6189914" | "6193263" | "6209892" | "6290290" | "6302412" | "6398233" | "6550802" | "D397316" | "D481975" | "D486427" | "D497844").PN. OR ("D508443").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:36
S39	20	("4725071" | "5221106" | "5338096" | "5522121" | "5918892" | "6209892" | "6267406" | "6527294" | "D296540").PN. OR ("6752405").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:46
S40	15	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:48
S41	30	("0556168" | "1707186" | "1934396" | "20020033588" | "20050167951" | "20070252352" | "20080143082" | "20090026733" | "3383738" | "4083579" | "4805938" | "5221106" | "5333893" | "5522121" | "5769448" | "5918892" | "6431579" | "6527294" | "6601866" | "6752405" | "7481439" | "7516966" | "7597332" | "D484075" | "D595621" | "D598333").PN. OR ("7896384").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:49
S42	13	("3000645" | "4969656" | "5125712" | "5522121" | "5918892" | "6527294" | "6561526" | "6715783" | "6752405" | "6851693" | "6938906").PN. OR ("7677585").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:50
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S68	2	("1707186").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
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S77	1,873	S75 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S78	2,516	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:35

S79	35	S78 and S77	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36
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S85	1	("8251382").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/14 15:15

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S91	1,876	S89 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:09
S92	2,544	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:11
S93	1,082	S92 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:11
S94	51	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20100140902-$ or US-20080303232-$ or US-20070085303-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:10

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S104	1	("6296260").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:18
S105	1	("6203053").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:19
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S107	1	("5685552").PN.	US-PGPUB;	OR	OFF	2013/07/24 13:21

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S108	1	("5984326").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:21
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S111	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:25
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S117	55	("4736959" | "4743063" | "4872692" | "4878680" | "5201535" | "5676386").PN. OR ("5947555").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 10:09
S118	25	("20010040357" | "20020093177" | "20030075903" | "4921261" | "4989888" | "5676386" | "5794951" | "5947555" | "6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205" | "6641164" | "6702316").PN. OR ("6923467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 11:03
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S120	2	("3000645").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:26
S121	9	("3000645").URPN.	USPAT	OR	ON	2013/07/25 15:27
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S124	28	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:31

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S128	28	("1876963" | "20010033069" | "20020089136" | "20040075230" | "20040173989" | "20060261575" | "20100201089" | "2859975" | "3069182" | "4190261" | "4239248" | "4323258" | "4336952" | "4359231" | "5624128" | "5931244" | "6203053" | "6485039" | "6517092" | "6572130" | "6626446" | "7073822" | "7377527" | "7549655" | "7699325").PN. OR ("8146926").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:37
S129	1	("7249779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:38
S130	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:38
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S132	7,295,614	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/29 18:38
S133	2,588	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S134	3,082	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S135	1,082	S132 and S133	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:39
S136	1,877	S132 and S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2014/01/29 18:39

			DERWENT			
S137	5,616	S133 or S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S138	2,924	S132 and S137	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S139	1,012	S138 and stroller	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S140	901	S139 and seat$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S141	757	S140 and (insert$4 or attach$4 or detach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:42
S142	107	S141 and ((double or tandem) same stroller)	US-PGPUB; USPAT;	OR	ON	2014/01/29 18:42

			USOCR; FPRS; EPO; JPO; DERWENT			
S143	1	("5816367").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 09:23
S144	3	("2006/0290107").URPN.	USPAT	OR	ON	2014/01/30 14:24
S145	78	("20030020259" | "20030227157" | "20060290107" | "20070001429" | "20070085303" | "20070222167" | "20070296182" | "20080073877" | "20080150247" | "20090039620" | "20100038886" | "20100038887" | "20100072732" | "20100078916" | "20100109292" | "20100140902" | "20100282800" | "20120153583" | "2769482" | "2798733" | "2857953" | "2993702" | "3235279" | "3309101" | "4542915" | "4725071" | "4858947" | "5018754" | "5167425" | "5184835" | "5263730" | "5333893" | "5338096" | "5417449" | "5653460" | "5664795" | "5722682" | "5911432" | "6045145" | "6086087" | "6209892" | "6267406" | "6378892" | "6497424" | "6585284" | "6676140" | "6702316" | "6843498" | "6877761" | "6935652" | "6979017" | "7320471" | "7451999" | "7938433" | "8070179" | "8157273" | "8186705" | "8205894" | "D311363" | "D321850" | "D328047" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D455679" | "D587635" | "D614540" | "D616337" | "D616338" | "D636300").PN. OR ("8371606").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 14:26
S146	8	("2010/0078916").URPN.	USPAT	OR	ON	2014/01/30 14:27
S147	8	("20070096438" | "20100025968" | "20100078916" | "6422586" | "7401803" | "7441794" | "7632035" | "7766366").PN. OR ("8596669").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 14:27
S148	1	("8157273").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 16:20

S149	18	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:21
S150	1	("5338096").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 16:23
S151	19	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:24
S152	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:17
S153	53	("20030192925" | "20050072821" | "2907372" | "3079162" | "3248125" | "3627342" | "3961803" | "3967833" | "4032173" | "4113306" | "4181356" | "4220351" | "4231587" | "4239259" | "4256325" | "4412688" | "4620711" | "4681340" | "4762256" | "4844504" | "4892327" | "5230523" | "5333769" | "5398951" | "5411729" | "5431478" | "5468009" | "5478096" | "5662339" | "5806924" | "5829826" | "5964470" | "5987665" | "6045145" | "6231056" | "6250654" | "6375213" | "6811178" | "6910696" | "D254610" | "D345720" | "D358058" | "D365925" | "D402235" | "D508443").PN. OR ("7497461").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:56
S154	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 18:00
S155	23	("20010013689" | "20040032103" | "20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243260" | "20090295128" | "4398748" | "4836573" | "6446990" | "6478327" | "6572134" | "7497461" | "7513512" | "7658399" | "7686322" | "7712765" | "7775532" | "7832755" | "7878527" | "7938435").PN. OR ("8231136").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 10:54
S156	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/01/31 12:58

S157	14	("20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243261" | "20120098219" | "4398748" | "4836573" | "6446990" | "6478321" | "6478327" | "6572134" | "7712765").PN. OR ("8458880").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 12:59
S158	1	("7938435").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/31 13:26
S159	34	("4157839" | "5558357" | "5676386" | "5772279" | "5794951" | "5863061" | "5865447" | "5876046" | "5947555" | "6241274" | "6286844" | "6331032" | "6409205" | "6428034" | "6478327" | "6533309" | "6666473" | "6893040" | "7032922" | "7267359" | "7377537" | "7431395" | "7475900" | "7681894" | "7766366").PN. OR ("7938435").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 12:41
S160	17	("20050098983" | "2842374" | "6357784" | "7118121" | "7267359" | "7367581" | "7441794" | "7527283").PN. OR ("7766366").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 12:56
S161	105	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:14
S162	52	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:21
S168	1	("20140217706").PN.	US-PGPUB;	OR	OFF	2014/09/24 10:03

			USPAT; USOCR			
S169	3,175	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 10:24
S170	7,324,421	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:24
S171	1,878	S169 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25
S172	64	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25
S173	3,686,032	@pd>="20140129"	US-PGPUB; USPAT; USOCR;	OR	ON	2014/09/24 10:56

			FPRS; EPO; JPO; DERWENT			
S174	1	S171 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:56
S175	13	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:57
S176	1	("7,497,461").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:01
S177	94	S169 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 11:08
S178	12	("20070296182" | "20100117315" | "5820144" | "6086086" | "6513827" | "6715783" | "7032922" | "7066542" | "7364183" | "7377537" | "7455362" | "8061732").PN. OR ("8764048").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:25
S179	15	("3797848" | "4832361" | "5074575" | "6116624" | "6446990" | "6508605" | "6530591" | "6824161" | "6830254" | "6851700" | "6951342" | "7021650" | "7273225" | "7401803" | "7513512").PN. OR ("8696016").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:41
S180	1	("7,938,435").PN.	US-PGPUB;	OR	OFF	2014/09/24 11:47

			USPAT; USOCR			
S181	1	("20080231022").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:47
S182	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/09/24 11:48
S183	1	("7,766,366").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:51
S184	1	("6,286,844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:52
S185	1	("6,513,827").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S186	0	(2006/0131841).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S187	1	("20060131841").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S188	1	("20060001226").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S189	1	("7,320,471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S190	1	("6,045,145").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S191	1	("20080224451").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S192	1	("7,481,439").PN.	US-PGPUB;	OR	OFF	2014/09/24 11:57

			USPAT; USOCR			
S193	1	("7,367,581").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:57
S194	1	("8,029,007").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S195	1	("6,923,467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S196	1	("20070090619").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S197	1	("6,851,693").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:59
S198	1	("20010033069").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S199	1	("7,249,779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S200	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:02
S201	2,665	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:02

S202	79	S201 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 12:03
S203	2	S202 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:03
S204	1	("5338096").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:24
S205	1	("20030025304").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S206	1	("20070001429").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S207	1	("20070085303").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S208	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S209	1	("7681894").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:33
S210	14	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 14:33
S211	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:34
S212	41	("7249779" | "3000645" | "7677585" | "7377537" | "20060001226" | "8029007" | "20080231022" | "7766366" | "6443467" |	US-PGPUB;	OR	ON	2014/09/24 14:56

		"6561526" | "20080224451" | "6513827" | "7475900" | "7497461" | "20070114738" | "1707186" | "6752405" | "6851693" | "7938435" | "6676140" | "6045145" | "6923467" | "20030025304" | "20070001429" | "5338096" | "6045145" | "20070090619" | "6209892" | "6378892" | "7896384" | "8157273" | "8251382" | "8262103" | "8336904" | "20010033069" | "20060131841" | "7320471" | "7367581" | "7481439" | "6286844").PN.	USPAT; USOCR			
S219	19	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2015/04/20 13:53
S220	22	("7249779" | "20060001226" | "20080231022" | "7766366" | "8029007" | "20080224451" | "6513827" | "4797461" | "7497461" | "6851693" | "7938435" | "6045145" | "6923467" | "8905427" | "20070090619" | "20010033069" | "20060131841" | "6286844" | "7320471" | "7367581" | "7481439" | "8882134").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 13:58
S221	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:02
S222	68,470,442	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:02
S223	1,214,191	@pd>="20140924"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:03
S224	3,292	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:04
S225	2,741	(297/130,232,243,463.1).CCLS.	US-PGPUB;	OR	OFF	2015/04/20 14:04

			USPAT; USOCR			
S226	5,977	S224 or S225	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S227	2,929	S226 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S228	2	S227 and S223	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S229	88	("0119331" | "1138802" | "1269379" | "1707186" | "1890469" | "20040251063" | "20070045975" | "20090115151" | "20090160162" | "20100038887" | "20100140902" | "20110175330" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" | "6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" | "8398143" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("8905427").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:04
S230	84	(B62B7/00).CPC.	US-PGPUB;	OR	ON	2015/04/20 14:08

			USPAT; USOCR; FPRS; EPO; JPO			
S231	796	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S232	666	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S233	894	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S234	1,003	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S235	450	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S236	3,236	S230 S231 S232 S233 S234 S235	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S237	2,104	S236 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:13
S238	70	S237 and (seat$3 same revers$4)	US-PGPUB; USPAT;	OR	ON	2015/04/20 14:14

			USOCR; FPRS; EPO; JPO			
S239	77	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070069505-$ or US-20080231022-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7681894-$ or US-8955869-$ or US-8905427-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:14
S240	58	S238 not S239	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:14
S241	1	("8882134").PN.	US-PGPUB;	OR	OFF	2015/04/20 14:15

			USPAT; USOCR			
S242	87	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:16
S243	1	("6361111").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S244	1	("20040251063").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S245	1	("6527294").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20
S246	1	("20070045975").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20

S247	27	("20060001226" | "20070045975" | "20080296872" | "20090033066" | "5301970" | "5520433" | "5601302" | "5709400" | "5845924" | "6099022" | "6193263" | "6203054" | "6209892" | "6398233" | "6446990" | "6540250" | "6715783" | "7377537" | "7475900" | "7753398").PN. OR ("8029014").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:30
S249	2,790	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 10:16
S250	3,337	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 10:16
S251	102	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S252	824	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S253	686	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S254	947	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S255	1,031	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S256	520	(B62B9/12).CPC.	US-PGPUB; USPAT;	OR	ON	2015/12/07 10:17

			USOCR; FPRS; EPO; JPO			
S257	3,385	S251 S252 S253 S254 S255 S256	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S258	1,888,686	@pd>="20150420"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S259	6,070	S249 or S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S260	49	S258 and S249	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S261	93	S258 and S259	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S262	45	S258 and S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S263	44	S262 not S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:18
S264	105	S258 and S257	US-PGPUB; USPAT; USOCR;	OR	ON	2015/12/07 10:19

			FPRS; EPO; JPO			
S265	94	S264 not S263	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S266	93	S265 not S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S267	1	("8936261").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S268	64	("20040164593" | "20060261565" | "20070045975" | "20070069505" | "20070187914" | "20080054579" | "20080150247" | "20080179848" | "20080303232" | "20090033066" | "20090102162" | "20090256323" | "20100013281" | "20100102535" | "20100127480" | "20100230933" | "20100244408" | "20100259021" | "20110204600" | "20110291389" | "20110304124" | "20120025492" | "20120153583" | "20120242062" | "20120261961" | "20130113188" | "4872692" | "5018405" | "5676386" | "5722682" | "5947555" | "6513827" | "6530591" | "6581957" | "6851700" | "7032922" | "7267359" | "7377537" | "7401803" | "7681894" | "7686323" | "7753397" | "7753398" | "7789402" | "7798500" | "7938435" | "8029014" | "8033555" | "8157286" | "8205906" | "8240700" | "8251382" | "8322744" | "8366127" | "8454049" | "8465045" | "8469388" | "8474854" | "8480116" | "8485546" | "8544873" | "8550489" | "8596669").PN. OR ("8936261").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S269	18	("1671774" | "1707186" | "20050167951" | "20070194545" | "20100052277" | "20110163519" | "20120118516" | "7032922" | "7871100" | "8157273" | "8251382" | "8585075" | "8651502" | "8727370" | "D686541").PN. OR ("9010773").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 13:12

S270	1	("6,286,844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 18:14
S271	110	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S272	855	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S273	694	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S274	989	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S275	1,052	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S276	540	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S277	3,473	S271 S272 S273 S274 S275 S276	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S278	3,353	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB;	OR	OFF	2016/02/12 12:46

			USPAT; USOCR			
S279	2,802	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 12:46
S280	279,114	@pd>="20151207"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:47
S281	21	S277 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S282	16	S278 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S283	12	S279 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S284	17	S281 not (S282 or S283)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S285	2	("20070069504" | "7401803").PN. OR ("9242665").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:16
S286	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" | "20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" | "20100038886" | "20100038887" | "20100072731" | "20100140902" |	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:18

		"20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" | "20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" | "7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.				
S287	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 13:19
S288	1	("4343124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:17
S289	1	("4340124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:18
S290	1	("20140361517").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:50
S291	111	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S292	864	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44

S293	699	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S294	993	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S295	1,054	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S296	542	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S297	3,486	S291 S292 S293 S294 S295 S296	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S298	3,358	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S299	2,805	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S300	6,106	S298 or S299	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:45
S301	83,034	@pd>="20160212"	US-PGPUB; USPAT; USOCR;	OR	ON	2016/03/25 16:45

			FPRS; EPO; JPO			
S302	8	S300 and S301	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:59
S303	6	S297 and S301	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 17:01
S304	13	("20080231022" | "20090243261" | "20130113188" | "6513827" | "7267359" | "7377537" | "7798500" | "7938435" | "8061732" | "8733784" | "8764048" | "8777253" | "8955869").PN. OR ("9260128").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:03
S305	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "20140191483" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" | "6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" |	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:04

		"8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "D326748" | "D431798").PN. OR ("9260127").URPN.				
S306	1	("20150123440").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:20
S307	1	("8955869").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:22
S308	32	("20010033069" | "20060001226" | "20060131841" | "20070090619" | "20080224451" | "20080231022" | "6045145" | "6286844" | "6513827" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7475900" | "7481439" | "7497461" | "7681894" | "7766366" | "7938435" | "8029007" | "8033554" | "8061732" | "8231136" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048").PN. OR ("8955869").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:22
S309	2	"39773911".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:27
S310	32	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:33
S311	28	("1203729" | "1321009" | "20020036391" | "20050023783" | "20070075525" | "20070216138" | "20070222167" | "20090315300" | "20100072732" | "2769482" | "4923208" | "5338096" | "5417449" | "5664795" | "5722682" | "5740989" | "5887935" | "6045145" | "6378892" | "6676140" | "7011318" | "7445229" | "8282119" | "D587635" | "D614540").PN. OR ("8857830").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:37
S312	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:37
S313	1	"41399621".FMID.	US-PGPUB;	OR	ON	2016/03/25 17:41

			USPAT; FPRS			
S314	6	("2009/0302578").URPN.	USPAT	OR	ON	2016/03/25 17:42
S315	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" | "20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" | "20100038886" | "20100038887" | "20100072731" | "20100140902" | "20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" | "20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" | "7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:43
S316	108	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:54

		6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$).did. or (US-3000645-$ or US-2453631-$).did.				
S317	1	("20090290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:56
S318	1	("20060290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:58
S319	1	("4542915").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 18:07

S320	2	"47750100".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 21:54
S321	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 23:02
S322	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 23:02
S323	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/28 11:14
S324	0	(A stroller, comprising a stroller frame a plurality of wheels, including front and rear wheels a first seat coupled to the stroller frame at a first vertical position closer to a handle of the stroller frame and configured to hold a first child in the stroller a second seat attachment coupled to the stroller frame at a second vertical position substantially below the first vertical position and closer to the front wheels and comprising a left seat support element, wherein the left seat support element comprises a first connector portion releasably connected to the stroller frame closer to left front wheel and a left seat connector releasably connecting a second seat in either a forward or backward position and a right seat support element, wherein the right seat support element comprises a second connector portion releasably connected to the stroller frame closer to a right front wheel and a right seat connector releasably connecting the second seat in either a forward or backward position between the left and right seat support connectors and the second seat releasably connected to the left seat connector and the right seat connector and configured to hold a second child in the stroller while the first seat holds the first child).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:20
S325	0	(stroller frame wheel seat first vertical position handle child attach$4 coupl$3 left	US-PGPUB;	AND	ON	2016/03/28 13:42

		seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	USPAT; USOCR; FPRS; EPO; JPO			
S326	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:42
S327	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S328	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S329	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support$4 releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S330	3	(stroller frame wheel seat vertical position handle attach$4 left support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:44
S331	14	(stroller frame wheel seat vertical position handle attach$4 support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:45
S332	15	(stroller frame wheel seat vertical position handle attach$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:46
S333	1	S332 not S331	US-PGPUB; USPAT;	AND	ON	2016/03/28 13:46

			USOCR; FPRS; EPO; JPO			
S334	18	(stroller frame wheel seat vertical position handle attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:47
S335	3	S334 not S332	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:47
S336	25	(stroller frame wheel seat vertical position$4 attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S337	7	S336 not S334	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S338	1	"41399621".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/28 13:48
S339	1	("20160339940").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/08 16:58
S340	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:22
S341	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:23
S342	5,184,262	@pd>="20160325"	US-PGPUB;	OR	ON	2017/06/08 17:31

			USPAT; USOCR; FPRS; EPO; JPO			
S343	5,004	S340 or S341	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:33
S344	254	S342 and S343	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:33
S346	4	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:52
S347	14	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:15
S348	1	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
S349	66	("1707186" | "20010033069" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "3000645" | "4542915" | "5338096" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:35

		"6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128").PN.				
S350	111	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$ or US-20130049331-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:36

		8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$).did. or (US-3000645-$ or US-2453631-$).did.				
S351	4	S349 not S350	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:41
S352	34	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:44
S353	96	("1269379" | "1707186" | "1890469" | "20020158444" | "20040251063" | "20070045975" | "20080122200" | "20080224451" | "20090115151" | "20090160162" | "20090289440" | "20100038887" | "20100140902" | "20110175330" | "20140265258" | "3053493" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5522121" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:46

		"6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" | "8220822" | "8282120" | "8297642" | "8398143" | "8905427" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("9517787").URPN.				
S354	8	"48223173".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 09:47
S355	10	("2013/0113185").URPN.	USPAT	OR	ON	2017/06/12 09:48
S356	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:52
S357	22	("1707186").URPN.	USPAT	OR	ON	2017/06/12 09:53
S358	0	S350 and (cover$4 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:56
S359	0	S350 and (cover$4 same2 door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:00
S360	17	S350 and (cover$4 same attach$4)	US-PGPUB; USPAT; USOCR;	OR	ON	2017/06/12 10:00

			FPRS; EPO; JPO			
S361	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:08
S362	56	("4836573" | "4892327" | "5028061" | "5069474" | "5257799" | "5460430" | "5887935" | "5921574" | "6099022" | "6523853" | "6594840" | "6739649" | "7281732").PN. OR ("7377537").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:08
S363	3	S349 and door	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:13
S364	1	("9517787").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:19
S365	1	("9517789").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S366	1	("9561817").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S367	1	("9493179").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:21
S368	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S369	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S370	5,004	S368 or S369	US-PGPUB; USPAT;	OR	ON	2017/06/12 10:22

			USOCR; FPRS; EPO; JPO			
S371	23	S370 and (cover$4 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S372	5	S370 and (cavit$3 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:23
S373	35	("2917316" | "2993702" | "3110504" | "3248125" | "3309101" | "5579556" | "5622375" | "5664795" | "5725238" | "6086087" | "6276759" | "6312005" | "D319493" | "D444738" | "D450265").PN. OR ("6447001").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:23
S374	40	S370 and (cavit$3 same cover$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:24
S375	1	("5522121").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:28
S376	25	("0461069" | "1318850" | "1352647" | "1688148" | "1707186" | "4805938").PN. OR ("5522121").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:29
S377	1	("6449801").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:29
S378	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:30
S379	2	"38052732".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 10:30

S380	41	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" | "6540238" | "6557878" | "6698772" | "6827356" | "6893028" | "7159829" | "7290776").PN. OR ("8029007").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:30
S381	13	("20040164510" | "20070090619" | "20120098237" | "20130234419" | "20130264787" | "20160001805" | "3061328" | "5622375" | "6422634" | "6530591" | "7004272" | "8029007").PN. OR ("9545941").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:31
S382	91	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:33
S383	42	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" |	US-PGPUB;	OR	ON	2017/06/12 10:46

		"4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	USPAT; USOCR			
S384	15	("20050242548" | "20070052271" | "4518139" | "4681340" | "6022077" | "6536842").PN. OR ("7364183").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:49
S385	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 12:09
S386	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:13
S387	91	("0706448" | "1480451" | "1508500" | "1952467" | "20010013689" | "20040212161" | "20060085953" | "20070085302" | "20070120404" | "20090029784" | "20090181780" | "20110278810" | "20120023662" | "20120060326" | "20120235450" | "20130334781" | "20140042729" | "20150008659" | "20150042056" | "20150042076" | "20150175189" | "2708585" | "2961248" | "3564626" | "4476649" | "5099528" | "5201535" | "5562548" | "5676386" | "5772279" | "5846136" | "5947555" | "5987665" | "5988670" | "6250654" | "6286844" | "6471597" | "6671926" | "6872146" | "6893040" | "7037205" | "7100724" | "7354352" | "7377537" | "7445559" | "7475942" | "7497461" | "7607734" | "7681894" | "7686323" | "7694996" | "7766366" | "7905791" | "7938435" | "8029014" | "8251382" | "8292750" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16

		"8550556" | "8672341" | "8746794" | "8851505" | "8944927" | "8955869" | "9085312" | "D156930" | "D371094" | "D377466" | "D408768" | "D442895" | "D452195" | "D475951" | "D481976" | "D498713" | "D498714" | "D519063" | "D604055" | "D622640" | "D623429" | "D667229" | "D682562" | "D684789" | "D687352" | "D743304").PN. OR ("9421992").URPN.				
S388	20	("20010040357" | "20080106070" | "20100127480" | "20110181026" | "20160144879" | "5257799" | "5645293" | "6102432" | "6312005" | "7281732" | "7641216" | "8141895" | "8240698" | "8585075" | "8696015" | "8696016" | "8998241" | "9050993" | "9421991" | "9540028").PN. OR ("9637155").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16
S389	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:21
S390	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:54
S391	28	("20030015895" | "20090066130" | "20090295207" | "4306749" | "4750783" | "5385387" | "5478135" | "5562548" | "5586351" | "5997098" | "6017088" | "6170911" | "6299249" | "6331032" | "6336682" | "6347832" | "6428099" | "6428100" | "6443522" | "6554358" | "6705676" | "6793280" | "6921359" | "6979057" | "7090294").PN. OR ("8678498").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:55
S392	54	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" | "7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" | "7694996" | "7712765" | "7753398").PN. OR ("8251382").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:08

S393	15	("20080231022" | "5773379" | "5947555" | "6286844" | "6893040" | "7032922" | "7267359" | "7475900" | "7658399" | "7681894" | "7766366" | "7938435" | "8033555" | "D621306").PN. OR ("8851505").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:09
S394	58	("20010013689" | "20050264062" | "20060214397" | "20070257458" | "20070296182" | "20080136127" | "20080231023" | "20100219616" | "20100230933" | "20120025492" | "4834403" | "5028061" | "5201535" | "5203577" | "5257799" | "5277472" | "5364137" | "5564778" | "5567008" | "5676386" | "5772279" | "5794951" | "5947555" | "6086086" | "6089653" | "6286844" | "6318807" | "6446990" | "6572134" | "6595583" | "6793280" | "6802514" | "6863286" | "6942294" | "6983986" | "7032922" | "7070197" | "7207628" | "7370913" | "7377537" | "7681894" | "7686322" | "7694996" | "7753398" | "8029014" | "8070228" | "8172253" | "8282120" | "8382150").PN. OR ("8651502").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:09
S395	76	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:12
S396	49	("4915401" | "5133567" | "5277472" | "5564778" | "5644816" | "5676386" | "5772279").PN. OR ("5865447").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:13
S397	88	("0763771" | "0921361" | "1167525" | "2509972" | "2982562" | "3029087" | "3083997" | "3596986" | "4306749" | "4345791" | "4371206" | "4385769" | "4501032" | "4545613" | "4634177" | "4664396" | "4733909" | "4861105" | "4915446" | "4943113" | "4984813" | "4998307" | "5052750" | "5058283" | "5203577" | "5277472" | "5385387" | "D294777" | "D305583" | "D322001" | "D325132").PN. OR ("5567008").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:14
S398	92	("2982562" | "3100651" | "3290050" | "3330575" | "3784252" | "4072318" | "4378946" | "4412688" | "4428598" | "4478427" | "4606550" | "4762364" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:16

		"4815764" | "5004253" | "5074575").PN. OR ("5201535").URPN.				
S399	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23
S400	82	S397 not S399	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23
S401	20	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:28
S402	59	("20020175498" | "20020195797" | "20030111825" | "20040046364" | "20050098982" | "20060071452" | "20060237949" | "5772235" | "5823564" | "7032922").PN. OR ("7267359").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:30
S403	1	("5201535").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:32
S404	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:47
S405	3,477	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S406	2,369	(B62B9/12,28,102).CPC.	US-PGPUB;	OR	ON	2017/11/13 16:13

			USPAT; USOCR; FPRS; EPO; JPO			
S407	5,040	S405 or S406	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S408	1,329,175	@pd>="20170608"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S409	44	S407 and S408	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S410	3	"37808038".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/11/13 17:27
S423	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 10:50
S424	39	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 10:51
S425	8	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S426	18	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR;	OR	ON	2019/04/15 10:52

			FPRS; EPO; JPO; DERWENT			
S427	3	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S428	151	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$ or US-3000645-$).did. or (US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 11:03

		8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$ or US-8733784-$).did. or (US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$ or US-9260127-$).did. or (US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$ or US-8851505-$).did. or (US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S429	55	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:25
S430	3	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2019/04/15 12:25

S431	80	("1707186" | "20010033069" | "20020109321" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN. OR ("9944305").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:26
S432	3,809	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S433	2,627	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S434	5,496	S432 or S433	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S435	7,949,590	@pd>="20171113"	US-PGPUB; USPAT; USOCR;	OR	ON	2019/04/15 12:29

			FPRS; EPO; JPO			
S436	308	S434 and S435	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:30
S437	2	("20100140902" | "20140333039").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:52
S438	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:54
S439	7	S438 not S428	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:55
S440	11	("20060214395" | "20070085303" | "20090302578" | "4763911" | "5356172" | "5395154" | "5593173" | "6431647").PN. OR ("8596670").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:58

S441	12	("2007/0085303").URPN.	USPAT	OR	ON	2019/04/15 13:05
S443	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 14:37
S444	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 14:47
S445	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:08
S446	1	("7481439").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:09
S447	21	("4222132" | "4805938" | "4969656" | "5064209" | "5653460" | "5887935" | "5918892" | "6155592" | "6523840" | "6527294" | "6752405" | "D360392").PN. OR ("7481439").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10
S448	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10

		"7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.				
S449	28	("1707186" | "4222132" | "4288089" | "4354689" | "4805938" | "4969656" | "5064209" | "5076599" | "5522121" | "5653460" | "5918892" | "6086087" | "6527294" | "6752405").PN. OR ("6938906").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:13
S450	56	("20030080536" | "20040075229" | "20040124611" | "20040173997" | "20050127640" | "20050242549" | "20090295128" | "20100038886" | "20100230933" | "4697823" | "4846494" | "4921261" | "4946180" | "5121940" | "5338096" | "5454575" | "5624152" | "5669623" | "5687984" | "5752738" | "6189914" | "6193263" | "6209892" | "6267406" | "6409205" | "6478327" | "6702316" | "6938906" | "6964429" | "6981709" | "7017937" | "7040694" | "7284797" | "7445230" | "7513512" | "7614640" | "7770911" | "8087680" | "8100429" | "8186705" | "8186706" | "8205894" | "8282119" | "8328208" | "8388016" | "8398098" | "8414012" | "D344474" | "D345128" | "D352923" | "D430076" | "D452192" | "D455679" | "D510549" | "D593459").PN. OR ("8641077").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:14
S451	32	("6896286" | "D369992" | "D519422" | "D558099" | "D566013" | "D578045" | "D579827").PN. OR ("D593459").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:15
S452	66	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:18

		"6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" | "7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.				
S453	1	("D593459").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:25
S454	3,861	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S455	2,688	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S456	5,586	S454 or S455	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S457	969,007	@pd>="20190415"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:57
S458	58	S456 and S457	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:59
S459	27	("20040189076" | "20050029855" | "20110175306" | "20170247044" | "20170361861" | "4577355" | "5240265" | "5246272" | "5669625" | "5681084" | "5749627" | "5806877" | "6322097" | "6530591" | "6676140" | "6830254" | "6951342" | "8070180" | "8172322" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/08/23 01:02

		"8596670" | "8616638" | "8690250" | "8899615" | "8991929" | "9227650" | "9868456" | "D811949").PN.				
S460	167	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/08/23 01:02

		5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S461	22	S459 not S460	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 01:02
S462	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/08/23 01:04
S464	4,053	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR;	OR	ON	2020/02/28 20:49

			FPRS; EPO; JPO			
S465	2,834	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S466	5,847	S464 or S465	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S467	1,751,101	@pd>="20190823"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S468	97	S466 and S467	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S469	97	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20120181779" | "20130154215" | "20140191483" | "20150021872" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 21:03

		"6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "9260127" | "D326748" | "D431798").PN. OR ("10556610").URPN.				
S470	21	("20100140902" | "20130087993" | "20130154241" | "20150159414" | "20160046315" | "7789402" | "7832755" | "8033554" | "8231136" | "8602441" | "8905427" | "8955869" | "8967647" | "9050987" | "9399477" | "9403550" | "9493179" | "9517787" | "9616912" | "9637154" | "D747669").PN. OR ("10449987").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 22:17
S471	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/02/28 22:19
S472	7,365,969	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:01
S473	172	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:02

		D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-				

		9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-10556611-$ or US-10556610-$ or US-10449987-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S474	94	S472 and S473	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/03/01 23:02
S475	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS; JPO	OR	ON	2020/03/01 23:04
S476	16	("2010/0072732").URPN.	USPAT	OR	ON	2020/03/01 23:07
S484	1	("10730543").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:15
S485	0	("202000223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S486	1	("20200223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S487	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:19
S488	4,211	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB;	OR	ON	2020/09/10 14:24

			USPAT; USOCR; FPRS; EPO; JPO			
S489	2,957	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S490	6,047	S488 or S489	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S491	1,552,888	@pd>="20200228"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S492	69	S490 and S491	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:34
S493	98	("10023218" | "10207731" | "10293843" | "10449987" | "10556610" | "1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20100140902" | "20140191483" | "20140333039" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:43

		"8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652" | "9840168" | "9849903" | "9884640" | "9924806" | "9944305" | "9956979" | "D593459").PN. OR ("10730543").URPN.				
S494	45	(Baby near2 Jogger).AS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:47
S495	173	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:56

		7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-				

		D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-10556611-$ or US-10556610-$ or US-10449987-$ or US-10730543-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S496	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:57
S497	4	S496 not S495	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:58
S499	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 21:06

		"6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.				
S500	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:39
S501	10	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:43
S502	25	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:56
S503	5	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2020/09/11 00:00

			EPO; JPO; DERWENT			
S504	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/15 15:29
S505	1	("9260127").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/15 23:58

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51

		comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51

		extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
S163	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.	US-PGPUB; USPAT	AND	ON	2014/02/03 17:17
S164	0	(seat attachment stroller separate left right attachment portion connector portion removably connecting frame adjacent front wheel seat support element removably connecting seat forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:35
S165	0	(seat attach$4 stroller separate left right portion connect$4 remov$4 frame adjacent front wheel support$4 element forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S166	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S167	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:47

S213	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S214	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S215	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S216	19	(seat$3 attach$4 stroller left right connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29
S217	68	(seat$3 attach$4 stroller connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29
S218	5	("20020036391" | "20070069505" | "20070187914" | "4753453" | "4779883").PN. OR ("8033554").URPN.	US-PGPUB; USPAT	OR	ON	2014/09/24 14:32
S248	4	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2015/04/20 14:14
S411	0	(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
S412	0	(stroller frame wheel seat attachment housing first adapter receiving cavity extending through housing first door rotatably coupled to housing closed configuration preventing access to cavity from top side open configuration allowing access to cavity first removable seat attachment adapter removably coupled to housing and second removable seat attachment adapter removably coupled to housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:55
S413	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity extend$4 door rotat$4 closed configuration prevent$4 access$4 open configuration allow$4 access).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:56
S414	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity door rotat$4 closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:21
S415	1	(stroller wheel seat attach$4 hous$4 cavity door closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S416	1	(stroller wheel seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S417	1	(stroller seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:23
S418	1	(stroller seat$3 attach$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24

S419	1	(stroller seat$3 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S420	3	(stroller seat$3 door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S421	2	(stroller seat$3 cavit$3 clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S422	21	(stroller seat$3 cavit$3 clos$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S442	5	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/04/15 11:03
S463	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/08/23 01:02
S477	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/03/01 23:02
S478	0	(A stroller, comprising a stroller frame comprising a first upper tube support frame a second upper tube support frame a first front wheel support frame rotatable with respect to the first upper tube support frame a second front wheel support frame rotatable with respect to the second upper tube support frame a first back wheel support frame rotatable with respect to the first upper tube support frame a second back wheel support frame rotatable with respect to the second upper tube support frame a plurality of wheels comprising at least one front wheel and a plurality of back wheels a first seat coupled to the stroller frame at a first vertical position of the stroller frame a first seat attachment housing disposed along the first front wheel support frame a first seat attachment adapter removably coupled to the first seat attachment housing stroller frame at a second vertical position of the stroller frame that is below the first vertical position a second seat attachment housing disposed along the second front wheel support frame a second seat attachment adapter removably coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position wherein the first seat is coupled along the first upper tube support	US-PGPUB; USPAT	AND	ON	2020/03/11 23:05

		frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position).CLM.				
S479	1	(stroller frame wheel first seat first vertical position attachment housing adapter removably coupled below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:07
S480	1	(stroller frame wheel seat vertical position attach$4 hous$4 adapt$4 remov$4 coupl$4 below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S481	4	(stroller frame wheel seat attach$4 hous$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S482	11	(stroller frame wheel seat attach$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:11
S483	33	(stroller frame wheel seat attach$4 adapt$4 remov$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:12
S498	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/09/10 14:56

9/16/2020 2:39:13 PM
C:\Users\jdolak\Documents\EAST\Workspaces\16832429_updatedparent.wsp

To: patentdocket@eversheds-sutherland.com,,
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Sep 22, 2020 03:59:34 AM

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Application	Document	Mailroom Date	Attorney Docket No.
16832429	CTNF	09/22/2020	34757-2430
	892	09/22/2020	34757-2430
	1449	09/22/2020	34757-2430
	1449	09/22/2020	34757-2430

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UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
John Hee Lee, et al.	)	Confirmation No.: **8948**
	)	
Application No.: **16/832,429**	)	Art Unit: **3618**
	)	
Filed: **March 27, 2020**	)	Examiner: **James M. Dolak**
	)	
For: **Removable Seat Attachment for a Stroller**	)	Attorney Docket No.: **34757-2430**
	)	
	)	
	)	

AMENDMENT AND RESPONSE TO NON-FINAL OFFICE ACTION

Via EFS-Web
Mail Stop Amendment
Commissioner for Patents
Alexandria, VA 22313-1450

Dear Examiner Dolak:

This Amendment and Response is submitted in response to the Non-Final Office Action mailed September 22, 2020. A Petition for Two Month Extension of Time and fee are concurrently filed with this paper. In light of the amendments and remarks included herein, it is respectfully asserted that all pending claims are patentable, and it is respectfully requested that this application be allowed.

Amendments to the Drawings are described on page 2.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper.

Remarks begin on page 9 of this paper.

I hereby certify that this correspondence is being electronically filed via EFS-WEB to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Attn: Examiner Dolak, GAU 3618, on January 25, 2021.

/Christopher J. Chan/
Christopher J. Chan
Reg. No. 44,070

AMENDMENTS TO THE DRAWINGS

Applicant submits replacement drawings for FIGs. 8A-8H (5 pages), marked as "Replacement Sheets".

AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below. This listing of claims will replace all prior versions and listing of claims for this application.

1. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first front wheel support frame ~~adjustable~~ adjusted with respect to the first upper tube support frame;

a second front wheel support frame ~~adjustable~~ adjusted with respect to the second upper tube support frame;

a first back wheel support frame ~~rotatable~~ rotated with respect to the first upper tube support frame; and

a second back wheel support frame ~~rotatable~~ rotated with respect to the second upper tube support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled to the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the first front wheel support frame;

a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the second front wheel support frame;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position and wherein the second vertical position and the third vertical position are at a same vertical height.

2. (Original) The stroller of claim 1, further comprising:

a first seat attachment housing disposed adjacent the first front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the second front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

3. (Original) The stroller of claim 2, wherein the first seat attachment housing extends into the first front wheel support frame and the second seat attachment housing extends into the second front wheel support frame.

4. (Original) The stroller of claim 2, wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end.

5. (Original) The stroller of claim 4, wherein the first end comprises a connector portion and is coupled to one of the first seat attachment housing and the second seat attachment housing.

6. (Currently Amended) The stroller of claim 4, wherein the second seat is ~~configured to be~~ removably coupled to the second end.

7. (Original) The stroller of claim 1, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

8. (Original) The stroller of claim 1, further comprising:

a third seat attachment adapter coupled to the stroller frame at the first vertical position; and

a fourth seat attachment adapter coupled to the stroller frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

9. (Original) The stroller of claim 1, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

10. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a front wheel support frame ~~adjustable~~ adjusted with respect to the first upper tube support frame;

a back wheel support frame ~~rotatable~~ rotated with respect to the first upper tube support frame; and

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled to the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the front wheel support frame;

a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the front wheel support frame;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position.

11. (Original) The stroller of claim 10, wherein the front wheel support frame comprises a first front wheel support frame member and a second front wheel support frame member.

12. (Original) The stroller of claim 10, wherein the back wheel support frame comprises a first back wheel support member and a second back wheel support member.

13. (Original) The stroller of claim 10, further comprising:

a first seat attachment housing disposed adjacent the front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

14. (Currently Amended) The stroller of claim 13, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion ~~configured to be~~ coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is ~~configured to be~~ removably coupled to the second end.

15. (Original) The stroller of claim 10, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

16. (Original) The stroller of claim 10, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame at the first vertical position; and

a fourth seat attachment adapter coupled to the second upper tube support frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

17. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first back wheel support frame;

a second back wheel support frame;

a first front wheel support frame;

a second front wheel support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled to the stroller frame at a first vertical position of the stroller frame;

a first seat attachment housing disposed adjacent the first front wheel support frame:

a second seat attachment housing disposed adjacent the second front wheel support frame;

a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the first seat attachment housing;

a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the second seat attachment housing;

wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter.

18. (Currently Amended) The stroller of claim 17, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion configured to be coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is ~~configured to be~~ removably coupled to the second end.

19. (Original) The stroller of claim 17, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

20. (Original) The stroller of claim 17, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame; and

a fourth seat attachment adapter coupled to the second upper tube support frame;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

REMARKS

Applicant and the undersigned thank Examiner Dolak for the careful review of this application. Applicant's election of species directed to FIGs. 8A-8H, without traverse and without prejudice to filing continuation and/or divisional applications, has been accepted by the Examiner. In the present Non-Final Office Action, claims 1-20 are rejected.

Without admitting to the propriety of the rejections and to facilitate examination of the application, Applicant amends independent claims 1, 10, and 17, and dependent claims 6, 14, and 18, to clarify the scope of the claimed subject matter. The amendments to the claims are supported by the specification and drawings as-filed and do not introduce new matter. Upon entry of these amendments, claims 1-20 remain pending in the application. In view of these amendments and remarks, Applicant respectfully asserts that the rejections are now made moot and reconsideration and allowance of the application is respectfully requested.

Unless explicitly stated otherwise, none of the amendments to the claims were made for reasons substantially related to the statutory requirements for patentability. Furthermore, unless otherwise stated, the amendments to the claims were made simply to express that which had been implicit in the claims as originally worded and therefore, are not narrowing amendments that would create any prosecution history estoppel.

I. Request for Examiner Interview

Prior to the mailing of any further Office Actions, Applicant requests the courtesy of an examiner interview via telephone to discuss any remaining issues of patentability. The Examiner is invited to contact the Applicant's attorney, Christopher J. Chan, at 404.853.8049 to schedule the interview.

II. Drawing Objections

Applicant submits replacement pages for drawing FIGs. 8A-8H to clarify indication of certain claimed subject matter. The "first end" of the adapter is indicated as element 84A, the second/distal end of the adapter is indicated as 84B, and the "first end" of the handle is indicated as element 81g in the enclosed drawings labeled, "Replacement Sheets". No new matter is believed to be added. The drawing objections are believed to be traversed.

III. Claim Objections

The Office Action objected to claims 1, 6, and 10 for certain alleged informalities. Without admitting to the propriety of the rejections and to facilitate examination of the application, claims

1, 6, and 10 are amended to clarify the scope of the claimed subject matter. Further, the claim 6 objection to "second seat" is believed to be in error, and the term "second seat" is believed to be correct. *See* Applicant's specification, p. 14, lines 3-8. The objections are believed to be traversed.

IV. Claim Rejections Under 35 U.S.C. §112

The Office Action rejected claims 1-20 for allegedly being indefinite. Without admitting to the propriety of the rejections and to facilitate examination of the application, claims 1, 6, 10, 14, 17, and 18 are amended to clarify the scope of the claimed subject matter. For example, claims 6, 14, and 18 are amended to omit the phrase "configured to be". Further, claims 1 and 10 are amended to clarify the terms "adjusted" and "rotated", and omit the respective terms "adjustable" and "rotatable". Contrary to the Office Action rejection, claim 17 appears to lack the particular claim language that claims 1 and 10 were indicated as including. The rejections are believed to be traversed.

V. Claim Rejections Under 35 U.S.C. §102 and §103

In the Office Action, claims 17 and 20 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 7,475,900 B2 to Cheng ("Cheng"). The Office Action also rejected claims 1-5, 7-13, 15, 16, and 19 under 35 U.S.C. §103(a) as allegedly unpatentable over Cheng in view of U.S. Patent No. D593,459S to Liao ("Liao"). Claims 6, 14, and 18 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Cheng in view of U.S. Patent No. 6,286,844 B1 to Cone *et al.* ("Cone"). Applicant traverses the rejections of the pending claims.

Without admitting to the propriety of the rejections and to facilitate examination of the application, Applicant's independent claim 1 is amended to clarify the scope of the claimed subject matter. For example, claim 1 is amended to include the elements of, "a first seat attachment adapter coupled to the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the first front wheel support frame; a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the second front wheel support frame" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8.

Further, claim 10 is amended to include the elements of, "a first seat attachment adapter coupled to the front wheel support frame at a second vertical position of the stroller frame that is

below the first vertical position, wherein the first seat attachment adapter is removable from the front wheel support frame; a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the front wheel support frame" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8.

Moreover, claim 17 is amended to include the elements of, "a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the first seat attachment housing; a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the second seat attachment housing" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8.

By contrast, the stroller frames in the cited references Cheng and Liao only include fixed adapter-type structures, that is, not removable and fixed to the respective strollers. For example, the supporting bases 410 and 420 in Cheng do not appear to be removable and are fixed to the ends of the respective supports for the front seat and rear seats, respectively.

Since each and every element of the Applicant's amended independent claims 1, 10, and 17 is neither taught nor suggested by the cited references, either alone or in combination with each other, then claims 1, 10, and 17 should be allowable over the cited references.

VI. Dependent Claims 2-9, 11-16, and 18-20

Applicant submits that the above-identified dependent claims are allowable because the independent claims from which they ultimately depend are patentable over the cited references. The additional cited reference, namely Liao, does not cure the deficiencies of the cited reference Cheng. Applicant also respectfully traverses the Office Action's assertions about these claims and submits that the recitations of these dependent claims are of patentable significance. Applicant

respectfully requests that the Examiner reconsider and withdraw the pending rejections of claims 2-9, 11-16, and 18-20.

VII. NO WAIVER

All of Applicant's arguments presented herein are without prejudice or disclaimer. Additionally, Applicant has merely discussed example reasons that the pending claims are allowable. Other reasons may exist and Applicant reserves the right to discuss these additional reasons in a later response or on appeal, if appropriate, in this or another related application. By not responding to additional statements made by the Office Action, such as what is taught by each cited reference or alleged to have been obvious in view of the cited references, Applicant does not acquiesce to the Office Action's additional statements. The example reasons discussed by Applicant are sufficient to overcome the mentioned rejections.

CONCLUSION

The foregoing is submitted as a full and complete response to the Non-Final Office Action dated September 22, 2020. Applicant and the undersigned thank Examiner Dolak for the consideration of these amendments and remarks. In view of the amendments to the claims and the submitted remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections. Applicant further submits that the application is now in condition for allowance and earnestly solicits timely notice of the same. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the undersigned at the telephone number below.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this response. However, in the event that additional extensions of time are necessary to allow consideration of this response, such extensions are hereby petitioned under 37 C.F.R. §1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 19-5029.

Respectfully submitted,

/Christopher J. Chan/

Christopher J. Chan
Reg. No. 44,070

DATE: **JANUARY 25, 2021**

EVERSHEDS SUTHERLAND (US) LLP
999 Peachtree Street NE
Atlanta, Georgia 30309-3996
Telephone: (404) 853-8049
Facsimile: (404) 853-8806

Attorney Docket No.: **34757-2430**

Electronic Patent Application Fee Transmittal

Application Number:	16832429
Filing Date:	27-Mar-2020
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Filer:	Christopher Chan/LaYonda Prue
Attorney Docket Number:	34757-2430

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 2 months with $0 paid	1252	1	640	640
Miscellaneous:				
			Total in USD ($)	**640**

UPPABABY ET AL. EX. 1019

Electronic Acknowledgement Receipt

EFS ID:	41726867
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	Christopher Chan/LaYonda Prue
Filer Authorized By:	Christopher Chan
Attorney Docket Number:	34757-2430
Receipt Date:	25-JAN-2021
Filing Date:	27-MAR-2020
Time Stamp:	14:00:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$640
RAM confirmation Number	E20211OE00279372
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Extension of Time	34757-2430_EOT.pdf	165901 d2255861655c93a64851b21cd3019db345a25794	no	2
Warnings:					
Information:					
2		34757-2430_Response_to_NFOA.pdf	70416 c557db9a0b96ef84bd94db316346cb2ee373c65d	yes	13

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Drawings-only black and white line drawings	2	2
Claims	3	8
Applicant Arguments/Remarks Made in an Amendment	9	13

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30783 d3a28fa2a00de1b828f48e1b79523f2d970992db	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	267100	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/AIA/22 (10-20)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): 34757-2430

Application Number: 16/832,429

Filed: 2020-03-27

For: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Art Unit: 3618

Examiner: DOLAK, JAMES M

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	Micro Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$220	$110	$55	$
☑ Two months (37 CFR 1.17(a)(2))	$640	$320	$160	$ 640.00
☐ Three months (37 CFR 1.17(a)(3))	$1,480	$740	$370	$
☐ Four months (37 CFR 1.17(a)(4))	$2,320	$1,160	$580	$
☐ Five months (37 CFR 1.17(a)(5))	$3,160	$1,580	$790	$

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 195029.

☑ Payment made via EFS-Web.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 44,070.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Christopher J. Chan/ — Signature

2021-01-25 — Date

Christopher J. Chan — Typed or printed name

404-853-8049 — Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/832,429	Filing Date 03/27/2020	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $460 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	01/25/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/GYZELL P JOHNSON SMITH/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

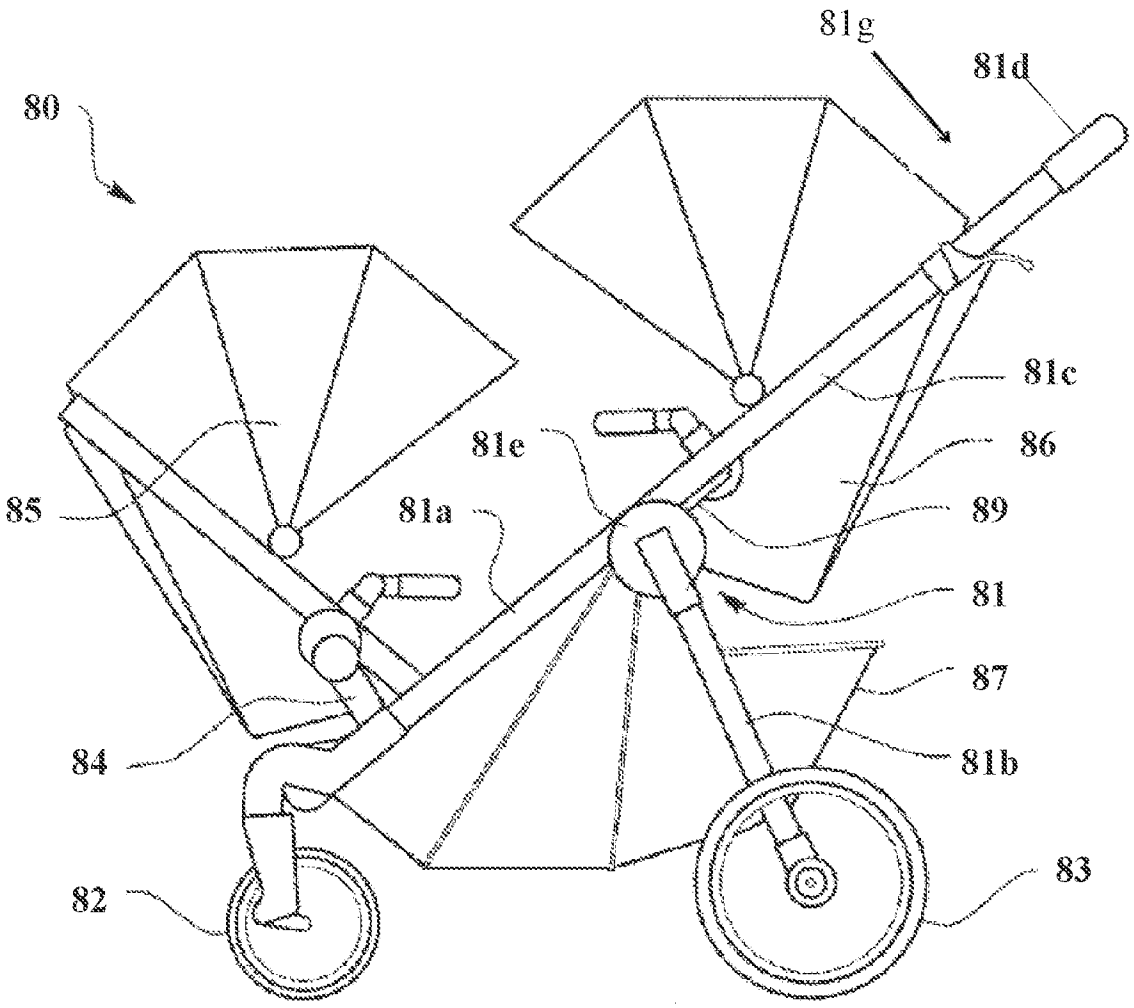

FIGURE 8A

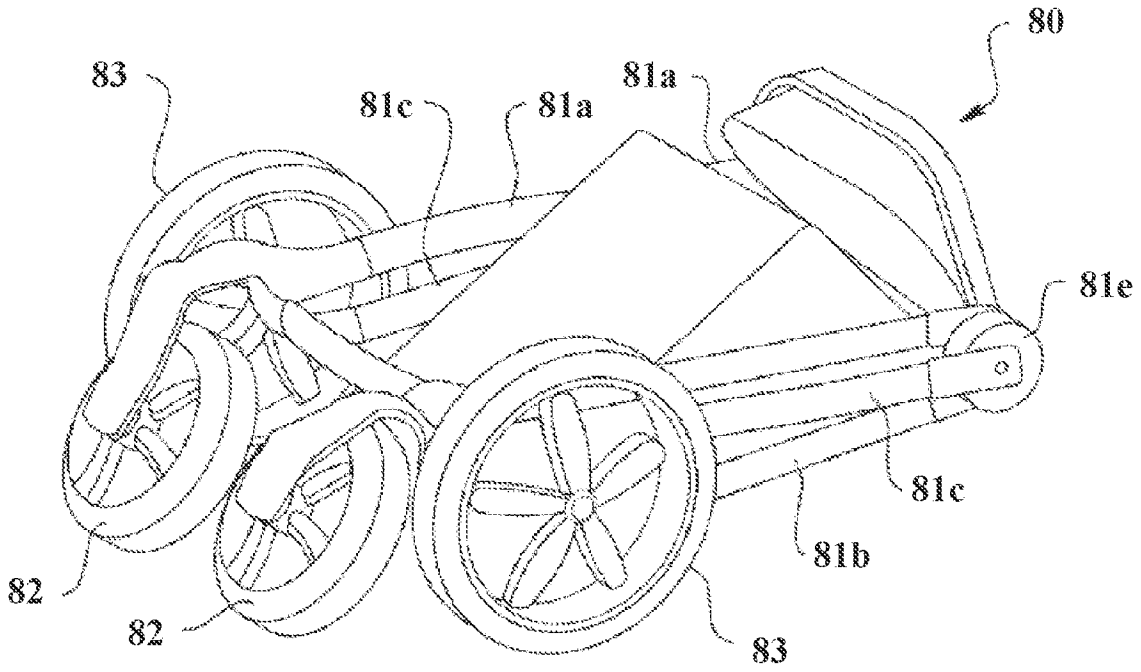

FIGURE 8B

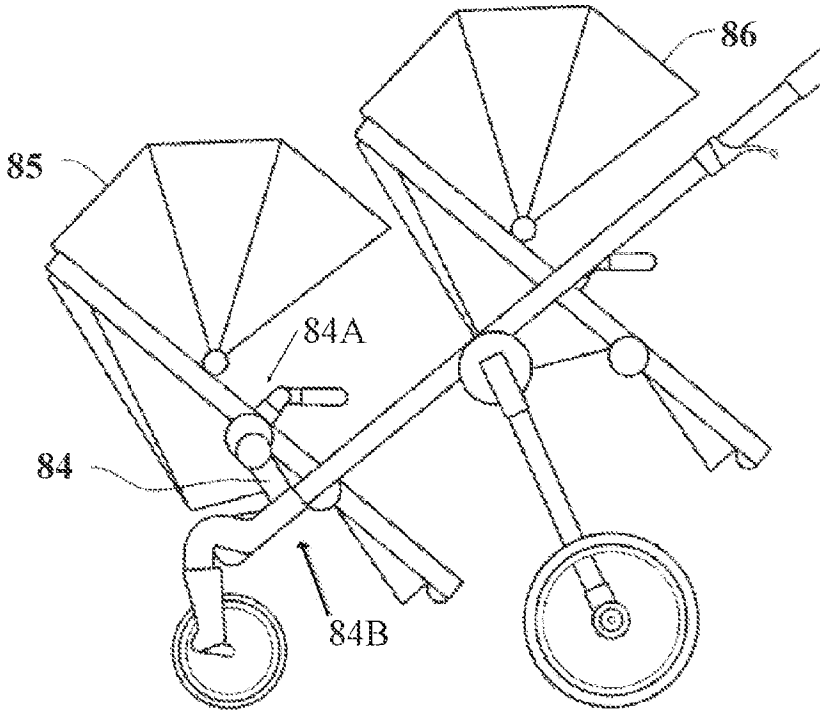

FIGURE 8C

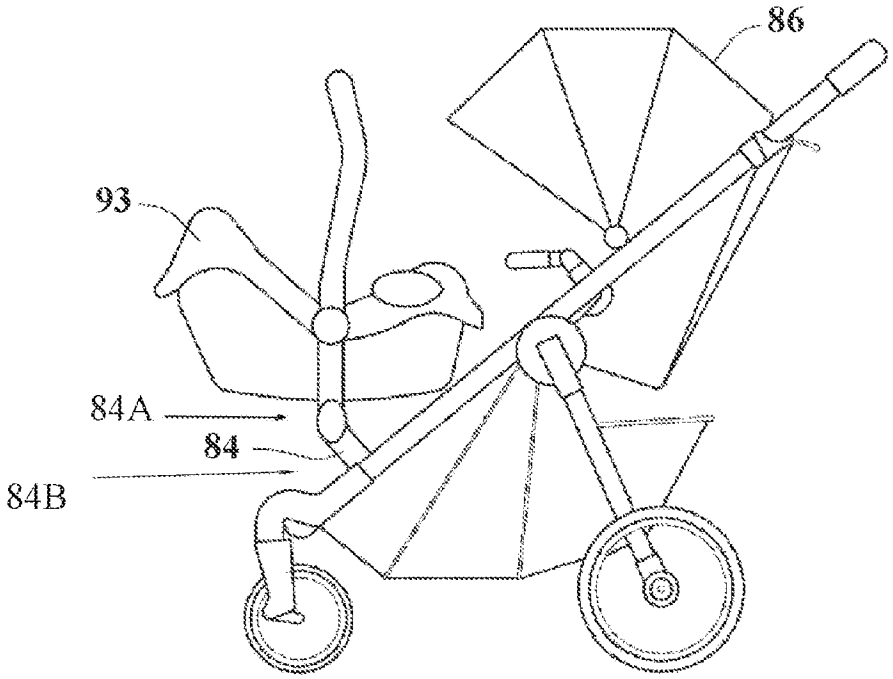

FIGURE 8D

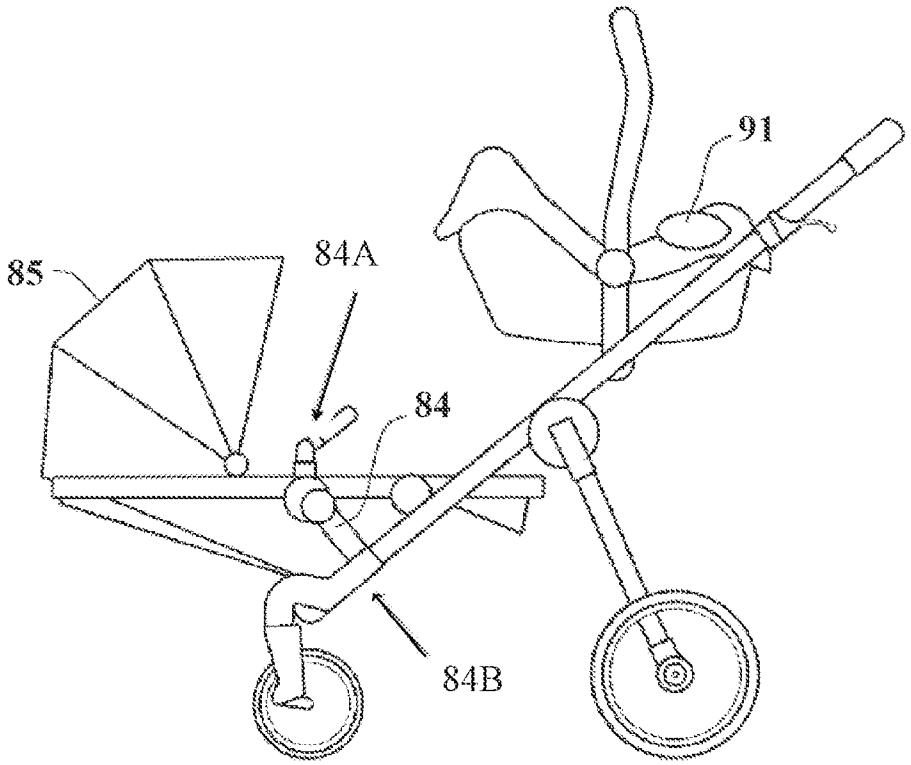

FIGURE 8E

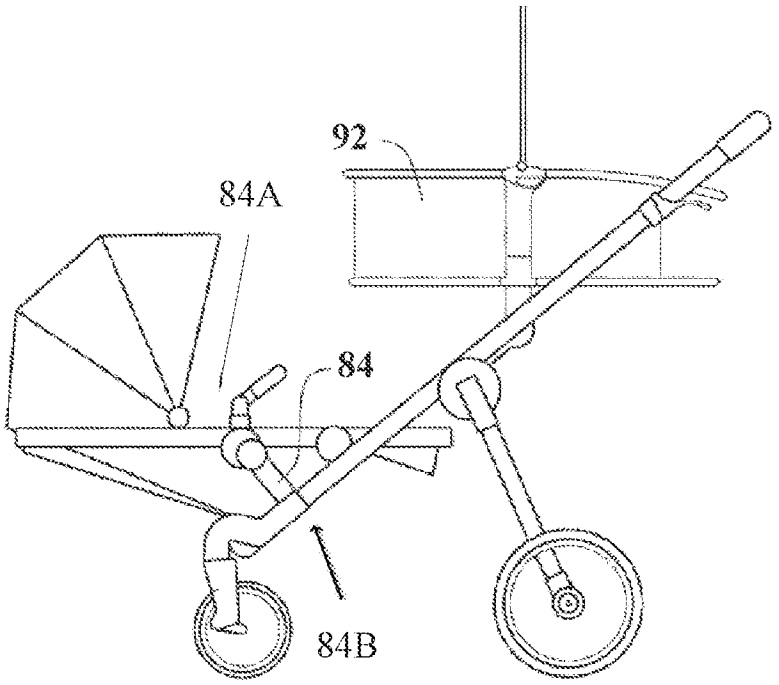

FIGURE 8F

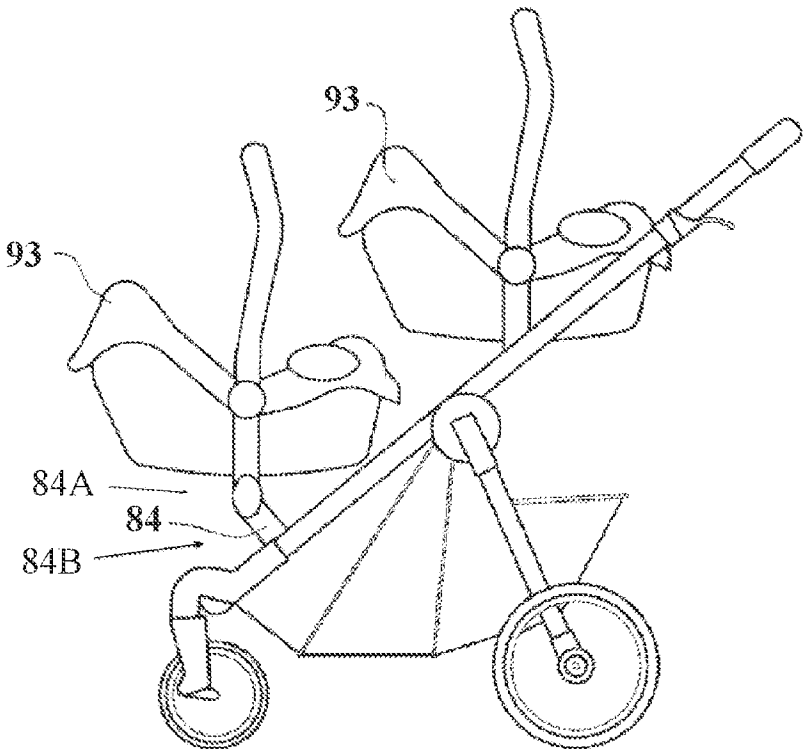

FIGURE 8G

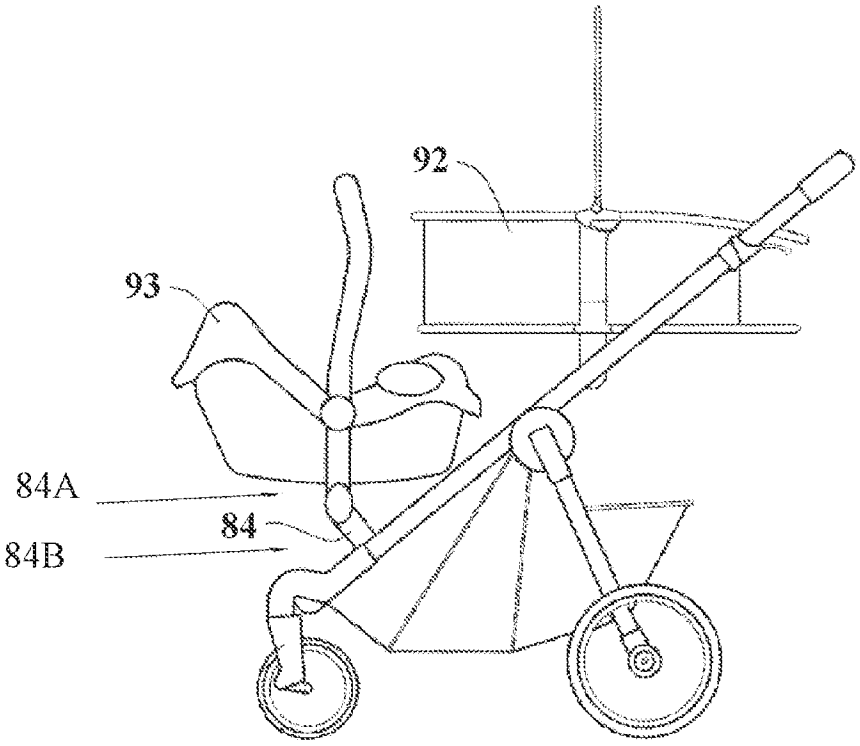

FIGURE 8H

Electronic Acknowledgement Receipt

EFS ID:	41801973
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	Christopher Chan/LaYonda Prue
Filer Authorized By:	Christopher Chan
Attorney Docket Number:	34757-2430
Receipt Date:	01-FEB-2021
Filing Date:	27-MAR-2020
Time Stamp:	15:45:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Drawings-only black and white line drawings	34757-2430_Replacement_Drawings.pdf	440643 c71439dd3ee10d9800e36da61a8a2af6028ac017	no	5

Warnings:

Information:	
Total Files Size (in bytes):	440643

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

134811 7590 04/28/2021

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

EXAMINER	
DOLAK, JAMES M	

ART UNIT	PAPER NUMBER
3618	

NOTIFICATION DATE	DELIVERY MODE
04/28/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@eversheds-sutherland.com

Office Action Summary	Application No. 16/832,429	Applicant(s) Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 1/25/2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☑ This action is **FINAL.** 2b) ☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-20 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☑ Claim(s) 1-20 are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 3/27/2020 and 2/01/2021 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☑ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Response to Amendment

2. The reply filed on 1/25/2021 amended claims 1, 6, 10, 14, 17, and 18. Claims 1-20 are currently pending herein.

Response to Arguments

3. Applicant's arguments with respect to claim(s) 1-20 have been considered but are moot because the new ground of rejection does not rely on any reference applied in the prior rejection of record for any teaching or matter specifically challenged in the argument.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*,

686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

5. Claims 1-20 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-13, of U.S. Patent No. 10,730,543. Although the claims at issue are not identical, they are not patentably distinct from each other because the differences are minor.

Drawings

6. The previous objections to the drawings are withdrawn in light of the amendments, the objections that remain are detailed below.

Claim Objections

7. The previous objections to the drawings are withdrawn in light of the amendments, the objections that remain are detailed below.

Claim Rejections - 35 USC § 112

8. The previous rejections of Claims 1-5 under 35 USC 112 are withdrawn in light of the amendments, the rejections that remain are detailed below.

9. The following is a quotation of 35 U.S.C. 112(b):

> (b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

> The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-20 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention. Regarding the claims, each independent claim recites "adjusted/rotated with respect to" (Claim 1/10/17), which is unclear and therefore renders the claims indefinite. Appropriate correction is required.

11. Claim 18 is rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards

as the invention. Regarding claim 18, the claim recites the open-ended clause "configured to be removably coupled" (line 3), which renders the claim indefinite, since it's not clear whether the claimed "coupling" is actually taking place or not. It has been held that the open-ended recitations stating that an element is capable to perform a function (e.g., "configured to", "adapted to", etc.) are not the positive limitations but only require the ability to so perform. They do not constitute a limitation in any patentable sense. See In re Hutchinson, 69 USPQ 138. Just because something is "configured to" do something (i.e. is "capable of" doing something), doesn't actually mean it does it. "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v.Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). The Office hereby notes that "configured to" does not explicitly denote how features(s) are constructed and/or associated with other claimed limitations; whereas the claim is amenable to two or more plausible claim constructions. If a claim is amenable to two or more plausible claim constructions, then the claim may be deemed indefinite. See Ex parte Miyazaki, 89 USPQ2d 1207 (Bd. Pat. App. & Inter. 2008) (precedential). Applicant is required to use definitive and positive statements while reciting the structure and functions of the claimed apparatus (e.g. "a locking arm chamfer [that is configured to engage] --engaging-- the lock pin chamfer"). Appropriate correction is required.

Claim Rejections - 35 USC § 103

12. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the

> time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under pre-AIA 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of pre-AIA 35 U.S.C. 103(c) and potential pre-AIA 35 U.S.C. 102(e), (f) or (g) prior art under pre-AIA 35 U.S.C. 103(a).

15. **Claims 17, 18, and 20 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng and further in view of Cone, II al. (US 6,286,844 B1)**.

[Claim 17] Regarding Claim 17, Cheng teaches:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421);

a first back wheel support frame (See, e.g., Fig. 4-8, 32); a second back wheel support frame (See, e.g., Fig. 4-8, 32); a first front wheel support frame (See, e.g., Fig. 4-8, 31); a second front wheel support frame (See, e.g., Fig. 4-8, 31);

a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 72) coupled to the stroller frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment housing (See, e.g., Fig. 4-8, 410) disposed adjacent the first front wheel support frame (See, e.g., Fig. 4-8); a second seat attachment housing (See, e.g., Fig. 4-8, 410) disposed adjacent the second front wheel support frame (See, e.g., Fig. 4-8); a first seat attachment adapter (See, e.g., Fig. 4-8, 71) coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 71) coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame (See, e.g., Fig. 4-8) and wherein a second seat (See, e.g., Fig. 4-8, 71) is removably coupled to the first seat attachment adapter and the second seat attachment adapter (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first/second seat attachment adapter is removable from the first/second seat attachment housing.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1 -13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with first/second seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) removable from a first/second seat attachment housing (See, e.g., Cone: Fig.1-13, 267+269+304).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that removably connect to a stroller frame seat attachment housing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng with seat attachment adapters that removably connect to the stroller frame housings such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 18] Regarding Claim 18, the combination of Cheng in view of Cone further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter comprises: a first end comprising a connector portion (See, e.g., Cheng: Fig. 4-8, 71) configured to be coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8) and a

distal second end (See, e.g., Cheng: Fig. 4-8, 71), wherein the second seat is coupled to the second end (See, e.g., Cheng: Fig. 4-8).

Cheng fails to explicitly teach: wherein the distal second end is removably coupled to the second seat.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1-13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) having a first end connected to a stroller frame (See, e.g., Cone: Fig.1-13, 251+267) and a second end releasably coupled to a seat (See, e.g., Cone: Fig.1-13, 12+252).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that releasably connect to a seat and a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng with a seat attachment adapter that has a distal second end that is releasably coupled to the seat such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 20] Regarding Claim 20, the combination of Cheng in view of Cone further teaches: further comprising: further comprising: a third seat attachment adapter

(See, e.g., Cheng: Fig. 4-8, 420) coupled to the first upper tube support frame (See, e.g., Cheng: Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the second upper tube support frame (See, e.g., Cheng: Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420).

16. **Claims 1-16 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng in view of Liao (US D593,459S) and further in view of Cone, II al. (US 6,286,844 B1)**.

[Claim 1] Regarding Claim 1, Cheng teaches:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421); a first front wheel support frame (See, e.g., Fig. 4-8, 31) adjusted with respect to the first upper tube support frame (See, e.g., Fig. 4-8); a second front wheel support frame (See, e.g., Fig. 4-8, 31) adjusted with respect to the second upper tube support frame (See, e.g., Fig. 4-8); a first back wheel support frame (See, e.g., Fig. 4-8, 32) rotated with respect to the first upper tube support frame (See, e.g., Fig. 4-8); and a second back wheel support frame (See, e.g., Fig. 4-8, 32) rotated with respect to the second upper tube support frame (See, e.g., Fig. 4-8);

a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 71) coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the stroller frame below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8);

wherein a second seat (See, e.g., Fig. 4-8, 72) is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position (See, e.g., Fig. 4-8) and wherein the second vertical position and the third vertical position are at a same vertical height (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first seat attachment adapter is coupled to the first front wheel support frame, and wherein the second seat attachment adapter is coupled to the second front wheel support frame.

However, Liao teaches a similar stroller with seat attachment (See, e.g., Liao: Fig.1-13) wherein a first seat attachment adapter is coupled to the first front wheel support frame (See, e.g., Liao: Fig.1-13), and wherein a second seat attachment adapter is coupled to the second front wheel support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide seat attachment adapters coupled to the front wheel support frame of the stroller. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the seat attachment adapters

coupled to the front wheel support frame such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to mount the front stroller seat at a position that is lower to the ground level thereby not requiring a parent to hoist the heavy baby seat up as high off the ground when mounting/dismounting from the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

The combination of Cheng in view of Liao fails to explicitly teach: wherein the first/second seat attachment adapter is removable from the first/second front wheel support frame.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1 -13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with first/second seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) removable from a first/second stroller frame (See, e.g., Cone: Fig.1-13, 251+267+269+304).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that removably connect to a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by the combination of Cheng in view Liao with seat attachment adapters that removably connect to the stroller frame such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base,

etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 2] Regarding Claim 2, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising: a first seat attachment housing (See, e.g., Cheng: Fig. 4-8, 71) disposed adjacent the first front wheel support frame at the second vertical position (See, e.g., Cheng: Fig. 4-8); a second seat attachment housing (See, e.g., Cheng: Fig. 4-8, 71) disposed adjacent the second front wheel support frame at the third vertical position (See, e.g., Cheng: Fig. 4-8); wherein the first seat attachment adapter is coupled to the first seat attachment housing (See, e.g., Cheng: Fig. 4-8) and the second seat attachment adapter is coupled to the second seat attachment housing (See, e.g., Cheng: Fig. 4-8).

[Claim 3] Regarding Claim 3, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the first seat attachment housing extends into the first front wheel support frame (See, e.g., Liao: Fig.1-13) and the second seat attachment housing extends into the second front wheel support frame (See, e.g., Liao: Fig.1-13).

[Claim 4] Regarding Claim 4, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end (See, e.g., Cheng: Fig. 4-8, 410).

[Claim 5] Regarding Claim 5, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the first end comprises a connector

portion (See, e.g., Fig. 4-8, 410) and is coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8).

[Claim 6] Regarding Claim 6, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter comprises: a first end comprising a connector portion (See, e.g., Cheng: Fig. 4-8, 71) coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8) and a distal second end (See, e.g., Cheng: Fig. 4-8, 71), wherein the second seat is coupled to the second end (See, e.g., Cheng: Fig. 4-8).

Cheng fails to explicitly teach: wherein the distal second end is removably coupled to the second seat.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1-13) for a stroller (See, e.g., Cone: Fig. 1-13, 214) with seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) having a first end connected to a stroller frame (See, e.g., Cone: Fig.1-13, 251+269) and a second end releasably coupled to a seat (See, e.g., Cone: Fig.1-13, 12).

Cone teaches that it is well known in the art of stroller seat design to provide a seat attachment adapters that releasably connect to a seat and a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng in view of Liao with a seat attachment adapter that has a distal second end that is removably coupled to the seat such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or

without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 7] Regarding Claim 7, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram (See, e.g., Cheng: Fig. 4-8, 71) and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram (See, e.g., Cheng: Fig. 4-8, 72).

[Claim 8] Regarding Claim 8, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising: a third seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the stroller frame at the first vertical position (See, e.g., Cheng: Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the stroller frame at the first vertical position (See, e.g., Cheng: Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8).

[Claim 9] Regarding Claim 9, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising a handle (See, e.g., Cheng Fig. 4-8, 10+24) comprising a first end and a distal second end (See, e.g., Cheng: Fig. 4-8).

Cheng fails to explicitly teach: where the handle first end is coupled to the first upper tube support frame and the distal second end is coupled to the second upper tube support frame.

However, Liao teaches a similar stroller with seat attachments (See, e.g., Liao: Fig.1-13) wherein a handle (See, e.g., Liao: Fig.1-13) is provided along an end of a first upper tube support frame and an end of a second upper tube support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide a handle coupled to upper tube support frames where the second seat is mounted. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the handle coupled to the upper tube support frames such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to push the stroller from a position where the handle adds the greatest mechanical advantage to the system thereby not requiring a parent to struggle to move the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 10] Regarding Claim 10, Cheng teaches:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421); a front wheel support frame (See, e.g., Fig. 4-8, 31) adjusted with respect to the first upper tube support frame (See, e.g., Fig. 4-8); a back

wheel support frame (See, e.g., Fig. 4-8, 32) rotated with respect to the first upper tube support frame (See, e.g., Fig. 4-8); and a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 71) coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8);

wherein a second seat (See, e.g., Fig. 4-8, 72) is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first seat attachment adapter is coupled to the front wheel support frame, and wherein the second seat attachment adapter is coupled to the front wheel support frame.

However, Liao teaches a similar stroller with seat attachment (See, e.g., Liao: Fig.1-13) wherein a first seat attachment adapter is coupled to the front wheel support frame (See, e.g., Liao: Fig.1-13), and wherein a second seat attachment adapter is coupled to the front wheel support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide seat attachment adapters coupled to the front wheel support frame of the stroller. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the seat attachment adapters coupled to the front wheel support frame such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to mount the front stroller seat at a position that is lower to the ground level thereby not requiring a parent to hoist the heavy baby seat up as high off the ground when mounting/dismounting from the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

The combination of Cheng in view of Liao fails to explicitly teach: wherein the first/second seat attachment adapter is removable from the first/second front wheel support frame.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1 -13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with first/second seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) removable from a first/second stroller frame (See, e.g., Cone: Fig.1-13, 251+267+269+304).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that removably connect to a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by the combination of Cheng in view Liao with seat attachment adapters that removably connect to the stroller frame such as taught by

Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 11] Regarding Claim 11, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the front wheel support frame comprises a first front wheel support frame member (See, e.g., Cheng: Fig. 4-8, 31) and a second front wheel support frame member (See, e.g., Cheng: Fig. 4-8, 31).

[Claim 12] Regarding Claim 12, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the back wheel support frame comprises a first back wheel support member (See, e.g., Cheng: Fig. 4-8, 32) and a second back wheel support member (See, e.g., Cheng: Fig. 4-8, 32).

[Claim 13] Regarding Claim 13, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising: a first seat attachment housing (See, e.g., Cheng: Fig. 4-8, 71) disposed adjacent the front wheel support frame at the second vertical position (See, e.g., Cheng: Fig. 4-8); a second seat attachment housing (See, e.g., Cheng: Fig. 4-8, 71) disposed adjacent the front wheel support frame at the third vertical position (See, e.g., Cheng: Fig. 4-8); wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second

seat attachment adapter is coupled to the second seat attachment housing (See, e.g., Cheng: Fig. 4-8).

[Claim 14] Regarding Claim 14, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter comprises: a first end comprising a connector portion (See, e.g., Cheng: Fig. 4-8, 71) coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8) and a distal second end (See, e.g., Cheng: Fig. 4-8, 71), wherein the second seat is coupled to the second end (See, e.g., Cheng: Fig. 4-8).

Cheng fails to explicitly teach: wherein the distal second end is removably coupled to the second seat.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1-13) for a stroller (See, e.g., Cone: Fig. 1-13, 214) with seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) having a first end connected to a stroller frame (See, e.g., Cone: Fig.1-13, 251+269) and a second end removably coupled to a seat (See, e.g., Cone: Fig.1-13, 12).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that removably connect to a seat and a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by the combination of Cheng in view of Liao with a seat attachment adapter that has a distal second end that is removably coupled to the seat such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with

or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 15] Regarding Claim 15, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram (See, e.g., Cheng: Fig. 4-8, 71) and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram (See, e.g., Cheng: Fig. 4-8, 72).

[Claim 16] Regarding Claim 16, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising: further comprising: a third seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the first upper tube support frame at the first vertical position (See, e.g., Cheng: Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the second upper tube support frame at the first vertical position (See, e.g., Cheng: Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8).

17. **Claim 19 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng in view of Cone and further in view of Liao (US D593,459S).**

[Claim 19] Regarding Claim 19, the combination of Cheng in view of Cone further teaches: further comprising a handle (See, e.g., Cheng: Fig. 4-8, 10+24) comprising a first end and a distal second end (See, e.g., Cheng: Fig. 4-8).

The combination of Cheng in view of Cone fails to explicitly teach: where the handle first end is coupled to the first upper tube support frame and the distal second end is coupled to the second upper tube support frame.

However, Liao teaches a similar stroller with seat attachments (See, e.g., Liao: Fig.1-13) wherein a handle (See, e.g., Liao: Fig.1-13) is provided along an end of a first upper tube support frame and an end of a second upper tube support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide a handle coupled to upper tube support frames where the second seat is mounted. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by the combination of Cheng in view of Cone modified with the handle coupled to the upper tube support frames such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to push the stroller from a position where the handle adds the greatest mechanical advantage to the system thereby not requiring a parent to struggle to move the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, and can be found on the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES M DOLAK whose telephone number is (571)270-7757. The examiner can normally be reached on 9-530 EST Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J ALLEN SHRIVER can be reached on 303-297-4337. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES M DOLAK/
Primary Examiner, Art Unit 3618.

Examiner-Initiated Interview Summary	Application No. 16/832,429	Applicant(s) Lee et al.		
	Examiner JAMES M DOLAK	Art Unit 3618	AIA (First Inventor to File) Status No	Page 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
JAMES M DOLAK	Primary Examiner	Telephonic
Chris Chan	Attorney	

Date of Interview: 01 February 2021

Issues Discussed:

Drawings

The Examiner informed Applicant's representative that the drawing amendments indicated on page two of the amendment filed 1/25/2021 were not included with the amendment. The Applicant indicated that they would be re-filed in due course.

/JAMES M DOLAK/ Primary Examiner, Art Unit 3618	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Notice of References Cited	Application/Control No. 16/832,429	Applicant(s)/Patent Under Reexamination Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-10899377-B2	01-2021	Eggert-Crowe; Colin F.	B62B7/14	1/1
*	B	US-10926785-B2	02-2021	Ambar; David	B62B7/08	1/1
	C					
	D					
	E					
	F					
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	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

CPC - Searched*		
Symbol	Date	Examiner
B62B7/008,00,006,14,142,145	09/10/2020	JMD
B62B9/12,28,102	09/10/2020	JMD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Inventor Search	09/10/2020	JMD
EAST text search	09/10/2020	JMD
Updated Search	04/11/2021	JMD

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/JAMES M DOLAK/ Primary Examiner.Art Unit 3618	/JAMES M DOLAK/ Primary Examiner, Art Unit 3618

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/15/2020	04/21/2021							
	1	✓	✓							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	✓							
	11	✓	✓							
	12	✓	✓							
	13	✓	✓							
	14	✓	✓							
	15	✓	✓							
	16	✓	✓							
	17	✓	✓							
	18	✓	✓							
	19	✓	✓							
	20	✓	✓							

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/03/01 23:01
		(Simpson near2 (Stacy and Noel).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:36
		(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:36
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:35

		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:24
		S78 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		S27 and ((wheel and seat) same add$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
		S10 and (seat near2 (attach$4 and convert$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
L1	4,376	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/30 23:34

L2	3,084	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/30 23:34
L3	6,260	L1 or L2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/30 23:34
L4	2,482,108	@pd>="20200910"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/31 00:02
L5	118	3 and 4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/31 00:02
L6	20	("20010013689" | "20020005628" | "20030201617" | "20070194545" | "20100127480" | "20100230933" | "20100244408" | "20100259021" | "20110298198" | "20130087993" | "20150042056" | "20160046315" | "20170313339" | "6086086" | "6209892" | "8061732" | "8474854" | "8696016" | "9085312" | "9399477").PN. OR ("10899377").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2021/03/31 00:21
S1	0	("20100140902").PN.	USPAT; USOCR	OR	OFF	2011/11/10 17:53
S2	1	("20100140902").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/11/10 17:55
S3	4	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:03

S4	8	("20030025304" | "20070001429" | "20070114738" | "5338096").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:10
S5	15	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:19
S6	1	("7320471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/21 11:26
S7	3	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:26
S8	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/27 15:43
S9	37,502,244	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:43
S10	1,861	S8 and S9	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S11	1,537	S10 and seat	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2012/06/27 15:44

			DERWENT			
S12	827	S10 and (seat same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S13	427	S10 and (seat near2 attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S14	51	S10 and (seat near2 (attach$4 and convert$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
S15	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 19:10
S16	37,502,315	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S17	1,076	S15 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2012/06/28 19:17

			DERWENT			
S18	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 19:17
S19	1,861	S18 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S20	35	S17 and S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S21	2,902	S17 or S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:20
S22	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:15
S23	37,502,315	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S24	1,076	S22 and S23	US-PGPUB; USPAT; USOCR;	OR	ON	2012/06/28 23:15

			FPRS; EPO; JPO; DERWENT			
S25	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:15
S26	1,861	S25 and S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S27	2,902	S24 or S26	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S28	657	S27 and ((wheel and seat) same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S29	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:16
S30	44	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:16
S31	115	S28 and expand$4	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/06/28 23:20

			EPO; JPO; DERWENT			
S32	58	("5564786" | "0733889" | "6443467" | "0329579" | "5611560" | "3235279" | "0292933" | "6017051" | "0781495" | "2305719" | "1707186" | "4989890" | "6220621" | "6676140" | "1168896" | "2517443" | "20030075903" | "0647165").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:22
S33	33	("2769482" | "2857953" | "2993702" | "3235279" | "3309101" | "3330575" | "3738700" | "4725071" | "5018754" | "5263730" | "5338096" | "5417449" | "5653460" | "5664795" | "5911432" | "6045145" | "6068087" | "6378892" | "D321850" | "D359937").PN. OR ("6676140").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:24
S34	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:25
S35	15	("1707186").URPN.	USPAT	OR	ON	2012/06/28 23:28
S36	14	("20030111825" | "5333893" | "6209892" | "6513827" | "6863286" | "7032922" | "7367581" | "7377537" | "D429664" | "D430076").PN. OR ("7475900").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:31
S37	44	S31 and (wheel near2 remov$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:35
S38	22	("3738600" | "3876046" | "4570956" | "4750783" | "5188389" | "5234224" | "5499831" | "5536027" | "5562300" | "5876046" | "6189914" | "6193263" | "6209892" | "6290290" | "6302412" | "6398233" | "6550802" | "D397316" | "D481975" | "D486427" | "D497844").PN. OR ("D508443").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:36

S39	20	("4725071" | "5221106" | "5338096" | "5522121" | "5918892" | "6209892" | "6267406" | "6527294" | "D296540").PN. OR ("6752405").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:46
S40	15	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:48
S41	30	("0556168" | "1707186" | "1934396" | "20020033588" | "20050167951" | "20070252352" | "20080143082" | "20090026733" | "3383738" | "4083579" | "4805938" | "5221106" | "5333893" | "5522121" | "5769448" | "5918892" | "6431579" | "6527294" | "6601866" | "6752405" | "7481439" | "7516966" | "7597332" | "D484075" | "D595621" | "D598333").PN. OR ("7896384").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:49
S42	13	("3000645" | "4969656" | "5125712" | "5522121" | "5918892" | "6527294" | "6561526" | "6715783" | "6752405" | "6851693" | "6938906").PN. OR ("7677585").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:50
S43	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:51
S44	9	("3000645").URPN.	USPAT	OR	ON	2012/06/28 23:55
S45	1	("6702316").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/29 00:04
S46	29	("20010040357" | "20020060444" | "20020093177" | "4852894" | "4921261" | "4989888" | "5490685" | "5641200" | "5676386" | "5794951" | "5947555" | "6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205").PN. OR ("6702316").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/29 00:04
S47	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB;	OR	OFF	2012/07/01 04:43

			USPAT; USOCR			
S48	37,502,608	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S49	1,076	S47 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S50	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 04:43
S51	1,861	S50 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S52	2,902	S49 or S51	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S53	476	S52 and cylindrical	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2012/07/01 04:43

			DERWENT			
S54	21	S52 and cylindrical near2 connect$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 05:05
S55	29	("1506565" | "1885627" | "1954179" | "20040026895" | "20040164515" | "2220528" | "2334387" | "2482585" | "5395130" | "5454578" | "5501480" | "5536027" | "5904363" | "6022042" | "6331013" | "6443467" | "6443469" | "6685206" | "6685207" | "D327240" | "D405031" | "D486425").PN. OR ("7261308").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:10
S56	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:17
S57	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:18
S58	18	("2926880" | "3290050" | "3309101" | "4183580" | "4711489" | "4779883" | "5074616" | "5168601" | "5265931" | "5401076" | "5529325").PN. OR ("5704627").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:21
S59	23	("4542915" | "4854607" | "4986564" | "5033761").PN. OR ("5653460").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:22

S60	31	("2453631" | "2558372" | "4953887" | "5090724" | "5380262" | "5653460" | "5676386").PN. OR ("6155592").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:25
S61	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:27
S62	33	("0279778" | "1033324" | "2453631" | "3643292" | "3849834" | "3879146" | "4132429" | "4335900" | "4606550" | "4856809" | "4902027" | "4953880" | "5176395" | "5188389" | "5263730" | "5299825" | "5318318" | "5344171" | "5356171" | "5364119" | "5536027").PN. OR ("5647601").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:28
S63	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:29
S64	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:33
S65	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 15:09
S66	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:02
S67	1	("6443467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S68	2	("1707186").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S69	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S70	1	("6752405").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:14
S71	1	("8157273").PN.	US-PGPUB;	OR	OFF	2012/07/01 16:14

			USPAT; USOCR			
S72	1	("7896384").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:15
S73	1	("6561526").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:16
S74	1	("5653460").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:17
S75	2,925	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:32
S76	37,571,828	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S77	1,873	S75 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S78	2,516	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:35
S79	35	S78 and S77	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36

S80	1,080	S78 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36
S81	1	("20050082897").PN. OR ("8246020").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:44
S82	9	("20070085303" | "20080303232" | "20090033066" | "3784252" | "5257799" | "5794951" | "6086086" | "7367581" | "7377537").PN. OR ("8205906").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:52
S83	31	("20010002745" | "20030067138" | "20050099025" | "20060237932" | "20070063474" | "20080067776" | "20090026817" | "2450051" | "4754987" | "5076599" | "5267744" | "5454577" | "5474316" | "5577746" | "5921571" | "5947497" | "5979921" | "6196572" | "6663126" | "6764087" | "6767028" | "6929274" | "6976697" | "7052026" | "7168761" | "7172206" | "7354058" | "7431324" | "7445222" | "7547029").PN. OR ("8262103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:58
S84	22	("20080211206" | "20090014985" | "20090078482" | "3605929" | "4362311" | "4861058" | "5020624" | "5421598" | "5921338" | "6135222" | "6220382" | "6378642" | "6439331" | "6659488" | "6793248" | "7044249" | "7080847" | "7364182" | "7571926" | "7591479" | "7832755").PN. OR ("8336904").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 18:03
S85	1	("8251382").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/14 15:15
S86	34	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 15:19

		"7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" | "7694996" | "7712765" | "7753398").PN. OR ("8251382").URPN.				
S87	32	("4836573" | "4892327" | "5028061" | "5069474" | "5257799" | "5460430" | "5887935" | "5921574" | "6099022" | "6523853" | "6594840" | "6739649" | "7281732").PN. OR ("7377537").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 17:50
S88	57	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" | "6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" | "7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 17:52
S89	3,003	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:09
S90	37,602,504	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:09
S91	1,876	S89 and S90	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2013/07/16 15:09

			EPO; JPO; DERWENT			
S92	2,544	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:11
S93	1,082	S92 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:11
S94	51	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20100140902-$ or US-20080303232-$ or US-20070085303-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:10
S95	26	("20060131841" | "20070069505" | "20070210560" | "20080012268" | "20080224450" | "20080224451" | "20090160162" | "20100171289" | "20100201103" | "5947555" | "6045145" | "6270111" | "6331032" | "6715783" | "7032922" | "7367581" | "7475900" | "7677585" | "7753398" | "7775532" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:16

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S96	1	("8240700").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/23 15:17
S97	231	("1598778" | "1709527" | "20050012306" | "20050242549" | "20060001226" | "20060131840" | "20060131841" | "20060152059" | "20060157945" | "20060219374" | "20060261576" | "20090127827" | "20090127828" | "20090243260" | "20100038886" | "2616719" | "2783053" | "3112042" | "3168330" | "3227484" | "3390893" | "3459435" | "3504926" | "3556546" | "3561787" | "3653681" | "3799567" | "3989295" | "4007947" | "4023825" | "4046401" | "4111454" | "4126331" | "4191397" | "4232897" | "4248443" | "4317581" | "4322093" | "4335900" | "4362315" | "4365819" | "4378946" | "4412688" | "4415180" | "4513974" | "4542915" | "4564212" | "4591176" | "4602395" | "4606550" | "4610460" | "4632420" | "4632421" | "4660850" | "4706986" | "4733882" | "4741056" | "4741551" | "4763911" | "4763919" | "4768795" | "4770437" | "4805928" | "4807928" | "4817982" | "4819958" | "4832361" | "4856809" | "4886289" | "4892327" | "4906017" | "4907818" | "4924725" | "4930697" | "4953887" | "4968092" | "5028061" | "5056805" | "5074575" | "5087066" | "5110150" | "5143398" | "5181735" | "5184835" | "5201535" | "5205577" | "5205579" | "5238292" | "5244228" | "5246272" | "5257799" | "5362089" | "5388852" | "5398951" | "5417449" | "5417450" | "5427402" | "5431478" | "5437493" | "5441163" | "5454584" | "5460395" | "5460398" | "5472224" | "5478102" | "5489138" | "5511259" | "5511441" | "5524503" | "5527090" | "5605409" | "5622377" | "5645293" | "5649737" | "5664795" | "5669623" | "5669624" | "5669625" | "5676386" | "5718444").PN. OR ("5722682" | "5727798" | "5741021" | "5752738" | "5765855" | "5765856" | "5769447" | "5772235" | "5775718" | "5795091" | "5810432" | "5845666" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:17

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S98	1	("8186705").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/23 16:51
S99	236	("1598778" | "1709527" | "20050012306" | "20050242549" | "20060001226" | "20060131840" | "20060131841" | "20060152059" | "20060157945" | "20060219374" | "20060261576" | "20090127827" | "20090127828" | "20090243260" | "20100171289" | "2616719" | "2783053" | "3112042" | "3168330" | "3227484" | "3390893" | "3459435" | "3504926" | "3556546" | "3561787" | "3653681" | "3784252" | "3799567" | "3989295" | "4007947" | "4023825" | "4046401" | "4111454" | "4126331" | "4191397" | "4232897" | "4248443" | "4317581" | "4322093" | "4335900" | "4362315" | "4365819" | "4378946" | "4412688" | "4415180" | "4513974" | "4542915" | "4564212" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 16:56

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S100	17	("20060001226" | "6099022" | "5121940" | "6502901" | "6530591" | "6641164" | "20060157945" | "6193263" | "6626452" | "20060152059" | "4365819" | "6209829" | "6398233" | "6877761" | "7070197" | "20060131841" | "7320471").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 17:08
S101	2	("4953667" | "4257729").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:00
S102	1	("6168174").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:04
S103	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:04
S104	1	("6296260").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:18
S105	1	("6203053").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:19
S106	1	("4681330").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:20
S107	1	("5685552").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:21
S108	1	("5984326").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:21
S109	1	("6168174").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:22

S110	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:22
S111	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:25
S112	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:26
S113	53	("20030192925" | "20050072821" | "2907372" | "3079162" | "3248125" | "3627342" | "3961803" | "3967833" | "4032173" | "4113306" | "4181356" | "4220351" | "4231587" | "4239259" | "4256325" | "4412688" | "4620711" | "4681340" | "4762256" | "4844504" | "4892327" | "5230523" | "5333769" | "5398951" | "5411729" | "5431478" | "5468009" | "5478096" | "5662339" | "5806924" | "5829826" | "5964470" | "5987665" | "6045145" | "6231056" | "6250654" | "6375213" | "6811178" | "6910696" | "D254610" | "D345720" | "D358058" | "D365925" | "D402235" | "D508443").PN. OR ("7497461").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 16:08
S114	22	("3738600" | "3876046" | "4570956" | "4750783" | "5188389" | "5234224" | "5499831" | "5536027" | "5562300" | "5876046" | "6189914" | "6193263" | "6209892" | "6290290" | "6302412" | "6398233" | "6550802" | "D397316" | "D481975" | "D486427" | "D497844").PN. OR ("D508443").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 16:13
S115	26	("4790548" | "5060967" | "5366274" | "5727848" | "5975225" | "6203054" | "6513827" | "7234722").PN. OR ("7367581").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 18:30
S116	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 18:39
S117	55	("4736959" | "4743063" | "4872692" | "4878680" | "5201535" | "5676386").PN. OR ("5947555").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 10:09

S118	25	("20010040357" | "20020093177" | "20030075903" | "4921261" | "4989888" | "5676386" | "5794951" | "5947555" | "6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205" | "6641164" | "6702316").PN. OR ("6923467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 11:03
S119	25	("4570956" | "4836573" | "4921261" | "4946180" | "5121940" | "5188380" | "5676386" | "5772279" | "5947555" | "6070890" | "6155592" | "6286844" | "6398233" | "6409205" | "6478327" | "D345720").PN. OR ("6641164").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 11:28
S120	2	("3000645").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:26
S121	9	("3000645").URPN.	USPAT	OR	ON	2013/07/25 15:27
S122	29	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:29
S123	1	("8029007").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:30
S124	28	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" | "6540238" | "6557878" | "6698772" | "6827356" | "6893028" | "7159829" | "7290776").PN. OR ("8029007").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:31
S125	1	("6851693").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:34
S126	14	("3887208" | "5064209" | "5067738" | "5269548" | "5421597" | "5470088" |	US-PGPUB;	OR	ON	2013/07/25 15:35

		"5513868" | "5785335").PN. OR ("6851693").URPN.	USPAT; USOCR			
S127	6	("2001/0033069").URPN.	USPAT	OR	ON	2013/07/25 15:36
S128	28	("1876963" | "20010033069" | "20020089136" | "20040075230" | "20040173989" | "20060261575" | "20100201089" | "2859975" | "3069182" | "4190261" | "4239248" | "4323258" | "4336952" | "4359231" | "5624128" | "5931244" | "6203053" | "6485039" | "6517092" | "6572130" | "6626446" | "7073822" | "7377527" | "7549655" | "7699325").PN. OR ("8146926").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:37
S129	1	("7249779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:38
S130	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:38
S131	60	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 16:59

		3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$).did. or (US-3000645-$ or US-2453631-$).did.				
S132	7,295,614	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/29 18:38
S133	2,588	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S134	3,082	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S135	1,082	S132 and S133	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:39
S136	1,877	S132 and S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:39
S137	5,616	S133 or S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2014/01/29 18:41

			DERWENT			
S138	2,924	S132 and S137	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S139	1,012	S138 and stroller	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S140	901	S139 and seat$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S141	757	S140 and (insert$4 or attach$4 or detach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:42
S142	107	S141 and ((double or tandem) same stroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:42
S143	1	("5816367").PN.	US-PGPUB;	OR	OFF	2014/01/30 09:23

			USPAT; USOCR			
S144	3	("2006/0290107").URPN.	USPAT	OR	ON	2014/01/30 14:24
S145	78	("20030020259" | "20030227157" | "20060290107" | "20070001429" | "20070085303" | "20070222167" | "20070296182" | "20080073877" | "20080150247" | "20090039620" | "20100038886" | "20100038887" | "20100072732" | "20100078916" | "20100109292" | "20100140902" | "20100282800" | "20120153583" | "2769482" | "2798733" | "2857953" | "2993702" | "3235279" | "3309101" | "4542915" | "4725071" | "4858947" | "5018754" | "5167425" | "5184835" | "5263730" | "5333893" | "5338096" | "5417449" | "5653460" | "5664795" | "5722682" | "5911432" | "6045145" | "6086087" | "6209892" | "6267406" | "6378892" | "6497424" | "6585284" | "6676140" | "6702316" | "6843498" | "6877761" | "6935652" | "6979017" | "7320471" | "7451999" | "7938433" | "8070179" | "8157273" | "8186705" | "8205894" | "D311363" | "D321850" | "D328047" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D455679" | "D587635" | "D614540" | "D616337" | "D616338" | "D636300").PN. OR ("8371606").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 14:26
S146	8	("2010/0078916").URPN.	USPAT	OR	ON	2014/01/30 14:27
S147	8	("20070096438" | "20100025968" | "20100078916" | "6422586" | "7401803" | "7441794" | "7632035" | "7766366").PN. OR ("8596669").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 14:27
S148	1	("8157273").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 16:20
S149	18	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:21
S150	1	("5338096").PN.	US-PGPUB;	OR	OFF	2014/01/30 16:23

			USPAT; USOCR			
S151	19	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:24
S152	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:17
S153	53	("20030192925" | "20050072821" | "2907372" | "3079162" | "3248125" | "3627342" | "3961803" | "3967833" | "4032173" | "4113306" | "4181356" | "4220351" | "4231587" | "4239259" | "4256325" | "4412688" | "4620711" | "4681340" | "4762256" | "4844504" | "4892327" | "5230523" | "5333769" | "5398951" | "5411729" | "5431478" | "5468009" | "5478096" | "5662339" | "5806924" | "5829826" | "5964470" | "5987665" | "6045145" | "6231056" | "6250654" | "6375213" | "6811178" | "6910696" | "D254610" | "D345720" | "D358058" | "D365925" | "D402235" | "D508443").PN. OR ("7497461").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:56
S154	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 18:00
S155	23	("20010013689" | "20040032103" | "20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243260" | "20090295128" | "4398748" | "4836573" | "6446990" | "6478327" | "6572134" | "7497461" | "7513512" | "7658399" | "7686322" | "7712765" | "7775532" | "7832755" | "7878527" | "7938435").PN. OR ("8231136").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 10:54
S156	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/01/31 12:58
S157	14	("20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243261" | "20120098219" | "4398748" | "4836573" | "6446990" | "6478321" | "6478327" | "6572134" | "7712765").PN. OR ("8458880").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 12:59

S158	1	("7938435").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/31 13:26
S159	34	("4157839" | "5558357" | "5676386" | "5772279" | "5794951" | "5863061" | "5865447" | "5876046" | "5947555" | "6241274" | "6286844" | "6331032" | "6409205" | "6428034" | "6478327" | "6533309" | "6666473" | "6893040" | "7032922" | "7267359" | "7377537" | "7431395" | "7475900" | "7681894" | "7766366").PN. OR ("7938435").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 12:41
S160	17	("20050098983" | "2842374" | "6357784" | "7118121" | "7267359" | "7367581" | "7441794" | "7527283").PN. OR ("7766366").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 12:56
S161	105	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:14
S162	52	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:21
S168	1	("20140217706").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 10:03
S169	3,175	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 10:24

S170	7,324,421	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:24
S171	1,878	S169 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25
S172	64	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25
S173	3,686,032	@pd>="20140129"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:56

S174	1	S171 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:56
S175	13	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:57
S176	1	("7,497,461").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:01
S177	94	S169 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 11:08
S178	12	("20070296182" | "20100117315" | "5820144" | "6086086" | "6513827" | "6715783" | "7032922" | "7066542" | "7364183" | "7377537" | "7455362" | "8061732").PN. OR ("8764048").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:25
S179	15	("3797848" | "4832361" | "5074575" | "6116624" | "6446990" | "6508605" | "6530591" | "6824161" | "6830254" | "6851700" | "6951342" | "7021650" | "7273225" | "7401803" | "7513512").PN. OR ("8696016").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:41
S180	1	("7,938,435").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:47
S181	1	("20080231022").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:47

S182	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/09/24 11:48
S183	1	("7,766,366").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:51
S184	1	("6,286,844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:52
S185	1	("6,513,827").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S186	0	(2006/0131841).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S187	1	("20060131841").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S188	1	("20060001226").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S189	1	("7,320,471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S190	1	("6,045,145").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S191	1	("20080224451").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S192	1	("7,481,439").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:57
S193	1	("7,367,581").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:57

S194	1	("8,029,007").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S195	1	("6,923,467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S196	1	("20070090619").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S197	1	("6,851,693").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:59
S198	1	("20010033069").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S199	1	("7,249,779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S200	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:02
S201	2,665	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:02
S202	79	S201 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2014/09/24 12:03

			DERWENT			
S203	2	S202 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:03
S204	1	("5338096").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:24
S205	1	("20030025304").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S206	1	("20070001429").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S207	1	("20070085303").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S208	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S209	1	("7681894").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:33
S210	14	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 14:33
S211	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:34
S212	41	("7249779" | "3000645" | "7677585" | "7377537" | "20060001226" | "8029007" | "20080231022" | "7766366" | "6443467" | "6561526" | "20080224451" | "6513827" | "7475900" | "7497461" | "20070114738" | "1707186" | "6752405" | "6851693" | "7938435" | "6676140" | "6045145" | "6923467" | "20030025304" | "20070001429" | "5338096" | "6045145" | "20070090619" | "6209892" | "6378892" |	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 14:56

		"7896384" | "8157273" | "8251382" | "8262103" | "8336904" | "20010033069" | "20060131841" | "7320471" | "7367581" | "7481439" | "6286844").PN.				
S219	19	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2015/04/20 13:53
S220	22	("7249779" | "20060001226" | "20080231022" | "7766366" | "8029007" | "20080224451" | "6513827" | "4797461" | "7497461" | "6851693" | "7938435" | "6045145" | "6923467" | "8905427" | "20070090619" | "20010033069" | "20060131841" | "6286844" | "7320471" | "7367581" | "7481439" | "8882134").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 13:58
S221	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:02
S222	68,470,442	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:02
S223	1,214,191	@pd>="20140924"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:03
S224	3,292	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:04
S225	2,741	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:04
S226	5,977	S224 or S225	US-PGPUB; USPAT; USOCR;	OR	ON	2015/04/20 14:04

			FPRS; EPO; JPO			
S227	2,929	S226 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S228	2	S227 and S223	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S229	88	("0119331" | "1138802" | "1269379" | "1707186" | "1890469" | "20040251063" | "20070045975" | "20090115151" | "20090160162" | "20100038887" | "20100140902" | "20110175330" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" | "6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" | "8398143" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("8905427").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:04
S230	84	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:08
S231	796	(B62B7/008).CPC.	US-PGPUB;	OR	ON	2015/04/20 14:12

			USPAT; USOCR; FPRS; EPO; JPO			
S232	666	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S233	894	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S234	1,003	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S235	450	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S236	3,236	S230 S231 S232 S233 S234 S235	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S237	2,104	S236 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:13
S238	70	S237 and (seat$3 same revers$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:14
S239	77	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-	US-PGPUB;	OR	ON	2015/04/20 14:14

		20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070069505-$ or US-20080231022-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7681894-$ or US-8955869-$ or US-8905427-$).did. or (US-3000645-$ or US-2453631-$).did.	USPAT; USOCR			
S240	58	S238 not S239	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:14
S241	1	("8882134").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:15
S242	87	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" |	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:16

		"20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.				
S243	1	("6361111").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S244	1	("20040251063").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S245	1	("6527294").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20
S246	1	("20070045975").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20
S247	27	("20060001226" | "20070045975" | "20080296872" | "20090033066" | "5301970" | "5520433" | "5601302" | "5709400" | "5845924" | "6099022" | "6193263" | "6203054" | "6209892" | "6398233" | "6446990" | "6540250" |	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:30

		"6715783" | "7377537" | "7475900" | "7753398").PN. OR ("8029014").URPN.				
S249	2,790	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 10:16
S250	3,337	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 10:16
S251	102	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S252	824	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S253	686	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S254	947	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S255	1,031	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S256	520	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S257	3,385	S251 S252 S253 S254 S255 S256	US-PGPUB; USPAT;	OR	ON	2015/12/07 10:17

			USOCR; FPRS; EPO; JPO			
S258	1,888,686	@pd>="20150420"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S259	6,070	S249 or S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S260	49	S258 and S249	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S261	93	S258 and S259	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S262	45	S258 and S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S263	44	S262 not S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:18
S264	105	S258 and S257	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S265	94	S264 not S263	US-PGPUB; USPAT; USOCR;	OR	ON	2015/12/07 10:19

			FPRS; EPO; JPO			
S266	93	S265 not S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S267	1	("8936261").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S268	64	("20040164593" | "20060261565" | "20070045975" | "20070069505" | "20070187914" | "20080054579" | "20080150247" | "20080179848" | "20080303232" | "20090033066" | "20090102162" | "20090256323" | "20100013281" | "20100102535" | "20100127480" | "20100230933" | "20100244408" | "20100259021" | "20110204600" | "20110291389" | "20110304124" | "20120025492" | "20120153583" | "20120242062" | "20120261961" | "20130113188" | "4872692" | "5018405" | "5676386" | "5722682" | "5947555" | "6513827" | "6530591" | "6581957" | "6851700" | "7032922" | "7267359" | "7377537" | "7401803" | "7681894" | "7686323" | "7753397" | "7753398" | "7789402" | "7798500" | "7938435" | "8029014" | "8033555" | "8157286" | "8205906" | "8240700" | "8251382" | "8322744" | "8366127" | "8454049" | "8465045" | "8469388" | "8474854" | "8480116" | "8485546" | "8544873" | "8550489" | "8596669").PN. OR ("8936261").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S269	18	("1671774" | "1707186" | "20050167951" | "20070194545" | "20100052277" | "20110163519" | "20120118516" | "7032922" | "7871100" | "8157273" | "8251382" | "8585075" | "8651502" | "8727370" | "D686541").PN. OR ("9010773").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 13:12
S270	1	("6,286,844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 18:14

S271	110	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S272	855	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S273	694	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S274	989	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S275	1,052	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S276	540	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S277	3,473	S271 S272 S273 S274 S275 S276	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S278	3,353	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 12:46
S279	2,802	(297/130,232,243,463.1).CCLS.	US-PGPUB;	OR	OFF	2016/02/12 12:46

			USPAT; USOCR			
S280	279,114	@pd>="20151207"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:47
S281	21	S277 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S282	16	S278 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S283	12	S279 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S284	17	S281 not (S282 or S283)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S285	2	("20070069504" | "7401803").PN. OR ("9242665").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:16
S286	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" | "20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" | "20100038886" | "20100038887" | "20100072731" | "20100140902" | "20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" |	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:18

		"20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" | "7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.				
S287	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 13:19
S288	1	("4343124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:17
S289	1	("4340124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:18
S290	1	("20140361517").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:50
S291	111	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S292	864	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S293	699	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44

S294	993	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S295	1,054	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S296	542	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S297	3,486	S291 S292 S293 S294 S295 S296	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S298	3,358	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S299	2,805	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S300	6,106	S298 or S299	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:45
S301	83,034	@pd>="20160212"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:45
S302	8	S300 and S301	US-PGPUB; USPAT; USOCR;	OR	ON	2016/03/25 16:59

			FPRS; EPO; JPO			
S303	6	S297 and S301	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 17:01
S304	13	("20080231022" | "20090243261" | "20130113188" | "6513827" | "7267359" | "7377537" | "7798500" | "7938435" | "8061732" | "8733784" | "8764048" | "8777253" | "8955869").PN. OR ("9260128").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:03
S305	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "20140191483" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" | "6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "D326748" | "D431798").PN. OR ("9260127").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:04
S306	1	("20150123440").PN.	US-PGPUB;	OR	OFF	2016/03/25 17:20

			USPAT; USOCR			
S307	1	("8955869").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:22
S308	32	("20010033069" | "20060001226" | "20060131841" | "20070090619" | "20080224451" | "20080231022" | "6045145" | "6286844" | "6513827" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7475900" | "7481439" | "7497461" | "7681894" | "7766366" | "7938435" | "8029007" | "8033554" | "8061732" | "8231136" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048").PN. OR ("8955869").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:22
S309	2	"39773911".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:27
S310	32	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:33
S311	28	("1203729" | "1321009" | "20020036391" | "20050023783" | "20070075525" | "20070216138" | "20070222167" | "20090315300" | "20100072732" | "2769482" | "4923208" | "5338096" | "5417449" | "5664795" | "5722682" | "5740989" | "5887935" | "6045145" | "6378892" | "6676140" | "7011318" | "7445229" | "8282119" | "D587635" | "D614540").PN. OR ("8857830").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:37
S312	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:37
S313	1	"41399621".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:41
S314	6	("2009/0302578").URPN.	USPAT	OR	ON	2016/03/25 17:42
S315	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" |	US-PGPUB;	OR	ON	2016/03/25 17:43

		"20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" | "20100038886" | "20100038887" | "20100072731" | "20100140902" | "20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" | "20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" | "7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.	USPAT; USOCR			
S316	108	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:54

		6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$).did. or (US-3000645-$ or US-2453631-$).did.				
S317	1	("20090290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:56
S318	1	("20060290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:58
S319	1	("4542915").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 18:07
S320	2	"47750100".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 21:54
S321	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 23:02

S322	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 23:02
S323	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/28 11:14
S324	0	(A stroller, comprising a stroller frame a plurality of wheels, including front and rear wheels a first seat coupled to the stroller frame at a first vertical position closer to a handle of the stroller frame and configured to hold a first child in the stroller a second seat attachment coupled to the stroller frame at a second vertical position substantially below the first vertical position and closer to the front wheels and comprising a left seat support element, wherein the left seat support element comprises a first connector portion releasably connected to the stroller frame closer to left front wheel and a left seat connector releasably connecting a second seat in either a forward or backward position and a right seat support element, wherein the right seat support element comprises a second connector portion releasably connected to the stroller frame closer to a right front wheel and a right seat connector releasably connecting the second seat in either a forward or backward position between the left and right seat support connectors and the second seat releasably connected to the left seat connector and the right seat connector and configured to hold a second child in the stroller while the first seat holds the first child).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:20
S325	0	(stroller frame wheel seat first vertical position handle child attach$4 coupl$3 left seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:42
S326	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR;	AND	ON	2016/03/28 13:42

			FPRS; EPO; JPO			
S327	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S328	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S329	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support$4 releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S330	3	(stroller frame wheel seat vertical position handle attach$4 left support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:44
S331	14	(stroller frame wheel seat vertical position handle attach$4 support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:45
S332	15	(stroller frame wheel seat vertical position handle attach$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:46
S333	1	S332 not S331	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:46
S334	18	(stroller frame wheel seat vertical position handle attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR;	AND	ON	2016/03/28 13:47

			FPRS; EPO; JPO			
S335	3	S334 not S332	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:47
S336	25	(stroller frame wheel seat vertical position$4 attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S337	7	S336 not S334	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S338	1	"41399621".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/28 13:48
S339	1	("20160339940").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/08 16:58
S340	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:22
S341	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:23
S342	5,184,262	@pd>="20160325"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:31
S343	5,004	S340 or S341	US-PGPUB; USPAT;	OR	ON	2017/06/08 17:33

			USOCR; FPRS; EPO; JPO			
S344	254	S342 and S343	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:33
S346	4	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:52
S347	14	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:15
S348	1	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
S349	66	("1707186" | "20010033069" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "3000645" | "4542915" | "5338096" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:35

		"8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128").PN.				
S350	111	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$ or US-20130049331-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:36

		8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$).did. or (US-3000645-$ or US-2453631-$).did.				
S351	4	S349 not S350	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:41
S352	34	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:44
S353	96	("1269379" | "1707186" | "1890469" | "20020158444" | "20040251063" | "20070045975" | "20080122200" | "20080224451" | "20090115151" | "20090160162" | "20090289440" | "20100038887" | "20100140902" | "20110175330" | "20140265258" | "3053493" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5522121" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" | "6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:46

		"8220822" | "8282120" | "8297642" | "8398143" | "8905427" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("9517787").URPN.				
S354	8	"48223173".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 09:47
S355	10	("2013/0113185").URPN.	USPAT	OR	ON	2017/06/12 09:48
S356	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:52
S357	22	("1707186").URPN.	USPAT	OR	ON	2017/06/12 09:53
S358	0	S350 and (cover$4 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:56
S359	0	S350 and (cover$4 same2 door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:00
S360	17	S350 and (cover$4 same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:00
S361	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:08

S362	56	("4836573" | "4892327" | "5028061" | "5069474" | "5257799" | "5460430" | "5887935" | "5921574" | "6099022" | "6523853" | "6594840" | "6739649" | "7281732").PN. OR ("7377537").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:08
S363	3	S349 and door	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:13
S364	1	("9517787").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:19
S365	1	("9517789").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S366	1	("9561817").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S367	1	("9493179").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:21
S368	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S369	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S370	5,004	S368 or S369	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S371	23	S370 and (cover$4 same door)	US-PGPUB; USPAT; USOCR;	OR	ON	2017/06/12 10:22

			FPRS; EPO; JPO			
S372	5	S370 and (cavit$3 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:23
S373	35	("2917316" | "2993702" | "3110504" | "3248125" | "3309101" | "5579556" | "5622375" | "5664795" | "5725238" | "6086087" | "6276759" | "6312005" | "D319493" | "D444738" | "D450265").PN. OR ("6447001").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:23
S374	40	S370 and (cavit$3 same cover$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:24
S375	1	("5522121").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:28
S376	25	("0461069" | "1318850" | "1352647" | "1688148" | "1707186" | "4805938").PN. OR ("5522121").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:29
S377	1	("6449801").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:29
S378	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:30
S379	2	"38052732".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 10:30
S380	41	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" | "6540238" | "6557878" | "6698772" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:30

		"6827356" | "6893028" | "7159829" | "7290776").PN. OR ("8029007").URPN.				
S381	13	("20040164510" | "20070090619" | "20120098237" | "20130234419" | "20130264787" | "20160001805" | "3061328" | "5622375" | "6422634" | "6530591" | "7004272" | "8029007").PN. OR ("9545941").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:31
S382	91	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:33
S383	42	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:46
S384	15	("20050242548" | "20070052271" | "4518139" | "4681340" | "6022077" | "6536842").PN. OR ("7364183").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:49

S385	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 12:09
S386	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:13
S387	91	("0706448" | "1480451" | "1508500" | "1952467" | "20010013689" | "20040212161" | "20060085953" | "20070085302" | "20070120404" | "20090029784" | "20090181780" | "20110278810" | "20120023662" | "20120060326" | "20120235450" | "20130334781" | "20140042729" | "20150008659" | "20150042056" | "20150042076" | "20150175189" | "2708585" | "2961248" | "3564626" | "4476649" | "5099528" | "5201535" | "5562548" | "5676386" | "5772279" | "5846136" | "5947555" | "5987665" | "5988670" | "6250654" | "6286844" | "6471597" | "6671926" | "6872146" | "6893040" | "7037205" | "7100724" | "7354352" | "7377537" | "7445559" | "7475942" | "7497461" | "7607734" | "7681894" | "7686323" | "7694996" | "7766366" | "7905791" | "7938435" | "8029014" | "8251382" | "8292750" | "8550556" | "8672341" | "8746794" | "8851505" | "8944927" | "8955869" | "9085312" | "D156930" | "D371094" | "D377466" | "D408768" | "D442895" | "D452195" | "D475951" | "D481976" | "D498713" | "D498714" | "D519063" | "D604055" | "D622640" | "D623429" | "D667229" | "D682562" | "D684789" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16

		"D687352" | "D743304").PN. OR ("9421992").URPN.				
S388	20	("20010040357" | "20080106070" | "20100127480" | "20110181026" | "20160144879" | "5257799" | "5645293" | "6102432" | "6312005" | "7281732" | "7641216" | "8141895" | "8240698" | "8585075" | "8696015" | "8696016" | "8998241" | "9050993" | "9421991" | "9540028").PN. OR ("9637155").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16
S389	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:21
S390	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:54
S391	28	("20030015895" | "20090066130" | "20090295207" | "4306749" | "4750783" | "5385387" | "5478135" | "5562548" | "5586351" | "5997098" | "6017088" | "6170911" | "6299249" | "6331032" | "6336682" | "6347832" | "6428099" | "6428100" | "6443522" | "6554358" | "6705676" | "6793280" | "6921359" | "6979057" | "7090294").PN. OR ("8678498").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:55
S392	54	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" | "7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" | "7694996" | "7712765" | "7753398").PN. OR ("8251382").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:08
S393	15	("20080231022" | "5773379" | "5947555" | "6286844" | "6893040" | "7032922" | "7267359" | "7475900" | "7658399" | "7681894" | "7766366" | "7938435" | "8033555" | "D621306").PN. OR ("8851505").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:09
S394	58	("20010013689" | "20050264062" | "20060214397" | "20070257458" |	US-PGPUB;	OR	ON	2017/06/12 13:09

		"20070296182" | "20080136127" | "20080231023" | "20100219616" | "20100230933" | "20120025492" | "4834403" | "5028061" | "5201535" | "5203577" | "5257799" | "5277472" | "5364137" | "5564778" | "5567008" | "5676386" | "5772279" | "5794951" | "5947555" | "6086086" | "6089653" | "6286844" | "6318807" | "6446990" | "6572134" | "6595583" | "6793280" | "6802514" | "6863286" | "6942294" | "6983986" | "7032922" | "7070197" | "7207628" | "7370913" | "7377537" | "7681894" | "7686322" | "7694996" | "7753398" | "8029014" | "8070228" | "8172253" | "8282120" | "8382150").PN. OR ("8651502").URPN.	USPAT; USOCR			
S395	76	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:12
S396	49	("4915401" | "5133567" | "5277472" | "5564778" | "5644816" | "5676386" | "5772279").PN. OR ("5865447").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:13
S397	88	("0763771" | "0921361" | "1167525" | "2509972" | "2982562" | "3029087" | "3083997" | "3596986" | "4306749" | "4345791" | "4371206" | "4385769" | "4501032" | "4545613" | "4634177" | "4664396" | "4733909" | "4861105" | "4915446" | "4943113" | "4984813" | "4998307" | "5052750" | "5058283" | "5203577" | "5277472" | "5385387" | "D294777" | "D305583" | "D322001" | "D325132").PN. OR ("5567008").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:14
S398	92	("2982562" | "3100651" | "3290050" | "3330575" | "3784252" | "4072318" | "4378946" | "4412688" | "4428598" | "4478427" | "4606550" | "4762364" | "4815764" | "5004253" | "5074575").PN. OR ("5201535").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:16
S399	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23

		"4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.				
S400	82	S397 not S399	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23
S401	20	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:28
S402	59	("20020175498" | "20020195797" | "20030111825" | "20040046364" | "20050098982" | "20060071452" | "20060237949" | "5772235" | "5823564" | "7032922").PN. OR ("7267359").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:30
S403	1	("5201535").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:32
S404	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:47
S405	3,477	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S406	2,369	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S407	5,040	S405 or S406	US-PGPUB; USPAT; USOCR;	OR	ON	2017/11/13 16:13

			FPRS; EPO; JPO			
S408	1,329,175	@pd>="20170608"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S409	44	S407 and S408	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S410	3	"37808038".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/11/13 17:27
S423	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 10:50
S424	39	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 10:51
S425	8	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S426	18	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S427	3	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT;	OR	ON	2019/04/15 10:52

			USOCR; FPRS; EPO; JPO; DERWENT			
S428	151	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$ or US-3000645-$).did. or (US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$ or US-8733784-$).did. or (US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 11:03

		8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$ or US-9260127-$).did. or (US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$ or US-8851505-$).did. or (US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S429	55	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:25
S430	3	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2019/04/15 12:25
S431	80	("1707186" | "20010033069" | "20020109321" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:26

		"5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN. OR ("9944305").URPN.				
S432	3,809	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S433	2,627	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S434	5,496	S432 or S433	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S435	7,949,590	@pd>="20171113"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S436	308	S434 and S435	US-PGPUB; USPAT; USOCR;	OR	ON	2019/04/15 12:30

			FPRS; EPO; JPO			
S437	2	("20100140902" | "20140333039").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:52
S438	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:54
S439	7	S438 not S428	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:55
S440	11	("20060214395" | "20070085303" | "20090302578" | "4763911" | "5356172" | "5395154" | "5593173" | "6431647").PN. OR ("8596670").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:58
S441	12	("2007/0085303").URPN.	USPAT	OR	ON	2019/04/15 13:05
S443	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 14:37

S444	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 14:47
S445	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:08
S446	1	("7481439").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:09
S447	21	("4222132" | "4805938" | "4969656" | "5064209" | "5653460" | "5887935" | "5918892" | "6155592" | "6523840" | "6527294" | "6752405" | "D360392").PN. OR ("7481439").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10
S448	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10

S449	28	("1707186" | "4222132" | "4288089" | "4354689" | "4805938" | "4969656" | "5064209" | "5076599" | "5522121" | "5653460" | "5918892" | "6086087" | "6527294" | "6752405").PN. OR ("6938906").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:13
S450	56	("20030080536" | "20040075229" | "20040124611" | "20040173997" | "20050127640" | "20050242549" | "20090295128" | "20100038886" | "20100230933" | "4697823" | "4846494" | "4921261" | "4946180" | "5121940" | "5338096" | "5454575" | "5624152" | "5669623" | "5687984" | "5752738" | "6189914" | "6193263" | "6209892" | "6267406" | "6409205" | "6478327" | "6702316" | "6938906" | "6964429" | "6981709" | "7017937" | "7040694" | "7284797" | "7445230" | "7513512" | "7614640" | "7770911" | "8087680" | "8100429" | "8186705" | "8186706" | "8205894" | "8282119" | "8328208" | "8388016" | "8398098" | "8414012" | "D344474" | "D345128" | "D352923" | "D430076" | "D452192" | "D455679" | "D510549" | "D593459").PN. OR ("8641077").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:14
S451	32	("6896286" | "D369992" | "D519422" | "D558099" | "D566013" | "D578045" | "D579827").PN. OR ("D593459").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:15
S452	66	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" | "6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:18

		"7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.				
S453	1	("D593459").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:25
S454	3,861	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S455	2,688	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S456	5,586	S454 or S455	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S457	969,007	@pd>="20190415"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:57
S458	58	S456 and S457	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:59
S459	27	("20040189076" | "20050029855" | "20110175306" | "20170247044" | "20170361861" | "4577355" | "5240265" | "5246272" | "5669625" | "5681084" | "5749627" | "5806877" | "6322097" | "6530591" | "6676140" | "6830254" | "6951342" | "8070180" | "8172322" | "8596670" | "8616638" | "8690250" | "8899615" | "8991929" | "9227650" | "9868456" | "D811949").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/08/23 01:02
S460	167	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-	US-PGPUB;	OR	ON	2019/08/23 01:02

		$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-	USPAT; USOCR			

		9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S461	22	S459 not S460	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 01:02
S462	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/08/23 01:04
S464	4,053	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S465	2,834	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR;	OR	ON	2020/02/28 20:49

			FPRS; EPO; JPO			
S466	5,847	S464 or S465	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S467	1,751,101	@pd>="20190823"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S468	97	S466 and S467	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S469	97	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20120181779" | "20130154215" | "20140191483" | "20150021872" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" | "6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 21:03

		"7971897" | "7992889" | "8029007" | "8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "9260127" | "D326748" | "D431798").PN. OR ("10556610").URPN.				
S470	21	("20100140902" | "20130087993" | "20130154241" | "20150159414" | "20160046315" | "7789402" | "7832755" | "8033554" | "8231136" | "8602441" | "8905427" | "8955869" | "8967647" | "9050987" | "9399477" | "9403550" | "9493179" | "9517787" | "9616912" | "9637154" | "D747669").PN. OR ("10449987").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 22:17
S471	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/02/28 22:19
S472	7,365,969	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:01
S473	172	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:02

		5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-				

		10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-10556611-$ or US-10556610-$ or US-10449987-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S474	94	S472 and S473	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/03/01 23:02
S475	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS; JPO	OR	ON	2020/03/01 23:04
S476	16	("2010/0072732").URPN.	USPAT	OR	ON	2020/03/01 23:07
S484	1	("10730543").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:15
S485	0	("202000223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S486	1	("20200223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S487	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:19
S488	4,211	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S489	2,957	(B62B9/12,28,102).CPC.	US-PGPUB;	OR	ON	2020/09/10 14:24

			USPAT; USOCR; FPRS; EPO; JPO			
S490	6,047	S488 or S489	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S491	1,552,888	@pd>="20200228"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S492	69	S490 and S491	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:34
S493	98	("10023218" | "10207731" | "10293843" | "10449987" | "10556610" | "1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20100140902" | "20140191483" | "20140333039" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:43

		"9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652" | "9840168" | "9849903" | "9884640" | "9924806" | "9944305" | "9956979" | "D593459").PN. OR ("10730543").URPN.				
S494	45	(Baby near2 Jogger).AS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:47
S495	173	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:56

		7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-10556611-$ or US-10556610-$ or US-10449987-$ or US-10730543-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				

S496	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:57
S497	4	S496 not S495	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:58
S499	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 21:06

		"7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.				
S500	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:39
S501	10	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:43
S502	25	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:56
S503	5	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/11 00:00
S504	1	("7475900").PN.	US-PGPUB;	OR	OFF	2020/09/15 15:29

			USPAT; USOCR			
S505	1	("9260127").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/15 23:58

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51

		configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration,	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51

		preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
S163	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.	US-PGPUB; USPAT	AND	ON	2014/02/03 17:17
S164	0	(seat attachment stroller separate left right attachment portion connector portion removably connecting frame adjacent front wheel seat support element removably connecting seat forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:35
S165	0	(seat attach$4 stroller separate left right portion connect$4 remov$4 frame adjacent front wheel support$4 element forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S166	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S167	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:47
S213	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26

		forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.				
S214	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S215	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S216	19	(seat$3 attach$4 stroller left right connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29
S217	68	(seat$3 attach$4 stroller connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29
S218	5	("20020036391" | "20070069505" | "20070187914" | "4753453" | "4779883").PN. OR ("8033554").URPN.	US-PGPUB; USPAT	OR	ON	2014/09/24 14:32
S248	4	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2015/04/20 14:14
S411	0	(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
S412	0	(stroller frame wheel seat attachment housing first adapter receiving cavity extending through housing first door rotatably coupled to housing closed configuration preventing access to cavity from top side open configuration allowing access to cavity first removable seat attachment adapter removably coupled to housing and second removable seat attachment adapter removably coupled to housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:55
S413	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity extend$4 door rotat$4 closed configuration prevent$4 access$4 open configuration allow$4 access).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:56
S414	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity door rotat$4 closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:21
S415	1	(stroller wheel seat attach$4 hous$4 cavity door closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S416	1	(stroller wheel seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S417	1	(stroller seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:23
S418	1	(stroller seat$3 attach$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S419	1	(stroller seat$3 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S420	3	(stroller seat$3 door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24

S421	2	(stroller seat$3 cavit$3 clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S422	21	(stroller seat$3 cavit$3 clos$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S442	5	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/04/15 11:03
S463	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/08/23 01:02
S477	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/03/01 23:02
S478	0	(A stroller, comprising a stroller frame comprising a first upper tube support frame a second upper tube support frame a first front wheel support frame rotatable with respect to the first upper tube support frame a second front wheel support frame rotatable with respect to the second upper tube support frame a first back wheel support frame rotatable with respect to the first upper tube support frame a second back wheel support frame rotatable with respect to the second upper tube support frame a plurality of wheels comprising at least one front wheel and a plurality of back wheels a first seat coupled to the stroller frame at a first vertical position of the stroller frame a first seat attachment housing disposed along the first front wheel support frame a first seat attachment adapter removably coupled to the first seat attachment housing stroller frame at a second vertical position of the stroller frame that is below the first vertical position a second seat attachment housing disposed along the second front wheel support frame a second seat attachment adapter removably coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:05

S479	1	(stroller frame wheel first seat first vertical position attachment housing adapter removably coupled below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:07
S480	1	(stroller frame wheel seat vertical position attach$4 hous$4 adapt$4 remov$4 coupl$4 below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S481	4	(stroller frame wheel seat attach$4 hous$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S482	11	(stroller frame wheel seat attach$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:11
S483	33	(stroller frame wheel seat attach$4 adapt$4 remov$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:12
S498	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/09/10 14:56

3/31/2021 12:39:11 AM
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16832429	CTFR	04/28/2021	34757-2430
	EXIN	04/28/2021	34757-2430
	892	04/28/2021	34757-2430

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Doc Code: A.NE.AFCP
Document Description: After Final Consideration Pilot Program Request

PTO/SB/434 (05-13)

CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0

Practitioner Docket No.:	Application No.:	Filing Date:
34757-2430	16/832,429	2020-03-27
First Named Inventor:	**Title:**	
Jon Hee Lee	REMOVABLE SEAT ATTACHMENT FOR A STROLLER	

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116.

1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (*e.g.*, a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c).
2. The above-identified application contains an outstanding final rejection.
3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect.
4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection.
5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response.
6. This certification and request is being filed electronically using the Office's electronic filing system (EFS-Web).
7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.]
8. By filing this certification and request, applicant acknowledges the following:
    - Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0.
    - The examiner will verify that the AFCP 2.0 submission is compliant, *i.e.*, that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions:
        - The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, by mailing an advisory action.
        - If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview.
            - The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate.
            - If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.

Signature	Date
/Christopher J. Chan/	2021-06-28
Name (Print/Typed) Christopher J. Chan	**Practitioner Registration No.** 44,070

***Note**: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.*

☑ * Total of 1 forms are submitted.

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The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
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4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

REMARKS

Applicant and the undersigned thank Examiner Dolak for the careful review of this application. In the present Final Office Action, claims 1-20 are rejected. A request for reconsideration under the After Final Consideration Pilot 2.0 (AFCP) is concurrently filed with this paper.

Without admitting to the propriety of the rejections and to facilitate examination of the application, Applicant amends independent claims 1, 10, and 17, and dependent claim 18, to clarify the scope of the claimed subject matter. The amendments to the claims are supported by the specification and drawing figures 8A to 8H and do not introduce new matter. Upon entry of these amendments, claims 1-20 remain pending in the application. In view of these amendments and remarks, Applicant respectfully asserts that the rejections are now made moot and reconsideration and allowance of the application is respectfully requested.

Unless explicitly stated otherwise, none of the amendments to the claims were made for reasons substantially related to the statutory requirements for patentability. Furthermore, unless otherwise stated, the amendments to the claims were made simply to express that which had been implicit in the claims as originally worded and therefore, are not narrowing amendments that would create any prosecution history estoppel.

I. Request for Examiner Interview

Prior to the mailing of any further Office Actions, Applicant requests the courtesy of an examiner interview via telephone to discuss any remaining issues of patentability. The Examiner is invited to contact the Applicant's attorney, Christopher J. Chan, at 404.853.8049 to schedule the interview.

II. Double Patenting

Claims 1-20 were rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 10,730,543. Upon allowance of any claims in the present application, the Applicant will agree to file a terminal disclaimer to overcome this rejection.

III. Claim Rejections Under 35 U.S.C. §112

The Office Action rejected claims 1-20 for allegedly being indefinite. Without admitting to the propriety of the rejections and to facilitate examination of the application, claims 1, 10, 17,

and 18 are amended to clarify the scope of the claimed subject matter. For example, claims 1, 10 and 17 are believed to be amended to clarify the scope of the Office Action indicated claim elements of, "adjusted/rotated with respect to". Further, claim 18 is amended to omit the respective terms "configured to be". The rejections are believed to be traversed.

IV. Claim Rejections Under 35 U.S.C. §103

In the Office Action, claims 17, 18, and 20 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 7,475,900 B2 to Cheng ("Cheng") in view of U.S. Patent No. 6,286,844 B1 to Cone ("Cone"). The Office Action also rejected claims 1-16 under 35 U.S.C. §103(a) as allegedly unpatentable over Cheng in view of U.S. Patent No. D593,459S to Liao ("Liao"), and in further view of Cone. Applicant traverses the rejections of the pending claims.

Without admitting to the propriety of the rejections and to facilitate examination of the application, Applicant's independent claim 1 is amended to clarify the scope of the claimed subject matter. For example, claim 1 is amended to include the elements of, "a first front wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame; a second front wheel support frame rotatably adjusted to be substantially parallel with respect to the second upper tube support frame; … a first seat attachment adapter coupled to the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position; a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8, and Figures 8A to 8H.

Further, claim 10 is amended to include the elements of, "a front wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame; … a first seat attachment adapter coupled to the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position; a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position" (underlining supplied solely to indicate newly amended

text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8, and Figures 8A to 8H.

Moreover, claim 17 is amended to include the elements of, "a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position when the first upper tube support frame is substantially parallel with the first front wheel support frame; a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position when the second upper tube support frame is substantially parallel with the second front wheel support frame" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8, and Figures 8A to 8H.

By contrast, the stroller frames in the cited references Cheng and Cone only include folded or curved frame or tube structures being described as upper tube and lower or front wheel support frames by the Office Action. For example, the frame elements 41 and 42 in Cheng do not appear to be substantially parallel to each other, but instead appear to be substantially folded with respect to each other when the stroller frame is extended. Further, the frame elements 51 and 52 in Cone do not appear to be substantially parallel to each other, but instead appear to be substantially curved with respect to each other when the stroller frame is extended. Since the frame elements of Cheng and Cone are either folded or curved, which inhibit the ability of the respective stroller frames to be able to elevate one seat in a much higher position the other seat when being attached to the stroller frames. The substantially parallel construction of the Applicant's claimed embodiments, permits the frame to be able to elevate one seat in a much higher position the other seat when being attached to the stroller frame. While Liao appears to have certain frame elements in a substantially parallel orientation, Liao appears to only show seats in a relatively level orientation with each other, wherein one seat is not higher than the other seat, thus teaching away from the Applicant's claimed embodiments wherein one seat is positioned higher than the other seat.

Since each and every element of the Applicant's amended independent claims 1, 10, and 17 is neither taught nor suggested by the cited references, either alone or in combination with each other, then claims 1, 10, and 17 should be allowable over the cited references.

V. Dependent Claims 2-9, 11-16, and 18-20

Applicant submits that the above-identified dependent claims are allowable because the independent claims from which they ultimately depend are patentable over the cited references. The additional cited reference, namely Liao, does not cure the deficiencies of the cited references Cheng and Cone. Applicant also respectfully traverses the Office Action's assertions about these claims and submits that the recitations of these dependent claims are of patentable significance. Applicant respectfully requests that the Examiner reconsider and withdraw the pending rejections of claims 2-9, 11-16, and 18-20.

VI. NO WAIVER

All of Applicant's arguments presented herein are without prejudice or disclaimer. Additionally, Applicant has merely discussed example reasons that the pending claims are allowable. Other reasons may exist and Applicant reserves the right to discuss these additional reasons in a later response or on appeal, if appropriate, in this or another related application. By not responding to additional statements made by the Office Action, such as what is taught by each cited reference or alleged to have been obvious in view of the cited references, Applicant does not acquiesce to the Office Action's additional statements. The example reasons discussed by Applicant are sufficient to overcome the mentioned rejections.

CONCLUSION

The foregoing is submitted as a full and complete response to the Final Office Action dated April 28, 2021. Applicant and the undersigned thank Examiner Dolak for the consideration of these amendments and remarks. In view of the amendments to the claims and the submitted remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections. Applicant further submits that the application is now in condition for allowance and earnestly solicits timely notice of the same. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the undersigned at the telephone number below.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this response. However, in the event that additional extensions of time are necessary to allow consideration of

this response, such extensions are hereby petitioned under 37 C.F.R. §1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 19-5029.

Respectfully submitted,

/Christopher J. Chan/

Christopher J. Chan
Reg. No. 44,070

DATE: **June 28, 2021**

EVERSHEDS SUTHERLAND (US) LLP
999 Peachtree Street NE
Atlanta, Georgia 30309-3996
Telephone: (404) 853-8049
Facsimile: (404) 853-8806

Attorney Docket No.: **34757-2430**

841 of 1090 UPPABABY ET AL. EX. 1019

AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below. This listing of claims will replace all prior versions and listing of claims for this application.

1. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first front wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame;

a second front wheel support frame rotatably adjusted to be substantially parallel with respect to the second upper tube support frame;

a first back wheel support frame rotated with respect to the first upper tube support frame; and

a second back wheel support frame rotated with respect to the second upper tube support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled to the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position~~, wherein the first seat attachment adapter is removable from the first front wheel support frame~~;

a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position~~, wherein the second seat attachment adapter is removable from the second front wheel support frame~~;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position and wherein the second vertical position and the third vertical position are at a same vertical height.

2. (Original) The stroller of claim 1, further comprising:

a first seat attachment housing disposed adjacent the first front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the second front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

3. (Original) The stroller of claim 2, wherein the first seat attachment housing extends into the first front wheel support frame and the second seat attachment housing extends into the second front wheel support frame.

4. (Original) The stroller of claim 2, wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end.

5. (Original) The stroller of claim 4, wherein the first end comprises a connector portion and is coupled to one of the first seat attachment housing and the second seat attachment housing.

6. (Previously Amended) The stroller of claim 4, wherein the second seat is removably coupled to the second end.

7. (Original) The stroller of claim 1, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

8. (Original) The stroller of claim 1, further comprising:

a third seat attachment adapter coupled to the stroller frame at the first vertical position; and

a fourth seat attachment adapter coupled to the stroller frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

9. (Original) The stroller of claim 1, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

10. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a front wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame;

a back wheel support frame rotatably adjusted with respect to the first upper tube support frame; and

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled to the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position~~, wherein the first seat attachment adapter is removable from the front wheel support frame~~;

a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position~~, wherein the second seat attachment adapter is removable from the front wheel support frame~~;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position.

11. (Original) The stroller of claim 10, wherein the front wheel support frame comprises a first front wheel support frame member and a second front wheel support frame member.

12. (Original) The stroller of claim 10, wherein the back wheel support frame comprises a first back wheel support member and a second back wheel support member.

13. (Original) The stroller of claim 10, further comprising:

a first seat attachment housing disposed adjacent the front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

14. (Previously Amended) The stroller of claim 13, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is removably coupled to the second end.

15. (Original) The stroller of claim 10, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

16. (Original) The stroller of claim 10, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame at the first vertical position; and

a fourth seat attachment adapter coupled to the second upper tube support frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

17. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first back wheel support frame;

a second back wheel support frame;

a first front wheel support frame;

a second front wheel support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled to the stroller frame at a first vertical position of the stroller frame;

a first seat attachment housing disposed adjacent the first front wheel support frame:

a second seat attachment housing disposed adjacent the second front wheel support frame;

a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position~~, wherein the first seat attachment adapter is removable from the first seat attachment housing~~ when the first upper tube support frame is substantially parallel with the first front wheel support frame;

a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position~~, wherein the second seat attachment adapter is removable from the second seat attachment housing~~ when the second upper tube support frame is substantially parallel with the second front wheel support frame;

wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter.

18. (Currently Amended) The stroller of claim 17, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion ~~configured to be~~ coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is removably coupled to the second end.

19. (Original) The stroller of claim 17, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

20. (Original) The stroller of claim 17, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame; and

a fourth seat attachment adapter coupled to the second upper tube support frame;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
John Hee Lee, et al.	)	Confirmation No.: **8948**
	)	
Application No.: **16/832,429**	)	Art Unit: **3618**
	)	
Filed: **March 27, 2020**	)	Examiner: **James M. Dolak**
	)	
For: **Removable Seat Attachment for a Stroller**	)	Attorney Docket No.: **34757-2430**
	)	
	)	
	)	

AMENDMENT AND RESPONSE TO FINAL OFFICE ACTION

Via EFS-Web
Mail Stop AF
Commissioner for Patents
Alexandria, VA 22313-1450

Dear Examiner Dolak:

This Amendment and Response is submitted in response to the Final Office Action mailed April 28, 2021. A request for reconsideration under the After Final Consideration Pilot 2.0 (AFCP) is concurrently filed with this paper. In light of the amendments and remarks included herein, it is respectfully asserted that all pending claims are patentable, and it is respectfully requested that this application be allowed.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks begin on page 8 of this paper.

I hereby certify that this correspondence is being electronically filed via EFS-WEB to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Attn: Examiner Dolak, GAU 3618, on June 28, 2021.

/Christopher J. Chan/
Christopher J. Chan
Reg. No. 44,070

Electronic Acknowledgement Receipt

EFS ID:	43101320
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	Christopher Chan/LaYonda Prue
Filer Authorized By:	Christopher Chan
Attorney Docket Number:	34757-2430
Receipt Date:	28-JUN-2021
Filing Date:	27-MAR-2020
Time Stamp:	10:04:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	After Final Consideration Program Request	34757-2430_AFCP_Request.pdf	234185 5fe38d059e4dbcb9814a6f8ab29d86583331 0ddd	no	2

Warnings:

Information:					
2		34757-2430_Response_to_FOA.pdf	66459 f79fa6f135e20fae2b9196e1001c00703783e46b	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Applicant Arguments/Remarks Made in an Amendment	8	12
	Claims	2	7
	Response After Final Action	1	1

Warnings:	
Information:	
Total Files Size (in bytes):	300644

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/832,429	Filing Date 03/27/2020	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $460 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	06/28/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/ZURIASHWORK ZENEBE/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

134811 7590 07/15/2021

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

EXAMINER	
DOLAK, JAMES M	

ART UNIT	PAPER NUMBER
3618	

NOTIFICATION DATE	DELIVERY MODE
07/15/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@eversheds-sutherland.com

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 16/832,429	**Applicant(s)** Lee et al.	
	Examiner JAMES M DOLAK	**Art Unit** 3618	**AIA (FITF) Status** No

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 June 2021 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☑ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires ____ months from the mailing date of the final rejection.
   b) ☑ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection.The current period for reply expires ____ months from the mailing date of *the prior Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.
   Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANTS FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37CFR 41.37(a).

AMENDMENTS

3. ☑ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   a) ☑ They raise new issues that would require further consideration and/or search (see NOTE below);
   b) ☐ They raise the issue of new matter (see NOTE below);
   c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: See Continuation Sheet (See 37CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicants reply has overcome the following rejection(s): _____
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☑ For purposes of appeal, the proposed amendment(s):(a) ☑ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____
9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☑ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
13. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
14. ☑ Other: PTO-2323.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:
    Claim(s) allowed:_____.
    Claim(s) objected to:_____.
    Claim(s) rejected:1-20.
    Claim(s) withdrawn from consideration:_____.

/JAMES M DOLAK/ Primary Examiner, Art Unit 3618	

Continuation of 3. NOTE: The new amendments require further search and consideration but as best understood would overcome the current art rejections and would not resolve 112 issues related to when the recited stroller frame members are "rotatably adjusted" in order to be parallel, and the new term " substantially" creates new 112 issues as the metes and bounds of this term are not defined in the specification. Applicants are encouraged not to cancel the limitations "wherein the first/second seat attachment adapter is removable from the first/second front wheel support frame" and to further amend the new limitations in all three independent claims 1/10/17 to read: "a first/second front wheel support frame rotatably adjusted through a first/second folding mechanism to be parallel with respect to the first/second upper tube support frame when the stroller frame is unfolded out of a folded configuration." (See attached PTO-2323 and PTOL-413).

Continuation of REQUEST FOR RECONSIDERATION/OTHER 12. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: The new amendments require further search and consideration but as best understood would not overcome the current art rejections, however a determination of allowability could not be made in the time allotted under the AFCP pilot.

Applicant-Initiated Interview Summary	**Application No.** 16/832,429	**Applicant(s)** Lee et al.	
	Examiner JAMES M DOLAK	**Art Unit** 3618	**AIA (FITF) Status** No

All participants (applicant, applicants representative, PTO personnel):

(1) JAMES M. DOLAK (Examiner). (3) _____.

(2) Christopher J. Chan (Applicant's representative). (4) _____.

Date of Interview: 12 July 2021.

Type: ☑ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☑ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☑102 ☑103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1-20.

Identification of prior art discussed: Cheng (US 7,475,900 B2), Cone (US 6,286,844 B1) and Cheng (D593,459S).

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Discussed the AFCP pilot claim amendments filed 6/28/2021 in relation to the outstanding rejections presented in the Final office action mailed 4/28/2021 (See attached PTO-2323).

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/JAMES M DOLAK/ Primary Examiner, Art Unit 3618	

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiners responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicants correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,-
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicants record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiners version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, Interview Record OK on the paper recording the substance of the interview along with the date and the examiners initials.

Notice of References Cited	Application/Control No. 16/832,429	Applicant(s)/Patent Under Reexamination Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-10974754-B2	04-2021	Choi; Yejin	B62B9/14	1/1
*	B	US-10994763-B2	05-2021	Rolicki; Peter	B62B9/12	1/1
*	C	US-11001289-B2	05-2021	Gibson; Bryce	B62B7/06	1/1
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

AFCP 2.0 Decision	Application No.	Applicant(s)	
	16/832,429	Lee et al.	
	Examiner	Art Unit	AIA (FITF) Status
	JAMES M DOLAK	3618	No

This is in response to the After Final Consideration Pilot request filed 28 June 2021.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

   ☐ An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.

   ☐ A non-broadening amendment to at least one independent claim was not submitted.

   ☐ The request is not the first proper AFCP 2.0 request submitted in response to the most recent final rejection.

   ☐ Other: _____

2. **Proper Request**

   A. After final amendment submitted with the request will not be treated under AFCP 2.0.
   The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

   ☐ The after final amendment will be treated under pre-pilot procedure.

   B. Updated search and/or completed additional consideration.
   The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

   ☐ 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.

   ☐ 2. The after final amendment would not overcome all of the rejections in the most recent final Office action . See attached interview summary for further details.

   ☑ 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.

   ☑ 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.

   ☐ 5. Other: _____

   Examiner Note: Please attach an interview summary when necessary as described above.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

CPC - Searched*		
Symbol	Date	Examiner
B62B7/008,00,006,14,142,145	09/10/2020	JMD
B62B9/12,28,102	09/10/2020	JMD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Inventor Search	09/10/2020	JMD
EAST text search	09/10/2020	JMD
Updated Search	04/11/2021	JMD
AFCP Updated Search	07/02/2021	JMD

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/JAMES M DOLAK/ Primary Examiner.Art Unit 3618	/JAMES M DOLAK/ Primary Examiner, Art Unit 3618

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/03/01 23:01
		(Simpson near2 (Stacy and Noel).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:36
		(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:36
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:35

		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:24
		S78 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		S27 and ((wheel and seat) same add$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
		S10 and (seat near2 (attach$4 and convert$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
S1	0	("20100140902").PN.	USPAT; USOCR	OR	OFF	2011/11/10 17:53
S2	1	("20100140902").PN.	US-PGPUB;	OR	OFF	2011/11/10 17:55

			USPAT; USOCR			
S3	4	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:03
S4	8	("20030025304" | "20070001429" | "20070114738" | "5338096").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:10
S5	15	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:19
S6	1	("7320471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/21 11:26
S7	3	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:26
S8	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/27 15:43
S9	37,502,244	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:43
S10	1,861	S8 and S9	US-PGPUB; USPAT; USOCR;	OR	ON	2012/06/27 15:44

			FPRS; EPO; JPO; DERWENT			
S11	1,537	S10 and seat	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S12	827	S10 and (seat same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S13	427	S10 and (seat near2 attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S14	51	S10 and (seat near2 (attach$4 and convert$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
S15	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 19:10
S16	37,502,315	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/06/28 19:17

			EPO; JPO; DERWENT			
S17	1,076	S15 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S18	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 19:17
S19	1,861	S18 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S20	35	S17 and S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S21	2,902	S17 or S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:20
S22	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:15
S23	37,502,315	@ad<="20081204"	US-PGPUB;	OR	ON	2012/06/28 23:15

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT			
S24	1,076	S22 and S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S25	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:15
S26	1,861	S25 and S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S27	2,902	S24 or S26	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S28	657	S27 and ((wheel and seat) same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S29	1	("6209892").PN.	US-PGPUB;	OR	OFF	2012/06/28 23:16

			USPAT; USOCR			
S30	44	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:16
S31	115	S28 and expand$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:20
S32	58	("5564786" | "0733889" | "6443467" | "0329579" | "5611560" | "3235279" | "0292933" | "6017051" | "0781495" | "2305719" | "1707186" | "4989890" | "6220621" | "6676140" | "1168896" | "2517443" | "20030075903" | "0647165").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:22
S33	33	("2769482" | "2857953" | "2993702" | "3235279" | "3309101" | "3330575" | "3738700" | "4725071" | "5018754" | "5263730" | "5338096" | "5417449" | "5653460" | "5664795" | "5911432" | "6045145" | "6068087" | "6378892" | "D321850" | "D359937").PN. OR ("6676140").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:24
S34	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:25
S35	15	("1707186").URPN.	USPAT	OR	ON	2012/06/28 23:28
S36	14	("20030111825" | "5333893" | "6209892" | "6513827" | "6863286" | "7032922" | "7367581" | "7377537" | "D429664" | "D430076").PN. OR ("7475900").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:31
S37	44	S31 and (wheel near2 remov$4)	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/06/28 23:35

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S38	22	("3738600" | "3876046" | "4570956" | "4750783" | "5188389" | "5234224" | "5499831" | "5536027" | "5562300" | "5876046" | "6189914" | "6193263" | "6209892" | "6290290" | "6302412" | "6398233" | "6550802" | "D397316" | "D481975" | "D486427" | "D497844").PN. OR ("D508443").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:36
S39	20	("4725071" | "5221106" | "5338096" | "5522121" | "5918892" | "6209892" | "6267406" | "6527294" | "D296540").PN. OR ("6752405").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:46
S40	15	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:48
S41	30	("0556168" | "1707186" | "1934396" | "20020033588" | "20050167951" | "20070252352" | "20080143082" | "20090026733" | "3383738" | "4083579" | "4805938" | "5221106" | "5333893" | "5522121" | "5769448" | "5918892" | "6431579" | "6527294" | "6601866" | "6752405" | "7481439" | "7516966" | "7597332" | "D484075" | "D595621" | "D598333").PN. OR ("7896384").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:49
S42	13	("3000645" | "4969656" | "5125712" | "5522121" | "5918892" | "6527294" | "6561526" | "6715783" | "6752405" | "6851693" | "6938906").PN. OR ("7677585").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:50
S43	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:51
S44	9	("3000645").URPN.	USPAT	OR	ON	2012/06/28 23:55
S45	1	("6702316").PN.	US-PGPUB;	OR	OFF	2012/06/29 00:04

			USPAT; USOCR			
S46	29	("20010040357" | "20020060444" | "20020093177" | "4852894" | "4921261" | "4989888" | "5490685" | "5641200" | "5676386" | "5794951" | "5947555" | "6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205").PN. OR ("6702316").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/29 00:04
S47	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 04:43
S48	37,502,608	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S49	1,076	S47 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S50	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 04:43
S51	1,861	S50 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S52	2,902	S49 or S51	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/07/01 04:43

			EPO; JPO; DERWENT			
S53	476	S52 and cylindrical	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S54	21	S52 and cylindrical near2 connect$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 05:05
S55	29	("1506565" | "1885627" | "1954179" | "20040026895" | "20040164515" | "2220528" | "2334387" | "2482585" | "5395130" | "5454578" | "5501480" | "5536027" | "5904363" | "6022042" | "6331013" | "6443467" | "6443469" | "6685206" | "6685207" | "D327240" | "D405031" | "D486425").PN. OR ("7261308").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:10
S56	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:17
S57	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:18

S58	18	("2926880" | "3290050" | "3309101" | "4183580" | "4711489" | "4779883" | "5074616" | "5168601" | "5265931" | "5401076" | "5529325").PN. OR ("5704627").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:21
S59	23	("4542915" | "4854607" | "4986564" | "5033761").PN. OR ("5653460").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:22
S60	31	("2453631" | "2558372" | "4953887" | "5090724" | "5380262" | "5653460" | "5676386").PN. OR ("6155592").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:25
S61	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:27
S62	33	("0279778" | "1033324" | "2453631" | "3643292" | "3849834" | "3879146" | "4132429" | "4335900" | "4606550" | "4856809" | "4902027" | "4953880" | "5176395" | "5188389" | "5263730" | "5299825" | "5318318" | "5344171" | "5356171" | "5364119" | "5536027").PN. OR ("5647601").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:28
S63	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:29
S64	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:33
S65	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 15:09
S66	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:02
S67	1	("6443467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S68	2	("1707186").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S69	1	("7475900").PN.	US-PGPUB;	OR	OFF	2012/07/01 16:05

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S70	1	("6752405").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:14
S71	1	("8157273").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:14
S72	1	("7896384").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:15
S73	1	("6561526").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:16
S74	1	("5653460").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:17
S75	2,925	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:32
S76	37,571,828	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S77	1,873	S75 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S78	2,516	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:35

S79	35	S78 and S77	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36
S80	1,080	S78 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36
S81	1	("20050082897").PN. OR ("8246020").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:44
S82	9	("20070085303" | "20080303232" | "20090033066" | "3784252" | "5257799" | "5794951" | "6086086" | "7367581" | "7377537").PN. OR ("8205906").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:52
S83	31	("20010002745" | "20030067138" | "20050099025" | "20060237932" | "20070063474" | "20080067776" | "20090026817" | "2450051" | "4754987" | "5076599" | "5267744" | "5454577" | "5474316" | "5577746" | "5921571" | "5947497" | "5979921" | "6196572" | "6663126" | "6764087" | "6767028" | "6929274" | "6976697" | "7052026" | "7168761" | "7172206" | "7354058" | "7431324" | "7445222" | "7547029").PN. OR ("8262103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:58
S84	22	("20080211206" | "20090014985" | "20090078482" | "3605929" | "4362311" | "4861058" | "5020624" | "5421598" | "5921338" | "6135222" | "6220382" | "6378642" | "6439331" | "6659488" | "6793248" | "7044249" | "7080847" | "7364182" | "7571926" | "7591479" | "7832755").PN. OR ("8336904").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 18:03
S85	1	("8251382").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/14 15:15

S86	34	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" | "7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" | "7694996" | "7712765" | "7753398").PN. OR ("8251382").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 15:19
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S88	57	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" | "6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" | "7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 17:52
S89	3,003	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:09
S90	37,602,504	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2013/07/16 15:09

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S91	1,876	S89 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:09
S92	2,544	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:11
S93	1,082	S92 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:11
S94	51	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20100140902-$ or US-20080303232-$ or US-20070085303-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:10

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S95	26	("20060131841" | "20070069505" | "20070210560" | "20080012268" | "20080224450" | "20080224451" | "20090160162" | "20100171289" | "20100201103" | "5947555" | "6045145" | "6270111" | "6331032" | "6715783" | "7032922" | "7367581" | "7475900" | "7677585" | "7753398" | "7775532" | "7798500" | "7938435" | "8061732" | "8128119" | "8157273" | "8205906").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:16
S96	1	("8240700").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/23 15:17
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S104	1	("6296260").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:18
S105	1	("6203053").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:19
S106	1	("4681330").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:20
S107	1	("5685552").PN.	US-PGPUB;	OR	OFF	2013/07/24 13:21

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S108	1	("5984326").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:21
S109	1	("6168174").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:22
S110	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:22
S111	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:25
S112	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:26
S113	53	("20030192925" | "20050072821" | "2907372" | "3079162" | "3248125" | "3627342" | "3961803" | "3967833" | "4032173" | "4113306" | "4181356" | "4220351" | "4231587" | "4239259" | "4256325" | "4412688" | "4620711" | "4681340" | "4762256" | "4844504" | "4892327" | "5230523" | "5333769" | "5398951" | "5411729" | "5431478" | "5468009" | "5478096" | "5662339" | "5806924" | "5829826" | "5964470" | "5987665" | "6045145" | "6231056" | "6250654" | "6375213" | "6811178" | "6910696" | "D254610" | "D345720" | "D358058" | "D365925" | "D402235" | "D508443").PN. OR ("7497461").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 16:08
S114	22	("3738600" | "3876046" | "4570956" | "4750783" | "5188389" | "5234224" | "5499831" | "5536027" | "5562300" | "5876046" | "6189914" | "6193263" | "6209892" | "6290290" | "6302412" | "6398233" | "6550802" | "D397316" | "D481975" | "D486427" | "D497844").PN. OR ("D508443").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 16:13
S115	26	("4790548" | "5060967" | "5366274" | "5727848" | "5975225" | "6203054" |	US-PGPUB;	OR	ON	2013/07/24 18:30

		"6513827" | "7234722").PN. OR ("7367581").URPN.	USPAT; USOCR			
S116	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 18:39
S117	55	("4736959" | "4743063" | "4872692" | "4878680" | "5201535" | "5676386").PN. OR ("5947555").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 10:09
S118	25	("20010040357" | "20020093177" | "20030075903" | "4921261" | "4989888" | "5676386" | "5794951" | "5947555" | "6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205" | "6641164" | "6702316").PN. OR ("6923467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 11:03
S119	25	("4570956" | "4836573" | "4921261" | "4946180" | "5121940" | "5188380" | "5676386" | "5772279" | "5947555" | "6070890" | "6155592" | "6286844" | "6398233" | "6409205" | "6478327" | "D345720").PN. OR ("6641164").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 11:28
S120	2	("3000645").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:26
S121	9	("3000645").URPN.	USPAT	OR	ON	2013/07/25 15:27
S122	29	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:29
S123	1	("8029007").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:30
S124	28	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:31

		"6540238" | "6557878" | "6698772" | "6827356" | "6893028" | "7159829" | "7290776").PN. OR ("8029007").URPN.				
S125	1	("6851693").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:34
S126	14	("3887208" | "5064209" | "5067738" | "5269548" | "5421597" | "5470088" | "5513868" | "5785335").PN. OR ("6851693").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:35
S127	6	("2001/0033069").URPN.	USPAT	OR	ON	2013/07/25 15:36
S128	28	("1876963" | "20010033069" | "20020089136" | "20040075230" | "20040173989" | "20060261575" | "20100201089" | "2859975" | "3069182" | "4190261" | "4239248" | "4323258" | "4336952" | "4359231" | "5624128" | "5931244" | "6203053" | "6485039" | "6517092" | "6572130" | "6626446" | "7073822" | "7377527" | "7549655" | "7699325").PN. OR ("8146926").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:37
S129	1	("7249779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:38
S130	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:38
S131	60	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 16:59

		5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$).did. or (US-3000645-$ or US-2453631-$).did.				
S132	7,295,614	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/29 18:38
S133	2,588	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S134	3,082	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S135	1,082	S132 and S133	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:39
S136	1,877	S132 and S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2014/01/29 18:39

			DERWENT			
S137	5,616	S133 or S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S138	2,924	S132 and S137	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S139	1,012	S138 and stroller	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S140	901	S139 and seat$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S141	757	S140 and (insert$4 or attach$4 or detach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:42
S142	107	S141 and ((double or tandem) same stroller)	US-PGPUB; USPAT;	OR	ON	2014/01/29 18:42

			USOCR; FPRS; EPO; JPO; DERWENT			
S143	1	("5816367").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 09:23
S144	3	("2006/0290107").URPN.	USPAT	OR	ON	2014/01/30 14:24
S145	78	("20030020259" | "20030227157" | "20060290107" | "20070001429" | "20070085303" | "20070222167" | "20070296182" | "20080073877" | "20080150247" | "20090039620" | "20100038886" | "20100038887" | "20100072732" | "20100078916" | "20100109292" | "20100140902" | "20100282800" | "20120153583" | "2769482" | "2798733" | "2857953" | "2993702" | "3235279" | "3309101" | "4542915" | "4725071" | "4858947" | "5018754" | "5167425" | "5184835" | "5263730" | "5333893" | "5338096" | "5417449" | "5653460" | "5664795" | "5722682" | "5911432" | "6045145" | "6086087" | "6209892" | "6267406" | "6378892" | "6497424" | "6585284" | "6676140" | "6702316" | "6843498" | "6877761" | "6935652" | "6979017" | "7320471" | "7451999" | "7938433" | "8070179" | "8157273" | "8186705" | "8205894" | "D311363" | "D321850" | "D328047" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D455679" | "D587635" | "D614540" | "D616337" | "D616338" | "D636300").PN. OR ("8371606").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 14:26
S146	8	("2010/0078916").URPN.	USPAT	OR	ON	2014/01/30 14:27
S147	8	("20070096438" | "20100025968" | "20100078916" | "6422586" | "7401803" | "7441794" | "7632035" | "7766366").PN. OR ("8596669").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 14:27
S148	1	("8157273").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 16:20

S149	18	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:21
S150	1	("5338096").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 16:23
S151	19	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:24
S152	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:17
S153	53	("20030192925" | "20050072821" | "2907372" | "3079162" | "3248125" | "3627342" | "3961803" | "3967833" | "4032173" | "4113306" | "4181356" | "4220351" | "4231587" | "4239259" | "4256325" | "4412688" | "4620711" | "4681340" | "4762256" | "4844504" | "4892327" | "5230523" | "5333769" | "5398951" | "5411729" | "5431478" | "5468009" | "5478096" | "5662339" | "5806924" | "5829826" | "5964470" | "5987665" | "6045145" | "6231056" | "6250654" | "6375213" | "6811178" | "6910696" | "D254610" | "D345720" | "D358058" | "D365925" | "D402235" | "D508443").PN. OR ("7497461").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:56
S154	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 18:00
S155	23	("20010013689" | "20040032103" | "20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243260" | "20090295128" | "4398748" | "4836573" | "6446990" | "6478327" | "6572134" | "7497461" | "7513512" | "7658399" | "7686322" | "7712765" | "7775532" | "7832755" | "7878527" | "7938435").PN. OR ("8231136").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 10:54
S156	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/01/31 12:58

S157	14	("20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243261" | "20120098219" | "4398748" | "4836573" | "6446990" | "6478321" | "6478327" | "6572134" | "7712765").PN. OR ("8458880").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 12:59
S158	1	("7938435").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/31 13:26
S159	34	("4157839" | "5558357" | "5676386" | "5772279" | "5794951" | "5863061" | "5865447" | "5876046" | "5947555" | "6241274" | "6286844" | "6331032" | "6409205" | "6428034" | "6478327" | "6533309" | "6666473" | "6893040" | "7032922" | "7267359" | "7377537" | "7431395" | "7475900" | "7681894" | "7766366").PN. OR ("7938435").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 12:41
S160	17	("20050098983" | "2842374" | "6357784" | "7118121" | "7267359" | "7367581" | "7441794" | "7527283").PN. OR ("7766366").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 12:56
S161	105	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:14
S162	52	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:21
S168	1	("20140217706").PN.	US-PGPUB;	OR	OFF	2014/09/24 10:03

			USPAT; USOCR			
S169	3,175	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 10:24
S170	7,324,421	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:24
S171	1,878	S169 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25
S172	64	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25
S173	3,686,032	@pd>="20140129"	US-PGPUB; USPAT; USOCR;	OR	ON	2014/09/24 10:56

			FPRS; EPO; JPO; DERWENT			
S174	1	S171 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:56
S175	13	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:57
S176	1	("7,497,461").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:01
S177	94	S169 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 11:08
S178	12	("20070296182" | "20100117315" | "5820144" | "6086086" | "6513827" | "6715783" | "7032922" | "7066542" | "7364183" | "7377537" | "7455362" | "8061732").PN. OR ("8764048").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:25
S179	15	("3797848" | "4832361" | "5074575" | "6116624" | "6446990" | "6508605" | "6530591" | "6824161" | "6830254" | "6851700" | "6951342" | "7021650" | "7273225" | "7401803" | "7513512").PN. OR ("8696016").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:41
S180	1	("7,938,435").PN.	US-PGPUB;	OR	OFF	2014/09/24 11:47

			USPAT; USOCR			
S181	1	("20080231022").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:47
S182	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/09/24 11:48
S183	1	("7,766,366").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:51
S184	1	("6,286,844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:52
S185	1	("6,513,827").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S186	0	(2006/0131841).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S187	1	("20060131841").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S188	1	("20060001226").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S189	1	("7,320,471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S190	1	("6,045,145").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S191	1	("20080224451").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S192	1	("7,481,439").PN.	US-PGPUB;	OR	OFF	2014/09/24 11:57

			USPAT; USOCR			
S193	1	("7,367,581").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:57
S194	1	("8,029,007").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S195	1	("6,923,467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S196	1	("20070090619").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S197	1	("6,851,693").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:59
S198	1	("20010033069").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S199	1	("7,249,779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S200	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:02
S201	2,665	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:02

S202	79	S201 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 12:03
S203	2	S202 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:03
S204	1	("5338096").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:24
S205	1	("20030025304").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S206	1	("20070001429").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S207	1	("20070085303").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S208	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S209	1	("7681894").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:33
S210	14	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 14:33
S211	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:34
S212	41	("7249779" | "3000645" | "7677585" | "7377537" | "20060001226" | "8029007" | "20080231022" | "7766366" | "6443467" |	US-PGPUB;	OR	ON	2014/09/24 14:56

		"6561526" | "20080224451" | "6513827" | "7475900" | "7497461" | "20070114738" | "1707186" | "6752405" | "6851693" | "7938435" | "6676140" | "6045145" | "6923467" | "20030025304" | "20070001429" | "5338096" | "6045145" | "20070090619" | "6209892" | "6378892" | "7896384" | "8157273" | "8251382" | "8262103" | "8336904" | "20010033069" | "20060131841" | "7320471" | "7367581" | "7481439" | "6286844").PN.	USPAT; USOCR			
S219	19	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2015/04/20 13:53
S220	22	("7249779" | "20060001226" | "20080231022" | "7766366" | "8029007" | "20080224451" | "6513827" | "4797461" | "7497461" | "6851693" | "7938435" | "6045145" | "6923467" | "8905427" | "20070090619" | "20010033069" | "20060131841" | "6286844" | "7320471" | "7367581" | "7481439" | "8882134").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 13:58
S221	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:02
S222	68,470,442	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:02
S223	1,214,191	@pd>="20140924"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:03
S224	3,292	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:04
S225	2,741	(297/130,232,243,463.1).CCLS.	US-PGPUB;	OR	OFF	2015/04/20 14:04

			USPAT; USOCR			
S226	5,977	S224 or S225	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S227	2,929	S226 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S228	2	S227 and S223	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S229	88	("0119331" | "1138802" | "1269379" | "1707186" | "1890469" | "20040251063" | "20070045975" | "20090115151" | "20090160162" | "20100038887" | "20100140902" | "20110175330" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" | "6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" | "8398143" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("8905427").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:04
S230	84	(B62B7/00).CPC.	US-PGPUB;	OR	ON	2015/04/20 14:08

			USPAT; USOCR; FPRS; EPO; JPO			
S231	796	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S232	666	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S233	894	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S234	1,003	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S235	450	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S236	3,236	S230 S231 S232 S233 S234 S235	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S237	2,104	S236 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:13
S238	70	S237 and (seat$3 same revers$4)	US-PGPUB; USPAT;	OR	ON	2015/04/20 14:14

			USOCR; FPRS; EPO; JPO			
S239	77	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070069505-$ or US-20080231022-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7681894-$ or US-8955869-$ or US-8905427-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:14
S240	58	S238 not S239	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:14
S241	1	("8882134").PN.	US-PGPUB;	OR	OFF	2015/04/20 14:15

			USPAT; USOCR			
S242	87	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:16
S243	1	("6361111").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S244	1	("20040251063").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S245	1	("6527294").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20
S246	1	("20070045975").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20

S247	27	("20060001226" | "20070045975" | "20080296872" | "20090033066" | "5301970" | "5520433" | "5601302" | "5709400" | "5845924" | "6099022" | "6193263" | "6203054" | "6209892" | "6398233" | "6446990" | "6540250" | "6715783" | "7377537" | "7475900" | "7753398").PN. OR ("8029014").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:30
S249	2,790	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 10:16
S250	3,337	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 10:16
S251	102	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S252	824	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S253	686	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S254	947	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S255	1,031	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S256	520	(B62B9/12).CPC.	US-PGPUB; USPAT;	OR	ON	2015/12/07 10:17

			USOCR; FPRS; EPO; JPO			
S257	3,385	S251 S252 S253 S254 S255 S256	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S258	1,888,686	@pd>="20150420"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S259	6,070	S249 or S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S260	49	S258 and S249	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S261	93	S258 and S259	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S262	45	S258 and S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S263	44	S262 not S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:18
S264	105	S258 and S257	US-PGPUB; USPAT; USOCR;	OR	ON	2015/12/07 10:19

			FPRS; EPO; JPO			
S265	94	S264 not S263	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S266	93	S265 not S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S267	1	("8936261").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S268	64	("20040164593" | "20060261565" | "20070045975" | "20070069505" | "20070187914" | "20080054579" | "20080150247" | "20080179848" | "20080303232" | "20090033066" | "20090102162" | "20090256323" | "20100013281" | "20100102535" | "20100127480" | "20100230933" | "20100244408" | "20100259021" | "20110204600" | "20110291389" | "20110304124" | "20120025492" | "20120153583" | "20120242062" | "20120261961" | "20130113188" | "4872692" | "5018405" | "5676386" | "5722682" | "5947555" | "6513827" | "6530591" | "6581957" | "6851700" | "7032922" | "7267359" | "7377537" | "7401803" | "7681894" | "7686323" | "7753397" | "7753398" | "7789402" | "7798500" | "7938435" | "8029014" | "8033555" | "8157286" | "8205906" | "8240700" | "8251382" | "8322744" | "8366127" | "8454049" | "8465045" | "8469388" | "8474854" | "8480116" | "8485546" | "8544873" | "8550489" | "8596669").PN. OR ("8936261").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S269	18	("1671774" | "1707186" | "20050167951" | "20070194545" | "20100052277" | "20110163519" | "20120118516" | "7032922" | "7871100" | "8157273" | "8251382" | "8585075" | "8651502" | "8727370" | "D686541").PN. OR ("9010773").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 13:12

S270	1	("6,286,844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 18:14
S271	110	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S272	855	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S273	694	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S274	989	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S275	1,052	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S276	540	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S277	3,473	S271 S272 S273 S274 S275 S276	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S278	3,353	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB;	OR	OFF	2016/02/12 12:46

			USPAT; USOCR			
S279	2,802	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 12:46
S280	279,114	@pd>="20151207"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:47
S281	21	S277 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S282	16	S278 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S283	12	S279 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S284	17	S281 not (S282 or S283)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S285	2	("20070069504" | "7401803").PN. OR ("9242665").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:16
S286	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" | "20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" | "20100038886" | "20100038887" | "20100072731" | "20100140902" |	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:18

		"20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" | "20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" | "7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.				
S287	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 13:19
S288	1	("4343124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:17
S289	1	("4340124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:18
S290	1	("20140361517").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:50
S291	111	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S292	864	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44

S293	699	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S294	993	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S295	1,054	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S296	542	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S297	3,486	S291 S292 S293 S294 S295 S296	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S298	3,358	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S299	2,805	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S300	6,106	S298 or S299	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:45
S301	83,034	@pd>="20160212"	US-PGPUB; USPAT; USOCR;	OR	ON	2016/03/25 16:45

			FPRS; EPO; JPO			
S302	8	S300 and S301	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:59
S303	6	S297 and S301	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 17:01
S304	13	("20080231022" | "20090243261" | "20130113188" | "6513827" | "7267359" | "7377537" | "7798500" | "7938435" | "8061732" | "8733784" | "8764048" | "8777253" | "8955869").PN. OR ("9260128").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:03
S305	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "20140191483" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" | "6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" |	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:04

		"8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "D326748" | "D431798").PN. OR ("9260127").URPN.				
S306	1	("20150123440").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:20
S307	1	("8955869").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:22
S308	32	("20010033069" | "20060001226" | "20060131841" | "20070090619" | "20080224451" | "20080231022" | "6045145" | "6286844" | "6513827" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7475900" | "7481439" | "7497461" | "7681894" | "7766366" | "7938435" | "8029007" | "8033554" | "8061732" | "8231136" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048").PN. OR ("8955869").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:22
S309	2	"39773911".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:27
S310	32	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:33
S311	28	("1203729" | "1321009" | "20020036391" | "20050023783" | "20070075525" | "20070216138" | "20070222167" | "20090315300" | "20100072732" | "2769482" | "4923208" | "5338096" | "5417449" | "5664795" | "5722682" | "5740989" | "5887935" | "6045145" | "6378892" | "6676140" | "7011318" | "7445229" | "8282119" | "D587635" | "D614540").PN. OR ("8857830").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:37
S312	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:37
S313	1	"41399621".FMID.	US-PGPUB;	OR	ON	2016/03/25 17:41

			USPAT; FPRS			
S314	6	("2009/0302578").URPN.	USPAT	OR	ON	2016/03/25 17:42
S315	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" | "20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" | "20100038886" | "20100038887" | "20100072731" | "20100140902" | "20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" | "20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" | "7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:43
S316	108	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:54

		6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$).did. or (US-3000645-$ or US-2453631-$).did.				
S317	1	("20090290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:56
S318	1	("20060290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:58
S319	1	("4542915").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 18:07

S320	2	"47750100".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 21:54
S321	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 23:02
S322	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 23:02
S323	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/28 11:14
S324	0	(A stroller, comprising a stroller frame a plurality of wheels, including front and rear wheels a first seat coupled to the stroller frame at a first vertical position closer to a handle of the stroller frame and configured to hold a first child in the stroller a second seat attachment coupled to the stroller frame at a second vertical position substantially below the first vertical position and closer to the front wheels and comprising a left seat support element, wherein the left seat support element comprises a first connector portion releasably connected to the stroller frame closer to left front wheel and a left seat connector releasably connecting a second seat in either a forward or backward position and a right seat support element, wherein the right seat support element comprises a second connector portion releasably connected to the stroller frame closer to a right front wheel and a right seat connector releasably connecting the second seat in either a forward or backward position between the left and right seat support connectors and the second seat releasably connected to the left seat connector and the right seat connector and configured to hold a second child in the stroller while the first seat holds the first child).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:20
S325	0	(stroller frame wheel seat first vertical position handle child attach$4 coupl$3 left	US-PGPUB;	AND	ON	2016/03/28 13:42

		seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	USPAT; USOCR; FPRS; EPO; JPO			
S326	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:42
S327	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S328	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S329	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support$4 releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S330	3	(stroller frame wheel seat vertical position handle attach$4 left support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:44
S331	14	(stroller frame wheel seat vertical position handle attach$4 support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:45
S332	15	(stroller frame wheel seat vertical position handle attach$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:46
S333	1	S332 not S331	US-PGPUB; USPAT;	AND	ON	2016/03/28 13:46

			USOCR; FPRS; EPO; JPO			
S334	18	(stroller frame wheel seat vertical position handle attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:47
S335	3	S334 not S332	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:47
S336	25	(stroller frame wheel seat vertical position$4 attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S337	7	S336 not S334	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S338	1	"41399621".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/28 13:48
S339	1	("20160339940").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/08 16:58
S340	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:22
S341	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:23
S342	5,184,262	@pd>="20160325"	US-PGPUB;	OR	ON	2017/06/08 17:31

			USPAT; USOCR; FPRS; EPO; JPO			
S343	5,004	S340 or S341	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:33
S344	254	S342 and S343	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:33
S346	4	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:52
S347	14	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:15
S348	1	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
S349	66	("1707186" | "20010033069" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "3000645" | "4542915" | "5338096" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:35

		"6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128").PN.				
S350	111	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$ or US-20130049331-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:36

		8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$).did. or (US-3000645-$ or US-2453631-$).did.				
S351	4	S349 not S350	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:41
S352	34	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:44
S353	96	("1269379" | "1707186" | "1890469" | "20020158444" | "20040251063" | "20070045975" | "20080122200" | "20080224451" | "20090115151" | "20090160162" | "20090289440" | "20100038887" | "20100140902" | "20110175330" | "20140265258" | "3053493" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5522121" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:46

		"6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" | "8220822" | "8282120" | "8297642" | "8398143" | "8905427" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("9517787").URPN.				
S354	8	"48223173".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 09:47
S355	10	("2013/0113185").URPN.	USPAT	OR	ON	2017/06/12 09:48
S356	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:52
S357	22	("1707186").URPN.	USPAT	OR	ON	2017/06/12 09:53
S358	0	S350 and (cover$4 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:56
S359	0	S350 and (cover$4 same2 door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:00
S360	17	S350 and (cover$4 same attach$4)	US-PGPUB; USPAT; USOCR;	OR	ON	2017/06/12 10:00

			FPRS; EPO; JPO			
S361	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:08
S362	56	("4836573" | "4892327" | "5028061" | "5069474" | "5257799" | "5460430" | "5887935" | "5921574" | "6099022" | "6523853" | "6594840" | "6739649" | "7281732").PN. OR ("7377537").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:08
S363	3	S349 and door	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:13
S364	1	("9517787").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:19
S365	1	("9517789").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S366	1	("9561817").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S367	1	("9493179").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:21
S368	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S369	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S370	5,004	S368 or S369	US-PGPUB; USPAT;	OR	ON	2017/06/12 10:22

			USOCR; FPRS; EPO; JPO			
S371	23	S370 and (cover$4 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S372	5	S370 and (cavit$3 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:23
S373	35	("2917316" | "2993702" | "3110504" | "3248125" | "3309101" | "5579556" | "5622375" | "5664795" | "5725238" | "6086087" | "6276759" | "6312005" | "D319493" | "D444738" | "D450265").PN. OR ("6447001").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:23
S374	40	S370 and (cavit$3 same cover$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:24
S375	1	("5522121").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:28
S376	25	("0461069" | "1318850" | "1352647" | "1688148" | "1707186" | "4805938").PN. OR ("5522121").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:29
S377	1	("6449801").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:29
S378	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:30
S379	2	"38052732".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 10:30

S380	41	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" | "6540238" | "6557878" | "6698772" | "6827356" | "6893028" | "7159829" | "7290776").PN. OR ("8029007").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:30
S381	13	("20040164510" | "20070090619" | "20120098237" | "20130234419" | "20130264787" | "20160001805" | "3061328" | "5622375" | "6422634" | "6530591" | "7004272" | "8029007").PN. OR ("9545941").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:31
S382	91	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:33
S383	42	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" |	US-PGPUB;	OR	ON	2017/06/12 10:46

		"4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	USPAT; USOCR			
S384	15	("20050242548" | "20070052271" | "4518139" | "4681340" | "6022077" | "6536842").PN. OR ("7364183").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:49
S385	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 12:09
S386	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:13
S387	91	("0706448" | "1480451" | "1508500" | "1952467" | "20010013689" | "20040212161" | "20060085953" | "20070085302" | "20070120404" | "20090029784" | "20090181780" | "20110278810" | "20120023662" | "20120060326" | "20120235450" | "20130334781" | "20140042729" | "20150008659" | "20150042056" | "20150042076" | "20150175189" | "2708585" | "2961248" | "3564626" | "4476649" | "5099528" | "5201535" | "5562548" | "5676386" | "5772279" | "5846136" | "5947555" | "5987665" | "5988670" | "6250654" | "6286844" | "6471597" | "6671926" | "6872146" | "6893040" | "7037205" | "7100724" | "7354352" | "7377537" | "7445559" | "7475942" | "7497461" | "7607734" | "7681894" | "7686323" | "7694996" | "7766366" | "7905791" | "7938435" | "8029014" | "8251382" | "8292750" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16

		"8550556" | "8672341" | "8746794" | "8851505" | "8944927" | "8955869" | "9085312" | "D156930" | "D371094" | "D377466" | "D408768" | "D442895" | "D452195" | "D475951" | "D481976" | "D498713" | "D498714" | "D519063" | "D604055" | "D622640" | "D623429" | "D667229" | "D682562" | "D684789" | "D687352" | "D743304").PN. OR ("9421992").URPN.				
S388	20	("20010040357" | "20080106070" | "20100127480" | "20110181026" | "20160144879" | "5257799" | "5645293" | "6102432" | "6312005" | "7281732" | "7641216" | "8141895" | "8240698" | "8585075" | "8696015" | "8696016" | "8998241" | "9050993" | "9421991" | "9540028").PN. OR ("9637155").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16
S389	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:21
S390	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:54
S391	28	("20030015895" | "20090066130" | "20090295207" | "4306749" | "4750783" | "5385387" | "5478135" | "5562548" | "5586351" | "5997098" | "6017088" | "6170911" | "6299249" | "6331032" | "6336682" | "6347832" | "6428099" | "6428100" | "6443522" | "6554358" | "6705676" | "6793280" | "6921359" | "6979057" | "7090294").PN. OR ("8678498").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:55
S392	54	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" | "7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" | "7694996" | "7712765" | "7753398").PN. OR ("8251382").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:08

S393	15	("20080231022" | "5773379" | "5947555" | "6286844" | "6893040" | "7032922" | "7267359" | "7475900" | "7658399" | "7681894" | "7766366" | "7938435" | "8033555" | "D621306").PN. OR ("8851505").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:09
S394	58	("20010013689" | "20050264062" | "20060214397" | "20070257458" | "20070296182" | "20080136127" | "20080231023" | "20100219616" | "20100230933" | "20120025492" | "4834403" | "5028061" | "5201535" | "5203577" | "5257799" | "5277472" | "5364137" | "5564778" | "5567008" | "5676386" | "5772279" | "5794951" | "5947555" | "6086086" | "6089653" | "6286844" | "6318807" | "6446990" | "6572134" | "6595583" | "6793280" | "6802514" | "6863286" | "6942294" | "6983986" | "7032922" | "7070197" | "7207628" | "7370913" | "7377537" | "7681894" | "7686322" | "7694996" | "7753398" | "8029014" | "8070228" | "8172253" | "8282120" | "8382150").PN. OR ("8651502").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:09
S395	76	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:12
S396	49	("4915401" | "5133567" | "5277472" | "5564778" | "5644816" | "5676386" | "5772279").PN. OR ("5865447").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:13
S397	88	("0763771" | "0921361" | "1167525" | "2509972" | "2982562" | "3029087" | "3083997" | "3596986" | "4306749" | "4345791" | "4371206" | "4385769" | "4501032" | "4545613" | "4634177" | "4664396" | "4733909" | "4861105" | "4915446" | "4943113" | "4984813" | "4998307" | "5052750" | "5058283" | "5203577" | "5277472" | "5385387" | "D294777" | "D305583" | "D322001" | "D325132").PN. OR ("5567008").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:14
S398	92	("2982562" | "3100651" | "3290050" | "3330575" | "3784252" | "4072318" | "4378946" | "4412688" | "4428598" | "4478427" | "4606550" | "4762364" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:16

		"4815764" | "5004253" | "5074575").PN. OR ("5201535").URPN.				
S399	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23
S400	82	S397 not S399	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23
S401	20	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:28
S402	59	("20020175498" | "20020195797" | "20030111825" | "20040046364" | "20050098982" | "20060071452" | "20060237949" | "5772235" | "5823564" | "7032922").PN. OR ("7267359").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:30
S403	1	("5201535").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:32
S404	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:47
S405	3,477	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S406	2,369	(B62B9/12,28,102).CPC.	US-PGPUB;	OR	ON	2017/11/13 16:13

			USPAT; USOCR; FPRS; EPO; JPO			
S407	5,040	S405 or S406	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S408	1,329,175	@pd>="20170608"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S409	44	S407 and S408	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S410	3	"37808038".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/11/13 17:27
S423	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 10:50
S424	39	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 10:51
S425	8	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S426	18	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR;	OR	ON	2019/04/15 10:52

			FPRS; EPO; JPO; DERWENT			
S427	3	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S428	151	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$ or US-3000645-$).did. or (US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 11:03

		8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$ or US-8733784-$).did. or (US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$ or US-9260127-$).did. or (US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$ or US-8851505-$).did. or (US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S429	55	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:25
S430	3	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2019/04/15 12:25

S431	80	("1707186" | "20010033069" | "20020109321" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN. OR ("9944305").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:26
S432	3,809	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S433	2,627	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S434	5,496	S432 or S433	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S435	7,949,590	@pd>="20171113"	US-PGPUB; USPAT; USOCR;	OR	ON	2019/04/15 12:29

			FPRS; EPO; JPO			
S436	308	S434 and S435	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:30
S437	2	("20100140902" | "20140333039").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:52
S438	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:54
S439	7	S438 not S428	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:55
S440	11	("20060214395" | "20070085303" | "20090302578" | "4763911" | "5356172" | "5395154" | "5593173" | "6431647").PN. OR ("8596670").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:58

S441	12	("2007/0085303").URPN.	USPAT	OR	ON	2019/04/15 13:05
S443	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 14:37
S444	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 14:47
S445	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:08
S446	1	("7481439").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:09
S447	21	("4222132" | "4805938" | "4969656" | "5064209" | "5653460" | "5887935" | "5918892" | "6155592" | "6523840" | "6527294" | "6752405" | "D360392").PN. OR ("7481439").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10
S448	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10

		"7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.				
S449	28	("1707186" | "4222132" | "4288089" | "4354689" | "4805938" | "4969656" | "5064209" | "5076599" | "5522121" | "5653460" | "5918892" | "6086087" | "6527294" | "6752405").PN. OR ("6938906").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:13
S450	56	("20030080536" | "20040075229" | "20040124611" | "20040173997" | "20050127640" | "20050242549" | "20090295128" | "20100038886" | "20100230933" | "4697823" | "4846494" | "4921261" | "4946180" | "5121940" | "5338096" | "5454575" | "5624152" | "5669623" | "5687984" | "5752738" | "6189914" | "6193263" | "6209892" | "6267406" | "6409205" | "6478327" | "6702316" | "6938906" | "6964429" | "6981709" | "7017937" | "7040694" | "7284797" | "7445230" | "7513512" | "7614640" | "7770911" | "8087680" | "8100429" | "8186705" | "8186706" | "8205894" | "8282119" | "8328208" | "8388016" | "8398098" | "8414012" | "D344474" | "D345128" | "D352923" | "D430076" | "D452192" | "D455679" | "D510549" | "D593459").PN. OR ("8641077").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:14
S451	32	("6896286" | "D369992" | "D519422" | "D558099" | "D566013" | "D578045" | "D579827").PN. OR ("D593459").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:15
S452	66	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:18

		"6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" | "7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.				
S453	1	("D593459").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:25
S454	3,861	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S455	2,688	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S456	5,586	S454 or S455	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S457	969,007	@pd>="20190415"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:57
S458	58	S456 and S457	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:59
S459	27	("20040189076" | "20050029855" | "20110175306" | "20170247044" | "20170361861" | "4577355" | "5240265" | "5246272" | "5669625" | "5681084" | "5749627" | "5806877" | "6322097" | "6530591" | "6676140" | "6830254" | "6951342" | "8070180" | "8172322" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/08/23 01:02

		"8596670" | "8616638" | "8690250" | "8899615" | "8991929" | "9227650" | "9868456" | "D811949").PN.				
S460	167	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/08/23 01:02

		5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S461	22	S459 not S460	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 01:02
S462	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/08/23 01:04
S464	4,053	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR;	OR	ON	2020/02/28 20:49

			FPRS; EPO; JPO			
S465	2,834	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S466	5,847	S464 or S465	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S467	1,751,101	@pd>="20190823"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S468	97	S466 and S467	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S469	97	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20120181779" | "20130154215" | "20140191483" | "20150021872" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 21:03

		"6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "9260127" | "D326748" | "D431798").PN. OR ("10556610").URPN.				
S470	21	("20100140902" | "20130087993" | "20130154241" | "20150159414" | "20160046315" | "7789402" | "7832755" | "8033554" | "8231136" | "8602441" | "8905427" | "8955869" | "8967647" | "9050987" | "9399477" | "9403550" | "9493179" | "9517787" | "9616912" | "9637154" | "D747669").PN. OR ("10449987").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 22:17
S471	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/02/28 22:19
S472	7,365,969	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:01
S473	172	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:02

		D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-				

		9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-10556611-$ or US-10556610-$ or US-10449987-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S474	94	S472 and S473	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/03/01 23:02
S475	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS; JPO	OR	ON	2020/03/01 23:04
S476	16	("2010/0072732").URPN.	USPAT	OR	ON	2020/03/01 23:07
S484	1	("10730543").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:15
S485	0	("202000223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S486	1	("20200223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S487	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:19
S488	4,211	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB;	OR	ON	2020/09/10 14:24

			USPAT; USOCR; FPRS; EPO; JPO			
S489	2,957	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S490	6,047	S488 or S489	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S491	1,552,888	@pd>="20200228"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S492	69	S490 and S491	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:34
S493	98	("10023218" | "10207731" | "10293843" | "10449987" | "10556610" | "1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20100140902" | "20140191483" | "20140333039" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:43

		"8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652" | "9840168" | "9849903" | "9884640" | "9924806" | "9944305" | "9956979" | "D593459").PN. OR ("10730543").URPN.				
S494	45	(Baby near2 Jogger).AS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:47
S495	173	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:56

		7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-				

		D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-10556611-$ or US-10556610-$ or US-10449987-$ or US-10730543-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S496	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:57
S497	4	S496 not S495	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:58
S499	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 21:06

		"6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.				
S500	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:39
S501	10	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:43
S502	25	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:56
S503	5	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2020/09/11 00:00

			EPO; JPO; DERWENT			
S504	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/15 15:29
S505	1	("9260127").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/15 23:58
S506	4,378	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:36
S507	3,086	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:36
S508	6,262	S506 or S507	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:36
S509	2,515,828	@pd>="20200910"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:47
S510	120	S508 and S509	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:48
S511	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2021/04/22 11:33
S512	1	("10730543").PN.	US-PGPUB;	OR	OFF	2021/04/22 12:44

			USPAT; USOCR			
S513	4,404	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:37
S514	3,109	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:37
S515	6,295	S513 or S514	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:37
S516	184,287	@pd>="20210411"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:37
S517	15	S515 and S516	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:38
S518	12	"22994051".FMID.	US-PGPUB; USPAT; FPRS; JPO	OR	ON	2021/07/02 20:52

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51

		adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51
S163	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate	US-PGPUB; USPAT	AND	ON	2014/02/03 17:17

		right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.				
S164	0	(seat attachment stroller separate left right attachment portion connector portion removably connecting frame adjacent front wheel seat support element removably connecting seat forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:35
S165	0	(seat attach$4 stroller separate left right portion connect$4 remov$4 frame adjacent front wheel support$4 element forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S166	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S167	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:47
S213	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S214	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S215	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S216	19	(seat$3 attach$4 stroller left right connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29

S217	68	(seat$3 attach$4 stroller connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29
S218	5	("20020036391" | "20070069505" | "20070187914" | "4753453" | "4779883").PN. OR ("8033554").URPN.	US-PGPUB; USPAT	OR	ON	2014/09/24 14:32
S248	4	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2015/04/20 14:14
S411	0	(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
S412	0	(stroller frame wheel seat attachment housing first adapter receiving cavity extending through housing first door rotatably coupled to housing closed configuration preventing access to cavity from top side open configuration	US-PGPUB; USPAT	AND	ON	2017/11/13 16:55

		allowing access to cavity first removable seat attachment adapter removably coupled to housing and second removable seat attachment adapter removably coupled to housing).CLM.				
S413	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity extend$4 door rotat$4 closed configuration prevent$4 access$4 open configuration allow$4 access).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:56
S414	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity door rotat$4 closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:21
S415	1	(stroller wheel seat attach$4 hous$4 cavity door closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S416	1	(stroller wheel seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S417	1	(stroller seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:23
S418	1	(stroller seat$3 attach$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S419	1	(stroller seat$3 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S420	3	(stroller seat$3 door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S421	2	(stroller seat$3 cavit$3 clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S422	21	(stroller seat$3 cavit$3 clos$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S442	5	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/04/15 11:03
S463	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/08/23 01:02
S477	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/03/01 23:02

S478	0	(A stroller, comprising a stroller frame comprising a first upper tube support frame a second upper tube support frame a first front wheel support frame rotatable with respect to the first upper tube support frame a second front wheel support frame rotatable with respect to the second upper tube support frame a first back wheel support frame rotatable with respect to the first upper tube support frame a second back wheel support frame rotatable with respect to the second upper tube support frame a plurality of wheels comprising at least one front wheel and a plurality of back wheels a first seat coupled to the stroller frame at a first vertical position of the stroller frame a first seat attachment housing disposed along the first front wheel support frame a first seat attachment adapter removably coupled to the first seat attachment housing stroller frame at a second vertical position of the stroller frame that is below the first vertical position a second seat attachment housing disposed along the second front wheel support frame a second seat attachment adapter removably coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:05
S479	1	(stroller frame wheel first seat first vertical position attachment housing adapter removably coupled below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:07
S480	1	(stroller frame wheel seat vertical position attach$4 hous$4 adapt$4 remov$4 coupl$4 below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S481	4	(stroller frame wheel seat attach$4 hous$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S482	11	(stroller frame wheel seat attach$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:11
S483	33	(stroller frame wheel seat attach$4 adapt$4 remov$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:12

S498	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/09/10 14:56
S519	37	(stroller frame wheel seat attach$4 adapt$4 remov$4).CLM.	US-PGPUB; USPAT	AND	ON	2021/07/02 20:50
S520	37	(stroller frame wheel seat attach$4 adapt$4 remov$4).CLM.	US-PGPUB; USPAT	AND	ON	2021/07/02 20:50
S521	0	S519 not S520	US-PGPUB; USPAT	AND	ON	2021/07/02 20:50

7/8/2021 11:24:32 PM
C:\Users\jdolak\Documents\EAST\Workspaces\16832429_updatedparent.wsp

DO NOT ENTER: /J.M.D/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
John Hee Lee, et al.	Confirmation No.: **8948**
Application No.: **16/832,429**	Art Unit: **3618**
Filed: **March 27, 2020**	Examiner: **James M. Dolak**
For: **Removable Seat Attachment for a Stroller**	Attorney Docket No.: **34757-2430**

AMENDMENT AND RESPONSE TO FINAL OFFICE ACTION

Via EFS-Web
Mail Stop AF
Commissioner for Patents
Alexandria, VA 22313-1450

Dear Examiner Dolak:

This Amendment and Response is submitted in response to the Final Office Action mailed April 28, 2021. A request for reconsideration under the After Final Consideration Pilot 2.0 (AFCP) is concurrently filed with this paper. In light of the amendments and remarks included herein, it is respectfully asserted that all pending claims are patentable, and it is respectfully requested that this application be allowed.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks begin on page 8 of this paper.

I hereby certify that this correspondence is being electronically filed via EFS-WEB to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Attn: Examiner Dolak, GAU 3618, on June 28, 2021.

/Christopher J. Chan/
Christopher J. Chan
Reg. No. 44,070

DO NOT ENTER: /J.M.D/

To: patentdocket@eversheds-sutherland.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 134811

Jul 15, 2021 04:32:36 AM

Dear PAIR Customer:

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 134811 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

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Application	Document	Mailroom Date	Attorney Docket No.
16832429	CTAV	07/15/2021	34757-2430
	INTV.SUM.APP	07/15/2021	34757-2430
	892	07/15/2021	34757-2430
	A.NE.AFCP.D	07/15/2021	34757-2430

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Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	16/832,429	Filing Date	2020-03-27	Docket Number (if applicable)	34757-2430	Art Unit	3618
First Named Inventor	John Hee Lee			Examiner Name	JAMES M. DOLAK		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 195029

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Christopher J. Chan/	Date (YYYY-MM-DD)	2021-07-28
Name	Christopher J. Chan	Registration Number	44070

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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The information provided by you in this form will be subject to the following routine uses:

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	16832429
Filing Date:	27-Mar-2020
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Filer:	Christopher Chan
Attorney Docket Number:	34757-2430

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
RCE- 1ST REQUEST	1801	1	1360	1360
		Total in USD ($)		**1360**

Electronic Acknowledgement Receipt

EFS ID:	43372650
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	Christopher Chan
Filer Authorized By:	
Attorney Docket Number:	34757-2430
Receipt Date:	28-JUL-2021
Filing Date:	27-MAR-2020
Time Stamp:	22:29:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1360
RAM confirmation Number	E20217RM30083592
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment Submitted/Entered with Filing of CPA/RCE	34757_2430_Response_Advisory_Action_07282021.pdf	538217 d86ee6be741127f3da211b633dd93940d4e594d7	no	12
Warnings:					
Information:					
2	Request for Continued Examination (RCE)	34757_2430_RCE.pdf	1349995 4ae898f9eb0c2a9465ed99b0e79029d98c374155	no	3
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	37667 9344c03a2456462c5a7a1d6c79dcadb14f97a47c	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1925879		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
John Hee Lee, et al.	)	Confirmation No.: **8948**
	)	
Application No.: **16/832,429**	)	Art Unit: **3618**
	)	
Filed: **March 27, 2020**	)	Examiner: **James M. Dolak**
	)	
For: **Removable Seat Attachment for a Stroller**	)	Attorney Docket No.: **34757-2430**
	)	
	)	
	)	

AMENDMENT AND RESPONSE TO ADVISORY ACTION

Via EFS-Web
Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Examiner Dolak:

This Amendment and Response is submitted in response to the Advisory Action ,ailed July 15, 2021, and the Final Office Action mailed April 28, 2021. A Request for Continued Examination (RCE) and fee are concurrently filed with this paper. In light of the amendments and remarks included herein, it is respectfully asserted that all pending claims are patentable, and it is respectfully requested that this application be allowed.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks begin on page 8 of this paper.

I hereby certify that this correspondence is being electronically filed via EFS-WEB to Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Attn: Examiner Dolak, GAU 3618, on July 28, 2021.

/Christopher J. Chan/
Christopher J. Chan
Reg. No. 44,070

AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below. This listing of claims will replace all prior versions and listing of claims for this application.

1. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first front wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame when the stroller frame is unfolded from a folded configuration;

a second front wheel support frame rotatably adjusted to be substantially parallel with respect to the second upper tube support frame when the stroller frame is unfolded from a folded configuration;

a first back wheel support frame rotated with respect to the first upper tube support frame; and

a second back wheel support frame rotated with respect to the second upper tube support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled to the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position~~, wherein the first seat attachment adapter is removable from the first front wheel support frame~~;

a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position~~, wherein the second seat attachment adapter is removable from the second front wheel support frame~~;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position and wherein the second vertical position and the third vertical position are at a same vertical height.

2. (Original) The stroller of claim 1, further comprising:

a first seat attachment housing disposed adjacent the first front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the second front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

3. (Original) The stroller of claim 2, wherein the first seat attachment housing extends into the first front wheel support frame and the second seat attachment housing extends into the second front wheel support frame.

4. (Original) The stroller of claim 2, wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end.

5. (Original) The stroller of claim 4, wherein the first end comprises a connector portion and is coupled to one of the first seat attachment housing and the second seat attachment housing.

6. (Previously Amended) The stroller of claim 4, wherein the second seat is removably coupled to the second end.

7. (Original) The stroller of claim 1, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

8. (Original) The stroller of claim 1, further comprising:

a third seat attachment adapter coupled to the stroller frame at the first vertical position; and

a fourth seat attachment adapter coupled to the stroller frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

9. (Original) The stroller of claim 1, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

10. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a front wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame when the stroller frame is unfolded from a folded configuration;

a back wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame when the stroller frame is unfolded from a folded configuration; and

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled to the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position~~, wherein the first seat attachment adapter is removable from the front wheel support frame~~;

a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position~~, wherein the second seat attachment adapter is removable from the front wheel support frame~~;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position.

11. (Original) The stroller of claim 10, wherein the front wheel support frame comprises a first front wheel support frame member and a second front wheel support frame member.

12. (Original) The stroller of claim 10, wherein the back wheel support frame comprises a first back wheel support member and a second back wheel support member.

13. (Original) The stroller of claim 10, further comprising:

a first seat attachment housing disposed adjacent the front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

14. (Previously Amended) The stroller of claim 13, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is removably coupled to the second end.

15. (Original) The stroller of claim 10, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

16. (Original) The stroller of claim 10, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame at the first vertical position; and

a fourth seat attachment adapter coupled to the second upper tube support frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

17. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first back wheel support frame;

a second back wheel support frame;

a first front wheel support frame;

a second front wheel support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled to the stroller frame at a first vertical position of the stroller frame;

a first seat attachment housing disposed adjacent the first front wheel support frame:

a second seat attachment housing disposed adjacent the second front wheel support frame;

a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position~~, wherein the first seat attachment adapter is removable from the first seat attachment housing~~ when the first upper tube support frame is substantially parallel with the first front wheel support frame when the stroller frame is unfolded from a folded configuration;

a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position~~, wherein the second seat attachment adapter is removable from the second seat attachment housing~~ when the second upper tube support frame is substantially parallel with the second front wheel support frame when the stroller frame is unfolded from a folded configuration;

wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter.

18. (Currently Amended) The stroller of claim 17, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion ~~configured to be~~ coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is removably coupled to the second end.

19. (Original) The stroller of claim 17, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

20. (Original) The stroller of claim 17, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame; and

a fourth seat attachment adapter coupled to the second upper tube support frame;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

REMARKS

Applicant and the undersigned thank Examiner Dolak for the careful review of this application. In the present Final Office Action, claims 1-20 are rejected. In response to the Advisory Action and After Final Consideration Pilot 2.0 (AFCP) Decision mailed July 15, 2021, Applicant submits these additional amendments and response with a Request for Continued Examination (RCE) and fee concurrently filed with this paper.

Without admitting to the propriety of the rejections and to facilitate examination of the application, Applicant amends independent claims 1, 10, and 17, and dependent claim 18, to clarify the scope of the claimed subject matter. The amendments to the claims are supported by the specification and drawing figures 8A to 8H and do not introduce new matter. Upon entry of these amendments, claims 1-20 remain pending in the application. In view of these amendments and remarks, Applicant respectfully asserts that the rejections are now made moot and reconsideration and allowance of the application is respectfully requested.

Unless explicitly stated otherwise, none of the amendments to the claims were made for reasons substantially related to the statutory requirements for patentability. Furthermore, unless otherwise stated, the amendments to the claims were made simply to express that which had been implicit in the claims as originally worded and therefore, are not narrowing amendments that would create any prosecution history estoppel.

I. Request to Examiner Interview

Prior to the mailing of any further Office Actions, Applicant requests the courtesy of an examiner interview via telephone to discuss any remaining issues of patentability. The Examiner is invited to contact the Applicant's attorney, Christopher J. Chan, at 404.853.8049 to schedule the interview.

II. Double Patenting

Claims 1-20 were rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 10,730,543. Upon allowance of any claims in the present application, the Applicant will agree to file a terminal disclaimer to overcome this rejection.

III. Claim Rejections Under 35 U.S.C. §112

The Office Action rejected claims 1-20 for allegedly being indefinite. Without admitting to the propriety of the rejections and to facilitate examination of the application, claims 1, 10, 17, and 18 are amended to clarify the scope of the claimed subject matter. For example, claims 1, 10 and 17 are believed to be amended to clarify the scope of the Office Action indicated claim elements of, "adjusted/rotated with respect to". Further, claim 18 is amended to omit the respective terms "configured to be". The rejections are believed to be traversed.

IV. Claim Rejections Under 35 U.S.C. §103

In the Office Action, claims 17, 18, and 20 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 7,475,900 B2 to Cheng ("Cheng") in view of U.S. Patent No. 6,286,844 B1 to Cone ("Cone"). The Office Action also rejected claims 1-16 under 35 U.S.C. §103(a) as allegedly unpatentable over Cheng in view of U.S. Patent No. D593,459S to Liao ("Liao"), and in further view of Cone. Applicant traverses the rejections of the pending claims.

Without admitting to the propriety of the rejections and to facilitate examination of the application, Applicant's independent claim 1 is amended to clarify the scope of the claimed subject matter. For example, claim 1 is amended to include the elements of, "a first front wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame when the stroller frame is unfolded from a folded configuration; a second front wheel support frame rotatably adjusted to be substantially parallel with respect to the second upper tube support frame when the stroller frame is unfolded from a folded configuration; … a first seat attachment adapter coupled to the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position; a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8, and Figures 8A to 8H.

Further, claim 10 is amended to include the elements of, "a front wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame when the stroller frame is unfolded from a folded configuration; a back wheel support frame

rotatably adjusted to be substantially parallel with respect to the first upper tube support frame when the stroller frame is unfolded from a folded configuration … a first seat attachment adapter coupled to the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position; a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8, and Figures 8A to 8H.

Moreover, claim 17 is amended to include the elements of, "a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position when the first upper tube support frame is substantially parallel with the first front wheel support frame when the stroller frame is unfolded from a folded configuration; a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position when the second upper tube support frame is substantially parallel with the second front wheel support frame when the stroller frame is unfolded from a folded configuration" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8, and Figures 8A to 8H.

By contrast, the stroller frames in the cited references Cheng and Cone only include folded or curved frame or tube structures being described as upper tube and lower or front wheel support frames by the Office Action. For example, the frame elements 41 and 42 in Cheng do not appear to be substantially parallel to each other when the stroller frame is unfolded from a folded configuration, but instead appear to be substantially folded with respect to each other when the stroller frame is extended or unfolded. Further, the frame elements 51 and 52 in Cone do not appear to be substantially parallel to each other, but instead appear to be substantially curved with respect to each other when the stroller frame is extended or unfolded. Since the frame elements of Cheng and Cone are either folded or curved, which inhibit the ability of the respective stroller frames to be able to elevate one seat in a much higher position the other seat when being attached to the stroller frames. The substantially parallel construction of the Applicant's claimed embodiments, permits the frame to be able to elevate one seat in a much

higher position the other seat when being attached to the stroller frame. While Liao appears to have certain frame elements in a substantially parallel orientation, Liao appears to only show seats in a relatively level orientation with each other, wherein one seat is not higher than the other seat, thus teaching away from the Applicant's claimed embodiments wherein one seat is positioned higher than the other seat.

Since each and every element of the Applicant's amended independent claims 1, 10, and 17 is neither taught nor suggested by the cited references, either alone or in combination with each other, then claims 1, 10, and 17 should be allowable over the cited references.

V. Dependent Claims 2-9, 11-16, and 18-20

Applicant submits that the above-identified dependent claims are allowable because the independent claims from which they ultimately depend are patentable over the cited references. The additional cited reference, namely Liao, does not cure the deficiencies of the cited references Cheng and Cone. Applicant also respectfully traverses the Office Action's assertions about these claims and submits that the recitations of these dependent claims are of patentable significance. Applicant respectfully requests that the Examiner reconsider and withdraw the pending rejections of claims 2-9, 11-16, and 18-20.

VI. NO WAIVER

All of Applicant's arguments presented herein are without prejudice or disclaimer. Additionally, Applicant has merely discussed example reasons that the pending claims are allowable. Other reasons may exist and Applicant reserves the right to discuss these additional reasons in a later response or on appeal, if appropriate, in this or another related application. By not responding to additional statements made by the Office Action, such as what is taught by each cited reference or alleged to have been obvious in view of the cited references, Applicant does not acquiesce to the Office Action's additional statements. The example reasons discussed by Applicant are sufficient to overcome the mentioned rejections.

CONCLUSION

The foregoing is submitted as a full and complete response to the Advisory Action dated July 15, 2021 and the Final Office Action dated April 28, 2021. Applicant and the undersigned

thank Examiner Dolak for the consideration of these amendments and remarks. In view of the amendments to the claims and the submitted remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections. Applicant further submits that the application is now in condition for allowance and earnestly solicits timely notice of the same. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the undersigned at the telephone number below.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this response. However, in the event that additional extensions of time are necessary to allow consideration of this response, such extensions are hereby petitioned under 37 C.F.R. §1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 19-5029.

Respectfully submitted,

/Christopher J. Chan/

Christopher J. Chan
Reg. No. 44,070

DATE: **July 28, 2021**

EVERSHEDS SUTHERLAND (US) LLP
999 Peachtree Street NE
Atlanta, Georgia 30309-3996
Telephone: (404) 853-8049
Facsimile: (404) 853-8806

Attorney Docket No.: **34757-2430**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
John Hee Lee, et al.	)	Confirmation No.: **8948**
	)	
Application No.: **16/832,429**	)	Art Unit: **3618**
	)	
Filed: **March 27, 2020**	)	Examiner: **James M. Dolak**
	)	
For: **Removable Seat Attachment for a Stroller**	)	Attorney Docket No.: **34757-2430**
	)	
	)	
	)	

AMENDMENT AND RESPONSE TO FINAL OFFICE ACTION

Via EFS-Web
Mail Stop AF
Commissioner for Patents
Alexandria, VA 22313-1450

Dear Examiner Dolak:

This Amendment and Response is submitted in response to the Final Office Action mailed April 28, 2021. A request for reconsideration under the After Final Consideration Pilot 2.0 (AFCP) is concurrently filed with this paper. In light of the amendments and remarks included herein, it is respectfully asserted that all pending claims are patentable, and it is respectfully requested that this application be allowed.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks begin on page 8 of this paper.

I hereby certify that this correspondence is being electronically filed via EFS-WEB to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Attn: Examiner Dolak, GAU 3618, on June 28, 2021.

/Christopher J. Chan/
Christopher J. Chan
Reg. No. 44,070

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/832,429	Filing Date 03/27/2020	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $460 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	07/28/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/MARGARET R BYARS/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

134811 7590 08/18/2021
Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

EXAMINER	
DOLAK, JAMES M	
ART UNIT	PAPER NUMBER
3618	

DATE MAILED: 08/18/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

TITLE OF INVENTION: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	11/18/2021

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

134811 7590 08/18/2021
Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

TITLE OF INVENTION: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	11/18/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
DOLAK, JAMES M	3618	280-047350

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

134811 7590 08/18/2021

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

EXAMINER	
DOLAK, JAMES M	
ART UNIT	PAPER NUMBER
3618	

DATE MAILED: 08/18/2021

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

UPPABABY ET AL. EX. 1019

Notice of Allowability	Application No. 16/832,429	Applicant(s) Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 7/28/2021.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1-20 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☑ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/JAMES M DOLAK/
Primary Examiner, Art Unit 3618

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/28/2021 has been entered.

Response to Amendment

3. The reply filed on 7/28/2021 amended claims 1, 10, and 17. Claims 1-17 are currently pending herein.

Allowable Subject Matter

4. Claims 1-17 are allowed.

5. The following is an examiner's statement of reasons for allowance: The prior art of record when taken alone or in combination with another does not teach or fairly suggest at this time at least, among other limitations: A stroller, comprising:
a stroller frame comprising: a first upper tube support frame; a second upper tube support frame; ***a first front wheel support frame rotatably adjusted to be substantially parallel with respect to the first upper tube support frame when the stroller frame is unfolded from a folded configuration; a second front wheel***

support frame rotatably adjusted to be substantially parallel with respect to the second upper tube support frame when the stroller frame is unfolded from a folded configuration; a first back wheel support frame rotated with respect to the first upper tube support frame; and a second back wheel support frame rotated with respect to the second upper tube support frame; a plurality of wheels comprising at least one front wheel and a plurality of back wheels; a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame; ***a first seat attachment adapter coupled to the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position; a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position; wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position and wherein the second vertical position and the third vertical position are at a same vertical height***, as claimed in Claim 1 and similarly claimed in Claims 10 and 17 (emphasis added to allowable limitations not suggested or taught by the prior art).

6. The prior art discloses similar examples of double strollers (see attached Notice of References cited). However, the prior art does not appear to teach or fairly suggest the combination of limitations of amended independent claim 1, as noted above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, and can be found on the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES M DOLAK whose telephone number is (571)270-7757. The examiner can normally be reached on 9-530 EST Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J ALLEN SHRIVER can be reached on 303-297-4337. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES M DOLAK/
Primary Examiner, Art Unit 3618

Notice of References Cited	Application/Control No. 16/832,429	Applicant(s)/Patent Under Reexamination Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-11059510-B2	07-2021	Eyman; Mark	B62B9/12	1/1
*	B	US-11052933-B2	07-2021	Cheng; Chih-Ching	B62B9/102	1/1
*	C	US-8844964-B2	09-2014	Chiang; Sen-Yung	B62B7/14	280/658
*	D	US-6086087-A	07-2000	Yang; Chih-Huang	B62B7/06	280/47.41
*	E	US-8602441-B2	12-2013	Li; Jian-Qun	B62B9/28	280/642
*	F	US-8505952-B1	08-2013	Choquette; Paul	B60D1/1675	280/491.2
*	G	US-8480115-B2	07-2013	Chen; Ying-Zhong	B62B9/26	280/643
*	H	US-8322745-B2	12-2012	Li; Jian-Qun	B62B7/08	280/642
*	I	US-6585284-B2	07-2003	Sweeney; Lisa A.	B62B9/28	280/33.993
*	J	US-6267406-B1	07-2001	Huang; Mien Chen	B62B7/08	280/47.38
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	**Art Unit**
	JAMES M DOLAK	3618

CPC						
Symbol					**Type**	**Version**
B62B	/	9	/	102	F	2013-01-01
B62B	/	7	/	006	I	2013-01-01
B62B	/	7	/	008	I	2013-01-01
B62B	/	7	/	14	I	2013-01-01
B62B	/	9	/	28	I	2013-01-01
B62K	/	27	/	003	I	2013-01-01
B62K	/	5	/	02	I	2013-01-01
B62M	/	1	/	38	I	2013-01-01
B62B	/	9	/	12	I	2013-01-01
B62B	/	7	/	145	A	2013-01-01
B62B	/	3	/	008	A	2013-01-01
B62K	/	13	/	00	A	2013-01-01

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/JAMES M DOLAK/ Primary Examiner, Art Unit 3618	12 August 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8 & 9

U.S. Patent and Trademark Office — Part of Paper No.: 20210812

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	**Art Unit**
	JAMES M DOLAK	3618

INTERNATIONAL CLASSIFICATION				
CLAIMED				
B62B	/	9	/	28

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/JAMES M DOLAK/ Primary Examiner, Art Unit 3618	12 August 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8 & 9

U.S. Patent and Trademark Office

Part of Paper No.: 20210812

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	**Art Unit**
	JAMES M DOLAK	3618

☑ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/JAMES M DOLAK/ Primary Examiner, Art Unit 3618	12 August 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8 & 9

U.S. Patent and Trademark Office

Part of Paper No.: 20210812

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

CPC - Searched*		
Symbol	Date	Examiner
B62B7/008,00,006,14,142,145	09/10/2020	JMD
B62B9/12,28,102	09/10/2020	JMD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Inventor Search	09/10/2020	JMD
EAST text search	09/10/2020	JMD
Updated Search	04/11/2021	JMD
AFCP Updated Search	07/02/2021	JMD
Updated Search	08/11/2021	JMD

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
ALL	See attached Search History	08/12/2021	JMD

/JAMES M DOLAK/ Primary Examiner.Art Unit 3618	/JAMES M DOLAK/ Primary Examiner, Art Unit 3618

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/03/01 23:01
		(Simpson near2 (Stacy and Noel).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:36
		(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:36
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:35

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		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		S27 and ((wheel and seat) same add$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
		S10 and (seat near2 (attach$4 and convert$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
L1	4,404	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:37

L2	3,109	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:37
L3	6,295	L1 or L2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:37
L4	184,287	@pd>="20210411"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:37
L5	15	3 and 4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/07/02 20:38
L9	12	"22994051".FMID.	US-PGPUB; USPAT; FPRS; JPO	OR	ON	2021/07/02 20:52
S1	0	("20100140902").PN.	USPAT; USOCR	OR	OFF	2011/11/10 17:53
S2	1	("20100140902").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/11/10 17:55
S3	4	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:03
S4	8	("20030025304" | "20070001429" | "20070114738" | "5338096").PN.	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/06/21 11:10

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S5	15	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:19
S6	1	("7320471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/21 11:26
S7	3	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:26
S8	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/27 15:43
S9	37,502,244	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:43
S10	1,861	S8 and S9	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S11	1,537	S10 and seat	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S12	827	S10 and (seat same attach$4)	US-PGPUB;	OR	ON	2012/06/27 15:44

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S13	427	S10 and (seat near2 attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S14	51	S10 and (seat near2 (attach$4 and convert$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
S15	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 19:10
S16	37,502,315	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S17	1,076	S15 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S18	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB;	OR	OFF	2012/06/28 19:17

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S20	35	S17 and S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S21	2,902	S17 or S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:20
S22	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:15
S23	37,502,315	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S24	1,076	S22 and S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2012/06/28 23:15

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S26	1,861	S25 and S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S27	2,902	S24 or S26	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S28	657	S27 and ((wheel and seat) same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S29	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:16
S30	44	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:16
S31	115	S28 and expand$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2012/06/28 23:20

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S33	33	("2769482" | "2857953" | "2993702" | "3235279" | "3309101" | "3330575" | "3738700" | "4725071" | "5018754" | "5263730" | "5338096" | "5417449" | "5653460" | "5664795" | "5911432" | "6045145" | "6068087" | "6378892" | "D321850" | "D359937").PN. OR ("6676140").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:24
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S35	15	("1707186").URPN.	USPAT	OR	ON	2012/06/28 23:28
S36	14	("20030111825" | "5333893" | "6209892" | "6513827" | "6863286" | "7032922" | "7367581" | "7377537" | "D429664" | "D430076").PN. OR ("7475900").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:31
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S42	13	("3000645" | "4969656" | "5125712" | "5522121" | "5918892" | "6527294" | "6561526" | "6715783" | "6752405" | "6851693" | "6938906").PN. OR ("7677585").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:50
S43	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:51
S44	9	("3000645").URPN.	USPAT	OR	ON	2012/06/28 23:55
S45	1	("6702316").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/29 00:04
S46	29	("20010040357" | "20020060444" | "20020093177" | "4852894" | "4921261" | "4989888" | "5490685" | "5641200" | "5676386" | "5794951" | "5947555" | "6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205").PN. OR ("6702316").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/29 00:04
S47	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 04:43

S48	37,502,608	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S49	1,076	S47 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S50	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 04:43
S51	1,861	S50 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S52	2,902	S49 or S51	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S53	476	S52 and cylindrical	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43

S54	21	S52 and cylindrical near2 connect$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 05:05
S55	29	("1506565" | "1885627" | "1954179" | "20040026895" | "20040164515" | "2220528" | "2334387" | "2482585" | "5395130" | "5454578" | "5501480" | "5536027" | "5904363" | "6022042" | "6331013" | "6443467" | "6443469" | "6685206" | "6685207" | "D327240" | "D405031" | "D486425").PN. OR ("7261308").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:10
S56	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:17
S57	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:18
S58	18	("2926880" | "3290050" | "3309101" | "4183580" | "4711489" | "4779883" | "5074616" | "5168601" | "5265931" | "5401076" | "5529325").PN. OR ("5704627").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:21
S59	23	("4542915" | "4854607" | "4986564" | "5033761").PN. OR ("5653460").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:22
S60	31	("2453631" | "2558372" | "4953887" | "5090724" | "5380262" | "5653460" | "5676386").PN. OR ("6155592").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:25

S61	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:27
S62	33	("0279778" | "1033324" | "2453631" | "3643292" | "3849834" | "3879146" | "4132429" | "4335900" | "4606550" | "4856809" | "4902027" | "4953880" | "5176395" | "5188389" | "5263730" | "5299825" | "5318318" | "5344171" | "5356171" | "5364119" | "5536027").PN. OR ("5647601").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:28
S63	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:29
S64	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:33
S65	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 15:09
S66	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:02
S67	1	("6443467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S68	2	("1707186").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S69	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S70	1	("6752405").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:14
S71	1	("8157273").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:14
S72	1	("7896384").PN.	US-PGPUB;	OR	OFF	2012/07/01 16:15

			USPAT; USOCR			
S73	1	("6561526").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:16
S74	1	("5653460").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:17
S75	2,925	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:32
S76	37,571,828	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S77	1,873	S75 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S78	2,516	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:35
S79	35	S78 and S77	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36
S80	1,080	S78 and S76	US-PGPUB; USPAT; USOCR;	OR	ON	2013/02/13 17:36

			FPRS; EPO; JPO; DERWENT			
S81	1	("20050082897").PN. OR ("8246020").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:44
S82	9	("20070085303" | "20080303232" | "20090033066" | "3784252" | "5257799" | "5794951" | "6086086" | "7367581" | "7377537").PN. OR ("8205906").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:52
S83	31	("20010002745" | "20030067138" | "20050099025" | "20060237932" | "20070063474" | "20080067776" | "20090026817" | "2450051" | "4754987" | "5076599" | "5267744" | "5454577" | "5474316" | "5577746" | "5921571" | "5947497" | "5979921" | "6196572" | "6663126" | "6764087" | "6767028" | "6929274" | "6976697" | "7052026" | "7168761" | "7172206" | "7354058" | "7431324" | "7445222" | "7547029").PN. OR ("8262103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:58
S84	22	("20080211206" | "20090014985" | "20090078482" | "3605929" | "4362311" | "4861058" | "5020624" | "5421598" | "5921338" | "6135222" | "6220382" | "6378642" | "6439331" | "6659488" | "6793248" | "7044249" | "7080847" | "7364182" | "7571926" | "7591479" | "7832755").PN. OR ("8336904").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 18:03
S85	1	("8251382").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/14 15:15
S86	34	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" | "7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 15:19

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S87	32	("4836573" | "4892327" | "5028061" | "5069474" | "5257799" | "5460430" | "5887935" | "5921574" | "6099022" | "6523853" | "6594840" | "6739649" | "7281732").PN. OR ("7377537").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 17:50
S88	57	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" | "6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" | "7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 17:52
S89	3,003	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:09
S90	37,602,504	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:09
S91	1,876	S89 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2013/07/16 15:09

			DERWENT			
S92	2,544	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:11
S93	1,082	S92 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:11
S94	51	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20100140902-$ or US-20080303232-$ or US-20070085303-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:10
S95	26	("20060131841" | "20070069505" | "20070210560" | "20080012268" | "20080224450" | "20080224451" | "20090160162" | "20100171289" | "20100201103" | "5947555" | "6045145" | "6270111" | "6331032" | "6715783" | "7032922" | "7367581" | "7475900" | "7677585" | "7753398" | "7775532" | "7798500" | "7938435" | "8061732" | "8128119" | "8157273" | "8205906").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:16

S96	1	("8240700").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/23 15:17
S97	231	("1598778" | "1709527" | "20050012306" | "20050242549" | "20060001226" | "20060131840" | "20060131841" | "20060152059" | "20060157945" | "20060219374" | "20060261576" | "20090127827" | "20090127828" | "20090243260" | "20100038886" | "2616719" | "2783053" | "3112042" | "3168330" | "3227484" | "3390893" | "3459435" | "3504926" | "3556546" | "3561787" | "3653681" | "3799567" | "3989295" | "4007947" | "4023825" | "4046401" | "4111454" | "4126331" | "4191397" | "4232897" | "4248443" | "4317581" | "4322093" | "4335900" | "4362315" | "4365819" | "4378946" | "4412688" | "4415180" | "4513974" | "4542915" | "4564212" | "4591176" | "4602395" | "4606550" | "4610460" | "4632420" | "4632421" | "4660850" | "4706986" | "4733882" | "4741056" | "4741551" | "4763911" | "4763919" | "4768795" | "4770437" | "4805928" | "4807928" | "4817982" | "4819958" | "4832361" | "4856809" | "4886289" | "4892327" | "4906017" | "4907818" | "4924725" | "4930697" | "4953887" | "4968092" | "5028061" | "5056805" | "5074575" | "5087066" | "5110150" | "5143398" | "5181735" | "5184835" | "5201535" | "5205577" | "5205579" | "5238292" | "5244228" | "5246272" | "5257799" | "5362089" | "5388852" | "5398951" | "5417449" | "5417450" | "5427402" | "5431478" | "5437493" | "5441163" | "5454584" | "5460395" | "5460398" | "5472224" | "5478102" | "5489138" | "5511259" | "5511441" | "5524503" | "5527090" | "5605409" | "5622377" | "5645293" | "5649737" | "5664795" | "5669623" | "5669624" | "5669625" | "5676386" | "5718444").PN. OR ("5722682" | "5727798" | "5741021" | "5752738" | "5765855" | "5765856" | "5769447" | "5772235" | "5775718" | "5795091" | "5810432" | "5845666" | "5845924" | "5876057" | "5887935" | "5921571" | "5934757" | "5938229" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:17

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S98	1	("8186705").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/23 16:51
S99	236	("1598778" | "1709527" | "20050012306" | "20050242549" | "20060001226" | "20060131840" | "20060131841" | "20060152059" | "20060157945" | "20060219374" | "20060261576" | "20090127827" | "20090127828" | "20090243260" | "20100171289" | "2616719" | "2783053" | "3112042" | "3168330" | "3227484" | "3390893" | "3459435" | "3504926" | "3556546" | "3561787" | "3653681" | "3784252" | "3799567" | "3989295" | "4007947" | "4023825" | "4046401" | "4111454" | "4126331" | "4191397" | "4232897" | "4248443" | "4317581" | "4322093" | "4335900" | "4362315" | "4365819" | "4378946" | "4412688" | "4415180" | "4513974" | "4542915" | "4564212" | "4591176" | "4602395" | "4606550" | "4610460" | "4632420" | "4632421" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 16:56

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S101	2	("4953667" | "4257729").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:00
S102	1	("6168174").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:04
S103	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:04
S104	1	("6296260").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:18
S105	1	("6203053").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:19
S106	1	("4681330").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:20
S107	1	("5685552").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:21
S108	1	("5984326").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:21
S109	1	("6168174").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/24 13:22
S110	1	("6209892").PN.	US-PGPUB;	OR	OFF	2013/07/24 13:22

			USPAT; USOCR			
S111	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:25
S112	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:26
S113	53	("20030192925" | "20050072821" | "2907372" | "3079162" | "3248125" | "3627342" | "3961803" | "3967833" | "4032173" | "4113306" | "4181356" | "4220351" | "4231587" | "4239259" | "4256325" | "4412688" | "4620711" | "4681340" | "4762256" | "4844504" | "4892327" | "5230523" | "5333769" | "5398951" | "5411729" | "5431478" | "5468009" | "5478096" | "5662339" | "5806924" | "5829826" | "5964470" | "5987665" | "6045145" | "6231056" | "6250654" | "6375213" | "6811178" | "6910696" | "D254610" | "D345720" | "D358058" | "D365925" | "D402235" | "D508443").PN. OR ("7497461").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 16:08
S114	22	("3738600" | "3876046" | "4570956" | "4750783" | "5188389" | "5234224" | "5499831" | "5536027" | "5562300" | "5876046" | "6189914" | "6193263" | "6209892" | "6290290" | "6302412" | "6398233" | "6550802" | "D397316" | "D481975" | "D486427" | "D497844").PN. OR ("D508443").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 16:13
S115	26	("4790548" | "5060967" | "5366274" | "5727848" | "5975225" | "6203054" | "6513827" | "7234722").PN. OR ("7367581").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 18:30
S116	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 18:39
S117	55	("4736959" | "4743063" | "4872692" | "4878680" | "5201535" | "5676386").PN. OR ("5947555").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 10:09
S118	25	("20010040357" | "20020093177" | "20030075903" | "4921261" | "4989888" | "5676386" | "5794951" | "5947555" |	US-PGPUB;	OR	ON	2013/07/25 11:03

		"6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205" | "6641164" | "6702316").PN. OR ("6923467").URPN.	USPAT; USOCR			
S119	25	("4570956" | "4836573" | "4921261" | "4946180" | "5121940" | "5188380" | "5676386" | "5772279" | "5947555" | "6070890" | "6155592" | "6286844" | "6398233" | "6409205" | "6478327" | "D345720").PN. OR ("6641164").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 11:28
S120	2	("3000645").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:26
S121	9	("3000645").URPN.	USPAT	OR	ON	2013/07/25 15:27
S122	29	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:29
S123	1	("8029007").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:30
S124	28	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" | "6540238" | "6557878" | "6698772" | "6827356" | "6893028" | "7159829" | "7290776").PN. OR ("8029007").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:31
S125	1	("6851693").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:34
S126	14	("3887208" | "5064209" | "5067738" | "5269548" | "5421597" | "5470088" | "5513868" | "5785335").PN. OR ("6851693").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:35
S127	6	("2001/0033069").URPN.	USPAT	OR	ON	2013/07/25 15:36

S128	28	("1876963" | "20010033069" | "20020089136" | "20040075230" | "20040173989" | "20060261575" | "20100201089" | "2859975" | "3069182" | "4190261" | "4239248" | "4323258" | "4336952" | "4359231" | "5624128" | "5931244" | "6203053" | "6485039" | "6517092" | "6572130" | "6626446" | "7073822" | "7377527" | "7549655" | "7699325").PN. OR ("8146926").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:37
S129	1	("7249779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:38
S130	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:38
S131	60	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 16:59

		6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$).did. or (US-3000645-$ or US-2453631-$).did.				
S132	7,295,614	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/29 18:38
S133	2,588	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S134	3,082	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S135	1,082	S132 and S133	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:39
S136	1,877	S132 and S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:39
S137	5,616	S133 or S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S138	2,924	S132 and S137	US-PGPUB; USPAT;	OR	ON	2014/01/29 18:41

			USOCR; FPRS; EPO; JPO; DERWENT			
S139	1,012	S138 and stroller	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S140	901	S139 and seat$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S141	757	S140 and (insert$4 or attach$4 or detach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:42
S142	107	S141 and ((double or tandem) same stroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:42
S143	1	("5816367").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 09:23
S144	3	("2006/0290107").URPN.	USPAT	OR	ON	2014/01/30 14:24
S145	78	("20030020259" | "20030227157" | "20060290107" | "20070001429" |	US-PGPUB;	OR	ON	2014/01/30 14:26

		"20070085303" | "20070222167" | "20070296182" | "20080073877" | "20080150247" | "20090039620" | "20100038886" | "20100038887" | "20100072732" | "20100078916" | "20100109292" | "20100140902" | "20100282800" | "20120153583" | "2769482" | "2798733" | "2857953" | "2993702" | "3235279" | "3309101" | "4542915" | "4725071" | "4858947" | "5018754" | "5167425" | "5184835" | "5263730" | "5333893" | "5338096" | "5417449" | "5653460" | "5664795" | "5722682" | "5911432" | "6045145" | "6086087" | "6209892" | "6267406" | "6378892" | "6497424" | "6585284" | "6676140" | "6702316" | "6843498" | "6877761" | "6935652" | "6979017" | "7320471" | "7451999" | "7938433" | "8070179" | "8157273" | "8186705" | "8205894" | "D311363" | "D321850" | "D328047" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D455679" | "D587635" | "D614540" | "D616337" | "D616338" | "D636300").PN. OR ("8371606").URPN.	USPAT; USOCR			
S146	8	("2010/0078916").URPN.	USPAT	OR	ON	2014/01/30 14:27
S147	8	("20070096438" | "20100025968" | "20100078916" | "6422586" | "7401803" | "7441794" | "7632035" | "7766366").PN. OR ("8596669").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 14:27
S148	1	("8157273").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 16:20
S149	18	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:21
S150	1	("5338096").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 16:23
S151	19	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:24

S152	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:17
S153	53	("20030192925" | "20050072821" | "2907372" | "3079162" | "3248125" | "3627342" | "3961803" | "3967833" | "4032173" | "4113306" | "4181356" | "4220351" | "4231587" | "4239259" | "4256325" | "4412688" | "4620711" | "4681340" | "4762256" | "4844504" | "4892327" | "5230523" | "5333769" | "5398951" | "5411729" | "5431478" | "5468009" | "5478096" | "5662339" | "5806924" | "5829826" | "5964470" | "5987665" | "6045145" | "6231056" | "6250654" | "6375213" | "6811178" | "6910696" | "D254610" | "D345720" | "D358058" | "D365925" | "D402235" | "D508443").PN. OR ("7497461").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:56
S154	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 18:00
S155	23	("20010013689" | "20040032103" | "20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243260" | "20090295128" | "4398748" | "4836573" | "6446990" | "6478327" | "6572134" | "7497461" | "7513512" | "7658399" | "7686322" | "7712765" | "7775532" | "7832755" | "7878527" | "7938435").PN. OR ("8231136").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 10:54
S156	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/01/31 12:58
S157	14	("20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243261" | "20120098219" | "4398748" | "4836573" | "6446990" | "6478321" | "6478327" | "6572134" | "7712765").PN. OR ("8458880").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 12:59
S158	1	("7938435").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/31 13:26
S159	34	("4157839" | "5558357" | "5676386" | "5772279" | "5794951" | "5863061" | "5865447" | "5876046" | "5947555" |	US-PGPUB;	OR	ON	2014/02/03 12:41

		"6241274" | "6286844" | "6331032" | "6409205" | "6428034" | "6478327" | "6533309" | "6666473" | "6893040" | "7032922" | "7267359" | "7377537" | "7431395" | "7475900" | "7681894" | "7766366").PN. OR ("7938435").URPN.	USPAT; USOCR			
S160	17	("20050098983" | "2842374" | "6357784" | "7118121" | "7267359" | "7367581" | "7441794" | "7527283").PN. OR ("7766366").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 12:56
S161	105	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:14
S162	52	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:21
S168	1	("20140217706").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 10:03
S169	3,175	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 10:24
S170	7,324,421	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:24
S171	1,878	S169 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25

S172	64	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25
S173	3,686,032	@pd>="20140129"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:56
S174	1	S171 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:56

S175	13	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:57
S176	1	("7,497,461").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:01
S177	94	S169 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 11:08
S178	12	("20070296182" | "20100117315" | "5820144" | "6086086" | "6513827" | "6715783" | "7032922" | "7066542" | "7364183" | "7377537" | "7455362" | "8061732").PN. OR ("8764048").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:25
S179	15	("3797848" | "4832361" | "5074575" | "6116624" | "6446990" | "6508605" | "6530591" | "6824161" | "6830254" | "6851700" | "6951342" | "7021650" | "7273225" | "7401803" | "7513512").PN. OR ("8696016").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:41
S180	1	("7,938,435").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:47
S181	1	("20080231022").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:47
S182	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/09/24 11:48
S183	1	("7,766,366").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:51
S184	1	("6,286,844").PN.	US-PGPUB;	OR	OFF	2014/09/24 11:52

			USPAT; USOCR			
S185	1	("6,513,827").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S186	0	(2006/0131841).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S187	1	("20060131841").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S188	1	("20060001226").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S189	1	("7,320,471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S190	1	("6,045,145").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S191	1	("20080224451").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S192	1	("7,481,439").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:57
S193	1	("7,367,581").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:57
S194	1	("8,029,007").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S195	1	("6,923,467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58

S196	1	("20070090619").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S197	1	("6,851,693").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:59
S198	1	("20010033069").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S199	1	("7,249,779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S200	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:02
S201	2,665	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:02
S202	79	S201 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 12:03
S203	2	S202 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:03
S204	1	("5338096").PN.	US-PGPUB;	OR	OFF	2014/09/24 13:24

			USPAT; USOCR			
S205	1	("20030025304").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S206	1	("20070001429").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S207	1	("20070085303").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S208	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S209	1	("7681894").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:33
S210	14	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 14:33
S211	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:34
S212	41	("7249779" | "3000645" | "7677585" | "7377537" | "20060001226" | "8029007" | "20080231022" | "7766366" | "6443467" | "6561526" | "20080224451" | "6513827" | "7475900" | "7497461" | "20070114738" | "1707186" | "6752405" | "6851693" | "7938435" | "6676140" | "6045145" | "6923467" | "20030025304" | "20070001429" | "5338096" | "6045145" | "20070090619" | "6209892" | "6378892" | "7896384" | "8157273" | "8251382" | "8262103" | "8336904" | "20010033069" | "20060131841" | "7320471" | "7367581" | "7481439" | "6286844").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 14:56
S219	19	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2015/04/20 13:53

			EPO; JPO; DERWENT			
S220	22	("7249779" | "20060001226" | "20080231022" | "7766366" | "8029007" | "20080224451" | "6513827" | "4797461" | "7497461" | "6851693" | "7938435" | "6045145" | "6923467" | "8905427" | "20070090619" | "20010033069" | "20060131841" | "6286844" | "7320471" | "7367581" | "7481439" | "8882134").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 13:58
S221	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:02
S222	68,470,442	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:02
S223	1,214,191	@pd>="20140924"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:03
S224	3,292	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:04
S225	2,741	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:04
S226	5,977	S224 or S225	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S227	2,929	S226 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04

S228	2	S227 and S223	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S229	88	("0119331" | "1138802" | "1269379" | "1707186" | "1890469" | "20040251063" | "20070045975" | "20090115151" | "20090160162" | "20100038887" | "20100140902" | "20110175330" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" | "6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" | "8398143" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("8905427").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:04
S230	84	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:08
S231	796	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S232	666	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR;	OR	ON	2015/04/20 14:12

			FPRS; EPO; JPO			
S233	894	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S234	1,003	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S235	450	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S236	3,236	S230 S231 S232 S233 S234 S235	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S237	2,104	S236 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:13
S238	70	S237 and (seat$3 same revers$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:14
S239	77	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070069505-$ or US-20080231022-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:14

		6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7681894-$ or US-8955869-$ or US-8905427-$).did. or (US-3000645-$ or US-2453631-$).did.				
S240	58	S238 not S239	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:14
S241	1	("8882134").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:15
S242	87	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" |	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:16

		"20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.				
S243	1	("6361111").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S244	1	("20040251063").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S245	1	("6527294").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20
S246	1	("20070045975").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20
S247	27	("20060001226" | "20070045975" | "20080296872" | "20090033066" | "5301970" | "5520433" | "5601302" | "5709400" | "5845924" | "6099022" | "6193263" | "6203054" | "6209892" | "6398233" | "6446990" | "6540250" | "6715783" | "7377537" | "7475900" | "7753398").PN. OR ("8029014").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:30
S249	2,790	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 10:16
S250	3,337	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB;	OR	OFF	2015/12/07 10:16

			USPAT; USOCR			
S251	102	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S252	824	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S253	686	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S254	947	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S255	1,031	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S256	520	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S257	3,385	S251 S252 S253 S254 S255 S256	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S258	1,888,686	@pd>="20150420"	US-PGPUB; USPAT; USOCR;	OR	ON	2015/12/07 10:17

			FPRS; EPO; JPO			
S259	6,070	S249 or S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S260	49	S258 and S249	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S261	93	S258 and S259	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S262	45	S258 and S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S263	44	S262 not S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:18
S264	105	S258 and S257	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S265	94	S264 not S263	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S266	93	S265 not S260	US-PGPUB; USPAT; USOCR;	OR	ON	2015/12/07 10:19

			FPRS; EPO; JPO			
S267	1	("8936261").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S268	64	("20040164593" | "20060261565" | "20070045975" | "20070069505" | "20070187914" | "20080054579" | "20080150247" | "20080179848" | "20080303232" | "20090033066" | "20090102162" | "20090256323" | "20100013281" | "20100102535" | "20100127480" | "20100230933" | "20100244408" | "20100259021" | "20110204600" | "20110291389" | "20110304124" | "20120025492" | "20120153583" | "20120242062" | "20120261961" | "20130113188" | "4872692" | "5018405" | "5676386" | "5722682" | "5947555" | "6513827" | "6530591" | "6581957" | "6851700" | "7032922" | "7267359" | "7377537" | "7401803" | "7681894" | "7686323" | "7753397" | "7753398" | "7789402" | "7798500" | "7938435" | "8029014" | "8033555" | "8157286" | "8205906" | "8240700" | "8251382" | "8322744" | "8366127" | "8454049" | "8465045" | "8469388" | "8474854" | "8480116" | "8485546" | "8544873" | "8550489" | "8596669").PN. OR ("8936261").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S269	18	("1671774" | "1707186" | "20050167951" | "20070194545" | "20100052277" | "20110163519" | "20120118516" | "7032922" | "7871100" | "8157273" | "8251382" | "8585075" | "8651502" | "8727370" | "D686541").PN. OR ("9010773").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 13:12
S270	1	("6,286,844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 18:14
S271	110	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45

S272	855	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S273	694	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S274	989	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S275	1,052	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S276	540	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S277	3,473	S271 S272 S273 S274 S275 S276	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S278	3,353	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 12:46
S279	2,802	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 12:46
S280	279,114	@pd>="20151207"	US-PGPUB; USPAT; USOCR;	OR	ON	2016/02/12 12:47

			FPRS; EPO; JPO			
S28 1	21	S277 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S28 2	16	S278 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S28 3	12	S279 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S28 4	17	S281 not (S282 or S283)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S28 5	2	("20070069504" | "7401803").PN. OR ("9242665").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:16
S28 6	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" | "20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" | "20100038886" | "20100038887" | "20100072731" | "20100140902" | "20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" | "20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" |	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:18

		"7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.				
S287	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 13:19
S288	1	("4343124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:17
S289	1	("4340124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:18
S290	1	("20140361517").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:50
S291	111	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S292	864	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S293	699	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S294	993	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR;	OR	ON	2016/03/25 16:44

			FPRS; EPO; JPO			
S295	1,054	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S296	542	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S297	3,486	S291 S292 S293 S294 S295 S296	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S298	3,358	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S299	2,805	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S300	6,106	S298 or S299	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:45
S301	83,034	@pd>="20160212"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:45
S302	8	S300 and S301	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:59
S303	6	S297 and S301	US-PGPUB; USPAT;	OR	ON	2016/03/25 17:01

			USOCR; FPRS; EPO; JPO			
S304	13	("20080231022" | "20090243261" | "20130113188" | "6513827" | "7267359" | "7377537" | "7798500" | "7938435" | "8061732" | "8733784" | "8764048" | "8777253" | "8955869").PN. OR ("9260128").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:03
S305	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "20140191483" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" | "6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "D326748" | "D431798").PN. OR ("9260127").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:04
S306	1	("20150123440").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:20
S307	1	("8955869").PN.	US-PGPUB;	OR	OFF	2016/03/25 17:22

			USPAT; USOCR			
S308	32	("20010033069" | "20060001226" | "20060131841" | "20070090619" | "20080224451" | "20080231022" | "6045145" | "6286844" | "6513827" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7475900" | "7481439" | "7497461" | "7681894" | "7766366" | "7938435" | "8029007" | "8033554" | "8061732" | "8231136" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048").PN. OR ("8955869").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:22
S309	2	"39773911".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:27
S310	32	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:33
S311	28	("1203729" | "1321009" | "20020036391" | "20050023783" | "20070075525" | "20070216138" | "20070222167" | "20090315300" | "20100072732" | "2769482" | "4923208" | "5338096" | "5417449" | "5664795" | "5722682" | "5740989" | "5887935" | "6045145" | "6378892" | "6676140" | "7011318" | "7445229" | "8282119" | "D587635" | "D614540").PN. OR ("8857830").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:37
S312	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:37
S313	1	"41399621".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:41
S314	6	("2009/0302578").URPN.	USPAT	OR	ON	2016/03/25 17:42
S315	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" | "20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" |	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:43

		"20100038886" | "20100038887" | "20100072731" | "20100140902" | "20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" | "20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" | "7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.				
S316	108	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:54

		5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$).did. or (US-3000645-$ or US-2453631-$).did.				
S317	1	("20090290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:56
S318	1	("20060290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:58
S319	1	("4542915").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 18:07
S320	2	"47750100".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 21:54
S321	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 23:02
S322	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" |	US-PGPUB;	OR	ON	2016/03/25 23:02

		"5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	USPAT; USOCR			
S323	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/28 11:14
S324	0	(A stroller, comprising a stroller frame a plurality of wheels, including front and rear wheels a first seat coupled to the stroller frame at a first vertical position closer to a handle of the stroller frame and configured to hold a first child in the stroller a second seat attachment coupled to the stroller frame at a second vertical position substantially below the first vertical position and closer to the front wheels and comprising a left seat support element, wherein the left seat support element comprises a first connector portion releasably connected to the stroller frame closer to left front wheel and a left seat connector releasably connecting a second seat in either a forward or backward position and a right seat support element, wherein the right seat support element comprises a second connector portion releasably connected to the stroller frame closer to a right front wheel and a right seat connector releasably connecting the second seat in either a forward or backward position between the left and right seat support connectors and the second seat releasably connected to the left seat connector and the right seat connector and configured to hold a second child in the stroller while the first seat holds the first child).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:20
S325	0	(stroller frame wheel seat first vertical position handle child attach$4 coupl$3 left seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:42
S326	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:42

S327	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S328	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S329	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support$4 releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S330	3	(stroller frame wheel seat vertical position handle attach$4 left support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:44
S331	14	(stroller frame wheel seat vertical position handle attach$4 support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:45
S332	15	(stroller frame wheel seat vertical position handle attach$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:46
S333	1	S332 not S331	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:46
S334	18	(stroller frame wheel seat vertical position handle attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:47

S335	3	S334 not S332	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:47
S336	25	(stroller frame wheel seat vertical position$4 attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S337	7	S336 not S334	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S338	1	"41399621".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/28 13:48
S339	1	("20160339940").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/08 16:58
S340	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:22
S341	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:23
S342	5,184,262	@pd>="20160325"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:31
S343	5,004	S340 or S341	US-PGPUB; USPAT; USOCR;	OR	ON	2017/06/08 17:33

			FPRS; EPO; JPO			
S344	254	S342 and S343	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:33
S346	4	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:52
S347	14	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:15
S348	1	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
S349	66	("1707186" | "20010033069" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "3000645" | "4542915" | "5338096" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:35

		"8262103" | "8336904" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128").PN.				
S350	111	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$ or US-20130049331-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:36

		8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$).did. or (US-3000645-$ or US-2453631-$).did.				
S351	4	S349 not S350	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:41
S352	34	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:44
S353	96	("1269379" | "1707186" | "1890469" | "20020158444" | "20040251063" | "20070045975" | "20080122200" | "20080224451" | "20090115151" | "20090160162" | "20090289440" | "20100038887" | "20100140902" | "20110175330" | "20140265258" | "3053493" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5522121" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" | "6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" | "8220822" | "8282120" | "8297642" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:46

		"8398143" | "8905427" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("9517787").URPN.				
S354	8	"48223173".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 09:47
S355	10	("2013/0113185").URPN.	USPAT	OR	ON	2017/06/12 09:48
S356	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:52
S357	22	("1707186").URPN.	USPAT	OR	ON	2017/06/12 09:53
S358	0	S350 and (cover$4 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:56
S359	0	S350 and (cover$4 same2 door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:00
S360	17	S350 and (cover$4 same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:00
S361	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:08
S362	56	("4836573" | "4892327" | "5028061" | "5069474" | "5257799" | "5460430" |	US-PGPUB;	OR	ON	2017/06/12 10:08

		"5887935" | "5921574" | "6099022" | "6523853" | "6594840" | "6739649" | "7281732").PN. OR ("7377537").URPN.	USPAT; USOCR			
S363	3	S349 and door	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:13
S364	1	("9517787").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:19
S365	1	("9517789").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S366	1	("9561817").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S367	1	("9493179").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:21
S368	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S369	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S370	5,004	S368 or S369	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S371	23	S370 and (cover$4 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22

S372	5	S370 and (cavit$3 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:23
S373	35	("2917316" | "2993702" | "3110504" | "3248125" | "3309101" | "5579556" | "5622375" | "5664795" | "5725238" | "6086087" | "6276759" | "6312005" | "D319493" | "D444738" | "D450265").PN. OR ("6447001").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:23
S374	40	S370 and (cavit$3 same cover$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:24
S375	1	("5522121").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:28
S376	25	("0461069" | "1318850" | "1352647" | "1688148" | "1707186" | "4805938").PN. OR ("5522121").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:29
S377	1	("6449801").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:29
S378	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:30
S379	2	"38052732".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 10:30
S380	41	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" | "6540238" | "6557878" | "6698772" | "6827356" | "6893028" | "7159829" | "7290776").PN. OR ("8029007").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:30

S381	13	("20040164510" | "20070090619" | "20120098237" | "20130234419" | "20130264787" | "20160001805" | "3061328" | "5622375" | "6422634" | "6530591" | "7004272" | "8029007").PN. OR ("9545941").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:31
S382	91	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:33
S383	42	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:46
S384	15	("20050242548" | "20070052271" | "4518139" | "4681340" | "6022077" | "6536842").PN. OR ("7364183").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:49
S385	1	("6286844").PN.	US-PGPUB;	OR	OFF	2017/06/12 12:09

			USPAT; USOCR			
S386	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:13
S387	91	("0706448" | "1480451" | "1508500" | "1952467" | "20010013689" | "20040212161" | "20060085953" | "20070085302" | "20070120404" | "20090029784" | "20090181780" | "20110278810" | "20120023662" | "20120060326" | "20120235450" | "20130334781" | "20140042729" | "20150008659" | "20150042056" | "20150042076" | "20150175189" | "2708585" | "2961248" | "3564626" | "4476649" | "5099528" | "5201535" | "5562548" | "5676386" | "5772279" | "5846136" | "5947555" | "5987665" | "5988670" | "6250654" | "6286844" | "6471597" | "6671926" | "6872146" | "6893040" | "7037205" | "7100724" | "7354352" | "7377537" | "7445559" | "7475942" | "7497461" | "7607734" | "7681894" | "7686323" | "7694996" | "7766366" | "7905791" | "7938435" | "8029014" | "8251382" | "8292750" | "8550556" | "8672341" | "8746794" | "8851505" | "8944927" | "8955869" | "9085312" | "D156930" | "D371094" | "D377466" | "D408768" | "D442895" | "D452195" | "D475951" | "D481976" | "D498713" | "D498714" | "D519063" | "D604055" | "D622640" | "D623429" | "D667229" | "D682562" | "D684789" | "D687352" | "D743304").PN. OR ("9421992").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16

S388	20	("20010040357" | "20080106070" | "20100127480" | "20110181026" | "20160144879" | "5257799" | "5645293" | "6102432" | "6312005" | "7281732" | "7641216" | "8141895" | "8240698" | "8585075" | "8696015" | "8696016" | "8998241" | "9050993" | "9421991" | "9540028").PN. OR ("9637155").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16
S389	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:21
S390	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:54
S391	28	("20030015895" | "20090066130" | "20090295207" | "4306749" | "4750783" | "5385387" | "5478135" | "5562548" | "5586351" | "5997098" | "6017088" | "6170911" | "6299249" | "6331032" | "6336682" | "6347832" | "6428099" | "6428100" | "6443522" | "6554358" | "6705676" | "6793280" | "6921359" | "6979057" | "7090294").PN. OR ("8678498").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:55
S392	54	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" | "7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" | "7694996" | "7712765" | "7753398").PN. OR ("8251382").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:08
S393	15	("20080231022" | "5773379" | "5947555" | "6286844" | "6893040" | "7032922" | "7267359" | "7475900" | "7658399" | "7681894" | "7766366" | "7938435" | "8033555" | "D621306").PN. OR ("8851505").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:09
S394	58	("20010013689" | "20050264062" | "20060214397" | "20070257458" | "20070296182" | "20080136127" | "20080231023" | "20100219616" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:09

		"20100230933" | "20120025492" | "4834403" | "5028061" | "5201535" | "5203577" | "5257799" | "5277472" | "5364137" | "5564778" | "5567008" | "5676386" | "5772279" | "5794951" | "5947555" | "6086086" | "6089653" | "6286844" | "6318807" | "6446990" | "6572134" | "6595583" | "6793280" | "6802514" | "6863286" | "6942294" | "6983986" | "7032922" | "7070197" | "7207628" | "7370913" | "7377537" | "7681894" | "7686322" | "7694996" | "7753398" | "8029014" | "8070228" | "8172253" | "8282120" | "8382150").PN. OR ("8651502").URPN.				
S395	76	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:12
S396	49	("4915401" | "5133567" | "5277472" | "5564778" | "5644816" | "5676386" | "5772279").PN. OR ("5865447").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:13
S397	88	("0763771" | "0921361" | "1167525" | "2509972" | "2982562" | "3029087" | "3083997" | "3596986" | "4306749" | "4345791" | "4371206" | "4385769" | "4501032" | "4545613" | "4634177" | "4664396" | "4733909" | "4861105" | "4915446" | "4943113" | "4984813" | "4998307" | "5052750" | "5058283" | "5203577" | "5277472" | "5385387" | "D294777" | "D305583" | "D322001" | "D325132").PN. OR ("5567008").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:14
S398	92	("2982562" | "3100651" | "3290050" | "3330575" | "3784252" | "4072318" | "4378946" | "4412688" | "4428598" | "4478427" | "4606550" | "4762364" | "4815764" | "5004253" | "5074575").PN. OR ("5201535").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:16
S399	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23

		"4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.				
S400	82	S397 not S399	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23
S401	20	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:28
S402	59	("20020175498" | "20020195797" | "20030111825" | "20040046364" | "20050098982" | "20060071452" | "20060237949" | "5772235" | "5823564" | "7032922").PN. OR ("7267359").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:30
S403	1	("5201535").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:32
S404	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:47
S405	3,477	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S406	2,369	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S407	5,040	S405 or S406	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13

S408	1,329,175	@pd>="20170608"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S409	44	S407 and S408	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S410	3	"37808038".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/11/13 17:27
S423	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 10:50
S424	39	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 10:51
S425	8	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S426	18	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S427	3	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	2019/04/15 10:52

			JPO; DERWENT			
S428	151	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$ or US-3000645-$).did. or (US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$ or US-8733784-$).did. or (US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 11:03

		8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$ or US-9260127-$).did. or (US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$ or US-8851505-$).did. or (US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S429	55	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:25
S430	3	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2019/04/15 12:25
S431	80	("1707186" | "20010033069" | "20020109321" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:26

		"6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN. OR ("9944305").URPN.				
S432	3,809	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S433	2,627	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S434	5,496	S432 or S433	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S435	7,949,590	@pd>="20171113"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S436	308	S434 and S435	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:30

S437	2	("20100140902" | "20140333039").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:52
S438	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:54
S439	7	S438 not S428	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:55
S440	11	("20060214395" | "20070085303" | "20090302578" | "4763911" | "5356172" | "5395154" | "5593173" | "6431647").PN. OR ("8596670").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:58
S441	12	("2007/0085303").URPN.	USPAT	OR	ON	2019/04/15 13:05
S443	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 14:37
S444	1	("7377537").PN.	US-PGPUB;	OR	OFF	2019/04/15 14:47

			USPAT; USOCR			
S445	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:08
S446	1	("7481439").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:09
S447	21	("4222132" | "4805938" | "4969656" | "5064209" | "5653460" | "5887935" | "5918892" | "6155592" | "6523840" | "6527294" | "6752405" | "D360392").PN. OR ("7481439").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10
S448	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10
S449	28	("1707186" | "4222132" | "4288089" | "4354689" | "4805938" | "4969656" | "5064209" | "5076599" | "5522121" |	US-PGPUB;	OR	ON	2019/04/28 23:13

		"5653460" | "5918892" | "6086087" | "6527294" | "6752405").PN. OR ("6938906").URPN.	USPAT; USOCR			
S450	56	("20030080536" | "20040075229" | "20040124611" | "20040173997" | "20050127640" | "20050242549" | "20090295128" | "20100038886" | "20100230933" | "4697823" | "4846494" | "4921261" | "4946180" | "5121940" | "5338096" | "5454575" | "5624152" | "5669623" | "5687984" | "5752738" | "6189914" | "6193263" | "6209892" | "6267406" | "6409205" | "6478327" | "6702316" | "6938906" | "6964429" | "6981709" | "7017937" | "7040694" | "7284797" | "7445230" | "7513512" | "7614640" | "7770911" | "8087680" | "8100429" | "8186705" | "8186706" | "8205894" | "8282119" | "8328208" | "8388016" | "8398098" | "8414012" | "D344474" | "D345128" | "D352923" | "D430076" | "D452192" | "D455679" | "D510549" | "D593459").PN. OR ("8641077").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:14
S451	32	("6896286" | "D369992" | "D519422" | "D558099" | "D566013" | "D578045" | "D579827").PN. OR ("D593459").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:15
S452	66	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" | "6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" | "7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:18

S453	1	("D593459").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:25
S454	3,861	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S455	2,688	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S456	5,586	S454 or S455	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S457	969,007	@pd>="20190415"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:57
S458	58	S456 and S457	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:59
S459	27	("20040189076" | "20050029855" | "20110175306" | "20170247044" | "20170361861" | "4577355" | "5240265" | "5246272" | "5669625" | "5681084" | "5749627" | "5806877" | "6322097" | "6530591" | "6676140" | "6830254" | "6951342" | "8070180" | "8172322" | "8596670" | "8616638" | "8690250" | "8899615" | "8991929" | "9227650" | "9868456" | "D811949").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/08/23 01:02
S460	167	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-	US-PGPUB; USPAT; USOCR	OR	ON	2019/08/23 01:02

		$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-				

		9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S461	22	S459 not S460	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 01:02
S462	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/08/23 01:04
S464	4,053	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S465	2,834	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S466	5,847	S464 or S465	US-PGPUB;	OR	ON	2020/02/28 20:49

			USPAT; USOCR; FPRS; EPO; JPO			
S467	1,751,101	@pd>="20190823"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S468	97	S466 and S467	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S469	97	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20120181779" | "20130154215" | "20140191483" | "20150021872" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" | "6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "9260127" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 21:03

		"D326748" | "D431798").PN. OR ("10556610").URPN.				
S470	21	("20100140902" | "20130087993" | "20130154241" | "20150159414" | "20160046315" | "7789402" | "7832755" | "8033554" | "8231136" | "8602441" | "8905427" | "8955869" | "8967647" | "9050987" | "9399477" | "9403550" | "9493179" | "9517787" | "9616912" | "9637154" | "D747669").PN. OR ("10449987").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 22:17
S471	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/02/28 22:19
S472	7,365,969	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:01
S473	172	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:02

		2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-				

		10556611-$ or US-10556610-$ or US-10449987-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S474	94	S472 and S473	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/03/01 23:02
S475	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS; JPO	OR	ON	2020/03/01 23:04
S476	16	("2010/0072732").URPN.	USPAT	OR	ON	2020/03/01 23:07
S484	1	("10730543").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:15
S485	0	("202000223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S486	1	("20200223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S487	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:19
S488	4,211	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S489	2,957	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24

S490	6,047	S488 or S489	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S491	1,552,888	@pd>="20200228"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S492	69	S490 and S491	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:34
S493	98	("10023218" | "10207731" | "10293843" | "10449987" | "10556610" | "1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20100140902" | "20140191483" | "20140333039" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652" | "9840168" | "9849903" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:43

		"9884640" | "9924806" | "9944305" | "9956979" | "D593459").PN. OR ("10730543").URPN.				
S494	45	(Baby near2 Jogger).AS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:47
S495	173	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:56

		6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-10556611-$ or US-10556610-$ or US-10449987-$ or US-10730543-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S496	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" |	US-PGPUB;	OR	ON	2020/09/10 14:57

		"20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	USPAT; USOCR			
S497	4	S496 not S495	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:58
S499	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 21:06

		"8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.				
S500	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:39
S501	10	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:43
S502	25	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:56
S503	5	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/11 00:00
S504	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/15 15:29

S505	1	("9260127").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/15 23:58
S506	4,378	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:36
S507	3,086	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:36
S508	6,262	S506 or S507	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:36
S509	2,515,828	@pd>="20200910"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:47
S510	120	S508 and S509	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/04/11 23:48
S511	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2021/04/22 11:33
S512	1	("10730543").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2021/04/22 12:44

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp

		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51

		second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51

L6	37	(stroller frame wheel seat attach$4 adapt$4 remov$4).CLM.	US-PGPUB; USPAT	AND	ON	2021/07/02 20:50
L7	37	(stroller frame wheel seat attach$4 adapt$4 remov$4).CLM.	US-PGPUB; USPAT	AND	ON	2021/07/02 20:50
L8	0	l6 not L7	US-PGPUB; USPAT	AND	ON	2021/07/02 20:50
S163	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.	US-PGPUB; USPAT	AND	ON	2014/02/03 17:17
S164	0	(seat attachment stroller separate left right attachment portion connector portion removably connecting frame adjacent front wheel seat support element removably connecting seat forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:35
S165	0	(seat attach$4 stroller separate left right portion connect$4 remov$4 frame adjacent front wheel support$4 element forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S166	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S167	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:47
S213	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26

		right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.				
S214	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S215	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S216	19	(seat$3 attach$4 stroller left right connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29
S217	68	(seat$3 attach$4 stroller connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29
S218	5	("20020036391" | "20070069505" | "20070187914" | "4753453" | "4779883").PN. OR ("8033554").URPN.	US-PGPUB; USPAT	OR	ON	2014/09/24 14:32
S248	4	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2015/04/20 14:14
S411	0	(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
S412	0	(stroller frame wheel seat attachment housing first adapter receiving cavity extending through housing first door rotatably coupled to housing closed configuration preventing access to cavity from top side open configuration allowing access to cavity first removable seat attachment adapter removably coupled to housing and second removable seat attachment adapter removably coupled to housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:55
S413	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity extend$4 door rotat$4 closed configuration prevent$4 access$4 open configuration allow$4 access).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:56
S414	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity door rotat$4 closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:21
S415	1	(stroller wheel seat attach$4 hous$4 cavity door closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S416	1	(stroller wheel seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S417	1	(stroller seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:23
S418	1	(stroller seat$3 attach$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S419	1	(stroller seat$3 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S420	3	(stroller seat$3 door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24

S421	2	(stroller seat$3 cavit$3 clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S422	21	(stroller seat$3 cavit$3 clos$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S442	5	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/04/15 11:03
S463	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/08/23 01:02
S477	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/03/01 23:02
S478	0	(A stroller, comprising a stroller frame comprising a first upper tube support frame a second upper tube support frame a first front wheel support frame rotatable with respect to the first upper tube support frame a second front wheel support frame rotatable with respect to the second upper tube support frame a first back wheel support frame rotatable with respect to the first upper tube support frame a second back wheel support frame rotatable with respect to the second upper tube support frame a plurality of wheels comprising at least one front wheel and a plurality of back wheels a first seat coupled to the stroller frame at a first vertical position of the stroller frame a first seat attachment housing disposed along the first front wheel support frame a first seat attachment adapter removably coupled to the first seat attachment housing stroller frame at a second vertical position of the stroller frame that is below the first vertical position a second seat attachment housing disposed along the second front wheel support frame a second seat attachment adapter removably coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:05

S479	1	(stroller frame wheel first seat first vertical position attachment housing adapter removably coupled below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:07
S480	1	(stroller frame wheel seat vertical position attach$4 hous$4 adapt$4 remov$4 coupl$4 below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S481	4	(stroller frame wheel seat attach$4 hous$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S482	11	(stroller frame wheel seat attach$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:11
S483	33	(stroller frame wheel seat attach$4 adapt$4 remov$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:12
S498	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/09/10 14:56

7/2/2021 8:55:19 PM
C:\Users\jdolak\Documents\EAST\Workspaces\16832429_updatedparent.wsp

To: patentdocket@eversheds-sutherland.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 134811

Aug 18, 2021 03:36:42 AM

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999 Peachtree Street
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Atlanta, GA 30309
UNITED STATES

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Application	Document	Mailroom Date	Attorney Docket No.
16832429	NOA	08/18/2021	34757-2430
	892	08/18/2021	34757-2430

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Monday - Friday 6:00 a.m. to 12:00 a.m.

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UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Jon Hee Lee, et al.	)	Confirmation No.: **8948**
	)	
Application No.: **16/832,429**	)	Art Unit: **3618**
	)	
Filed: **March 27, 2020**	)	Examiner: **James M. Dolak**
	)	
For: **Removable Seat Attachment for a Stroller**	)	Attorney Docket No.: **34757-2430**
	)	

COMMENTS ON EXAMINER'S REASONS FOR ALLOWANCE

Via EFS-Web
Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Examiner:

Responsive to the Notice of Allowance mailed on **July 26, 2021** and the Examiner's Amendment/Comment (the "Examiner's Response to Amendment"), Applicant submits the following remarks. The Examiner's Statement emphasizes that certain claim elements as not being disclosed in the cited art. However, such statements should not be construed as identifying the only possible novel and non-obvious features of the Applicant's claimed subject matter. Applicant respectfully asserts that the allowed claims may be considered novel and non-obvious over the cited art references for reasons other than those emphasized in the Examiner's statement of reasons for allowance.

Further, while Applicant believes that the claims are allowable, Applicant does not acquiesce that patentability resides in each feature, exactly as expressed in the claims, nor that each feature is required for patentability.

Respectfully submitted,

/Christopher J. Chan/
Christopher J. Chan
Attorney for Assignee
Registration No. 44,070

Date: **November 2, 2021**
EVERSHEDS SUTHERLAND (US) LLP
999 Peachtree Street, NE; Suite 2300
Atlanta, GA 30309-3996
Telephone: (404) 853-8049
Facsimile: (404) 853-8806

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

134811 7590 08/18/2021
Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

TITLE OF INVENTION: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	11/18/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
DOLAK, JAMES M	3618	280-047350

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Eversheds Sutherland (US) LLP
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: BABY JOGGER, LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Richmond, VA

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ☑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ☑ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

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☑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 195029

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Christopher J. Chan/ Date November 2, 2021

Typed or printed name Christopher J. Chan Registration No. 44,070

Electronic Patent Application Fee Transmittal

Application Number:	16832429
Filing Date:	27-Mar-2020
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Filer:	Christopher Chan/Tiffany Jessup
Attorney Docket Number:	34757-2430

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1200**

Electronic Acknowledgement Receipt

EFS ID:	44188518
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	Christopher Chan/Tiffany Jessup
Filer Authorized By:	Christopher Chan
Attorney Docket Number:	34757-2430
Receipt Date:	02-NOV-2021
Filing Date:	27-MAR-2020
Time Stamp:	21:19:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1200
RAM confirmation Number	E2021A2L20314515
Deposit Account	195029
Authorized User	Tiffany Jessup
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.20 (Post Issuance fees) 37 CFR 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Post Allowance Communication - Incoming	34757-2430_CERA.pdf	20326 cfd28151bb7fc377099033832dd02545a8f05bc3	no	1
Warnings:					
Information:					
2	Issue Fee Payment (PTO-85B)	34757-2430_IF-Transmittal.pdf	119839 7ce6d72a33944b40665741b632ff1ec1ee97a30e	no	1
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	37882 0ba6f844f3714c4c136ac18eebeef5a11d39f1e8	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	178047		

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	12/07/2021	11192568	34757-2430	8948

134811 7590 11/17/2021

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

BABY JOGGER, LLC, Richmond, VA;

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To: patentdocket@eversheds-sutherland.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 134811

Nov 19, 2021 05:00:10 AM

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Application	Document	Mailroom Date	Attorney Docket No.
16832429	ISSUE.NTF	11/17/2021	34757-2430

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