

CHILD TRAVEL SYSTEM

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Application No. 63/580,768, filed on September 6, 2023 and U.S. Application No. 63/685,855, filed on August 22, 2024, which is incorporated herein by reference in its entirety.

TECHNICAL FIELD

[0001] The present disclosure relates to travel systems for transporting children, and more particularly, to a travel system that can accommodate a growing child.

BACKGROUND

[0002] Child travel systems include a child seat connected to a carriage (also referred to as a stroller). The stroller includes a frame that has a mount or connection portion for connecting the child seat to the frame. The child seat can receive a child within, and a caregiver can transport the child using the travel system. Depending on the configuration of the child seat, the child seat can support either an infant or a toddler.

[0003] The foregoing background discussion is intended solely to aid the reader. It is not intended to limit the innovations described herein. Thus, the foregoing discussion should not be taken to indicate that any particular element of a prior system is unsuitable for use with the innovations described herein, nor is it intended to indicate that any element is essential in implementing the innovations described herein.

SUMMARY

[0004] According to an embodiment, a travel system includes a stroller frame having at least one seat connection hub, at least one wheel, and a handle frame. The handle frame is movable between a use position and a storage position. An infant car seat is detachably connectable to the at least one seat connection hub. When the handle frame is in the storage position, the handle frame is positioned between the at least one seat connection hub and the at least one wheel.

[0005] In addition to one or more of the features described above, or as an alternative, in further embodiments the handle frame includes an upper portion and a lower portion. The upper portion is pivotally coupled to the lower portion about a hinge axis.

[0006] In addition to one or more of the features described above, or as an alternative, in further embodiments when the handle frame is in the use position, the upper portion is coplanar with the lower portion and when the handle frame is in the storage position, the upper portion is folded about the hinge axis relative to the lower portion.

[0007] In addition to one or more of the features described above, or as an alternative, in further embodiments in the storage position, the upper portion is parallel to the lower portion.

[0008] In addition to one or more of the features described above, or as an alternative, in further embodiments the stroller frame is transformable between an expanded configuration and a collapsed configuration. The handle is in the storage position in both the expanded configuration and the collapsed configuration.

[0009] In addition to one or more of the features described above, or as an alternative, in further embodiments when the stroller frame is in the expanded configuration, the handle frame is in the use position and when the stroller frame is in the collapsed configuration, the handle frame is in the storage position.

[0010] In addition to one or more of the features described above, or as an alternative, in further embodiments the stroller frame stands upright when in the collapsed configuration.

[0011] In addition to one or more of the features described above, or as an alternative, in further embodiments a front leg frame is pivotally coupled to a rear leg frame. When the stroller frame is in the expanded configuration, the front leg frame is spaced away from the rear leg frame. When the stroller frame is in the collapsed configuration, the front leg frame is adjacent to the rear leg frame.

[0012] In addition to one or more of the features described above, or as an alternative, in further embodiments the stroller frame is further transformable to a luggage configuration and the handle frame is in the storage position when the stroller frame is in the luggage configuration.

[0013] In addition to one or more of the features described above, or as an alternative, in further embodiments when the stroller frame is in the luggage configuration, the front leg frame is spaced away from the rear leg frame.

[0014] In addition to one or more of the features described above, or as an alternative, in further embodiments the stroller frame includes a wheel rotation lock. The wheel rotation lock is transitionable between a locked position, in which the at least one

wheel is prevented from rotation about a vertical axis, and an unlocked position, in which the at least one wheel is free to rotate about the vertical axis.

[0015] In addition to one or more of the features described above, or as an alternative, in further embodiments the stroller frame is transformable between an expanded configuration and a luggage configuration. When the stroller frame is in the expanded configuration, the wheel rotation lock is in the locked position and when the stroller frame is in the luggage configuration, the wheel rotation lock is in the unlocked position.

[0016] In addition to one or more of the features described above, or as an alternative, in further embodiments an actuator is operably coupled to the wheel rotation lock to transform the wheel rotation lock between the locked position and the unlocked position. The handle frame is the actuator.

[0017] In addition to one or more of the features described above, or as an alternative, in further embodiments rotation of the handle frame is operable to transform the wheel rotation lock between the locked position and the unlocked position.

[0018] According to an embodiment, a travel system includes a stroller frame, a first child seat detachably connectable to the stroller frame, a second child seat detachably connectable to the stroller frame, and a third child seat detachably connectable to the stroller frame. The first child seat is configured to support a first child having a first size range, the second child seat is configured to support a second child having a second size range, and the third child seat is configured to support a third child having a third size range. The first size range, the second size range, and the third size range are different from one another.

[0019] In addition to one or more of the features described above, or as an alternative, in further embodiments the first child seat is an infant car seat.

[0020] In addition to one or more of the features described above, or as an alternative, in further embodiments the second child seat is a toddler car seat.

[0021] In addition to one or more of the features described above, or as an alternative, in further embodiments the second child seat can be connected to the stroller frame in a forward-facing mode and a rearward facing mode.

[0022] In addition to one or more of the features described above, or as an alternative, in further embodiments the stroller frame is foldable when the second child seat is connected to the stroller frame.

[0023] In addition to one or more of the features described above, or as an alternative, in further embodiments the third child seat is a toddler seat, and the third size range is larger than the second size range.

[0024] In addition to one or more of the features described above, or as an alternative, in further embodiments the stroller frame includes at least one seat connection hub. The at least one seat connection hub is detachably connectable to at least one of the first child seat, the second child seat, and the third child seat.

[0025] In addition to one or more of the features described above, or as an alternative, in further embodiments the at least one seat connection hub is configured to removably couple to a rigid portion of the at least one of the first child seat, the second child seat, and the third child seat.

[0026] In addition to one or more of the features described above, or as an alternative, in further embodiments the at least one seat connection hub includes a first pair of seat connection hubs positioned about the stroller frame.

[0027] In addition to one or more of the features described above, or as an alternative, in further embodiments the first pair of seat connection hubs is detachably connectable to only the first child seat.

[0028] In addition to one or more of the features described above, or as an alternative, in further embodiments the stroller frame includes a second pair of seat connection hubs. The second pair of seat connection hubs is detachably connectable to at least one of the first child seat, the second child seat, and the third child seat.

[0029] In addition to one or more of the features described above, or as an alternative, in further embodiments the second pair of seat connection hubs are longitudinally offset from the first pair of seat connection hubs.

[0030] In addition to one or more of the features described above, or as an alternative, in further embodiments the second pair of seat connection hubs are bayonets.

[0031] In addition to one or more of the features described above, or as an alternative, in further embodiments the at least one seat connection hub includes a receiving feature and the at least one of the first child seat, the second child seat, and the third child seat includes an engagement feature receivable within the receiving feature to removably couple the at least one of the first child seat, the second child seat, and the third child seat to the stroller frame.

[0032] This summary is provided to introduce a selection of concepts in a simplified form. This Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter. Furthermore, the claimed subject matter is not constrained to limitations that solve any or all disadvantages noted in any part of this disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0033] The following descriptions should not be considered limiting in any way.

With reference to the accompanying drawings, like elements are numbered alike:

[0034] FIG. 1A is a perspective view of a stroller frame of a child travel system in an expanded configuration according to an embodiment;

[0035] FIG. 1B is a side view of the stroller frame of FIG. 1A according to an embodiment;

[0036] FIG. 2 is a perspective view of the stroller frame of FIGS. 1A and 1B in a collapsed configuration according to an embodiment;

[0037] FIG. 3 is a perspective view of a first child seat attached to a stroller frame according to an embodiment;

[0038] FIG. 4 is a detailed perspective view of at least one seat connection hub of a stroller frame according to an embodiment;

[0039] FIG. 5A is a side view of a stroller frame having a first child seat connected thereto according to an embodiment;

[0040] FIG. 5B is a cross-sectional view of the interface between the first child seat and the stroller frame of FIG. 5A according to an embodiment;

[0041] FIG. 6 is a detailed perspective view of another seat connection hub of a stroller frame according to an embodiment;

[0042] FIG. 7A is a side view of a stroller frame having a first child seat connected thereto according to an embodiment;

[0043] FIG. 7B is a cross-sectional view of the interface between the first child seat and the stroller frame of FIG. 7A according to an embodiment;

[0044] FIG. 8A is a perspective view of a second child seat attached to a stroller frame in a forward-facing position according to an embodiment;

[0045] FIG. 8B is a perspective view of a second child seat attached to a stroller frame in a rearward facing position according to an embodiment;

[0046] FIG. 9 is a perspective view of a second child seat attached to a stroller frame in a forward-facing position when the stroller frame is in a collapsed configuration according to an embodiment;

[0047] FIG. 10 is a perspective view of a third child seat attached to a stroller frame in a forward-facing position according to an embodiment;

[0048] FIG. 11 is a perspective view of a first child seat attached to a stroller frame when the stroller frame is in a luggage configuration according to an embodiment;

[0049] FIG. 12A is a side view of a stroller frame in an expanded configuration according to an embodiment;

[0050] FIG. 12B is a detailed view of a wheel rotation lock of the stroller frame of FIG. 12A according to an embodiment;

[0051] FIG. 13A is a side view of a stroller frame as the handle frame is rotated from a use position to a storage position according to an embodiment; and

[0052] FIG. 13B is a detailed view of a wheel rotation lock of the stroller frame of FIG. 13A according to an embodiment.

DESCRIPTION

[0053] The disclosure relates to a travel system that can accommodate a growing child. The system includes a stroller frame that can connect with various sized child seats. The stroller can receive an infant car seat, a first toddler seat, and a second toddler seat. The travel system can be used to transport a child as they grow from an infant to a toddler.

[0054] With reference now to FIG. 1, an example of a stroller frame 20 of a child travel system 10 is illustrated. As shown, the stroller frame 20 may have a handle frame 22, a front leg frame 24, and a rear leg frame 26. Each of the handle frame 22, front leg frame 24, and rear leg frame 26 may have a generally symmetrical construction including two parallel side segments disposed, respectively, at a left side and a right side of the child travel system 10. For example, the handle frame 22 includes a first handle side segment 28a arranged at the left side of the stroller frame 20 and a second handle side segment 28b arranged at the right side of the stroller frame 20. The front leg frame 24 may include a first front leg side segment 30a arranged at the left side of the stroller frame 20 and a second front leg side segment 30b arranged at the right side of the stroller frame 20. Similarly, the rear leg frame 26 may include a first rear leg side segment 32a arranged at the left side of the stroller frame 20 and a second rear leg side segment 32b arranged at the right side of the stroller frame 20.

[0055] A first front wheel 34a may be attached to an end of the first front leg side segment 30a, and a second front wheel 34b may be connected to an end of the second front leg side segment 30b. Similarly, a first rear wheel 36a may be attached to an end of the first rear leg side segment 32a, and a second rear wheel 36b may be connected to an end of the second rear leg side segment 32b. Each of the plurality of wheels 34a, 34b, 36a, 36b is rotatable about a horizontally oriented axis to move the stroller frame 20. At least one of the plurality of wheels 34a, 34b, 36a, 36b may also be rotatable about a vertically oriented axis such that the wheel is movable in a manner similar to a castor. In an embodiment, each of the

plurality of wheels 34a, 34b, 36a, 36b is rotatable about a horizontal axis and vertical axis. However, in other embodiments, less than all of the wheels 34a, 34b, 36a, 36b of the stroller frame 20, such as just the front wheels 34a, 34b or just the back wheels 36a, 36b for example, may be rotatable about both a horizontal and vertical axis. In some embodiments, as will be described in more detail below, each of the plurality of wheels 34a, 34b, 36a, 36b is rotatable about a horizontal axis and vertical axis; however, rotation of at least one of the wheels 34a, 34b, 36a, 36b about a respective vertical axis, such as the rear wheels 36a, 36b for example, may be selectively restricted such as by a locking mechanism.

[0056] The respective parallel side segments 28a, 28b, 30a, 30b, 32a, 32b of one or more of the handle frame 22, front leg frame 24, and rear leg frame 26 may be interconnected. A handle cross-member 38 may extend between and couple the first handle side segment 28a and the second handle side segment 28b. In the illustrated, non-limiting embodiment, the handle cross-member 38 is arranged at a distal end of the handle side segments 28a, 28b. Further, the handle cross-member 38 may be integrally formed with the handle side segments 28a, 28b such that the handle frame 22 has a generally U-shaped configuration. A front leg cross-member 40 may extend between and connect to the first front leg side segment 30a and the second front leg side segment 30b. As shown in FIG. 1, the front leg cross-member 40 may be arranged near a distal end of the first and second front leg side segments 30a, 30b. Alternatively, or in addition, a rear leg cross-member 42 may extend between and couple the first rear leg side segment 32a to the second rear leg side segment 32b. The rear leg cross-member 42 may be arranged at a distal end thereof. In an embodiment, the front leg cross-member 40 and the rear leg cross-member 42 are arranged within the same horizontal plane. However, embodiments where one of the leg cross-members 40, 42 is vertically offset from the other are also contemplated herein. Although the front and rear leg cross-members 40, 42 are illustrated as having a substantially linear configuration and being oriented substantially perpendicular to the opposing leg side segments 30a, 30b, 32a, 32b, embodiments where one or more of the front and rear leg cross-members 40, 42 is oriented at another angle relative to one or more leg side segments 30a, 30b, 32a, 32b or has another configuration, such as a curved or curvilinear configuration are also within the scope of the disclosure.

[0057] The first handle side segment 28a, the first front leg side segment 30a, and the first rear leg side segment 32a may be joined together at a first joint structure 44a. The second handle side segment 28b, the second front leg side segment 30b, and the second rear

leg side segment 32b may be joined together at a second joint structure 44b. The first and second joint structures 44a, 44b may be similar or substantially identical to one another.

[0058] The joint structures 44a, 44b, in combination, allow relative rotation between the handle frame 22, the front leg frame 24, and the rear leg frame 26. In an embodiment, each of the handle frame 22, the front leg frame 24, and the rear leg frame 26 are rotatable relative to the joint structures 44a, 44b. However, in other embodiments, only some of the handle frame 22, the front leg frame 24, and the rear leg frame 26 are rotatable relative to the joint structures 44a, 44b. For example, the rear leg frame 26 may be fixedly connected to the joint structures 44a, 44b and the handle frame 22 and the front leg frame 24 may pivot at the joint structures 44a, 44b relative to the rear leg frame 26. The joint structures 44a, 44b are coaxially located and in an embodiment, one or more of the plurality of movable frames 22, 24, 26 of the stroller frame 20 are pivotable about an axis of rotation X defined by the joint structures 44a, 44b.

[0059] In an embodiment, the handle frame 22 includes an upper portion 46 connected to a lower portion 48. As shown, the lower portion 48 is connected to the joint structures 44a, 44b. The upper portion 46 is arranged at the opposite end of the handle frame 22 and is movably connected to the lower portion 48 of the handle frame 22. The upper portion 46 of the handle frame 22 may include the handle cross-member 38 and a portion of each of the first handle side segment 28a and the second handle side segment 28b, respectively. In the illustrated, non-limiting embodiment, the upper portion 46 of the handle frame 22 is pivotably or hingedly connected to the lower portion 48 of the handle frame 22. A joint or hinge, identified at 50a, 50b, formed between the upper and lower portions 46, 48 of the handle frame 22 allows relative movement between the upper and lower portions 46, 48 of the handle frame 22 about a hinge axis Y in at least one direction.

[0060] The handle frame 22 may be transformable between a use position and a storage position. In the use position (FIGS. 1A and 1B), the upper portion 46 and the lower portion 48 of the handle frame 22 are coplanar. Further, in the use position, the lower portion 48 of the handle frame 22 is coplanar with the front leg frame 24. In the storage position (FIGS. 2, 9, and 11), the lower portion 48 of the handle frame 22 extending from the joint structures 44a, 44b is not coplanar with the front leg frame 24. Rather, the lower portion 48 may be positioned adjacent to the rear leg frame 26. In an embodiment, when the handle frame 22 is in the storage position, the lower portion 48 of the handle frame 22 is arranged substantially parallel to the rear leg frame 26, such as within $\pm 10^\circ$ for example.

[0061] Further, in the storage position, the upper portion 46 of the handle frame 22 is rotated about the hinge axis Y relative to the lower portion 48 of the handle frame 22 at the hinges 50a, 50b. In such embodiments, the lower portion 48 of the handle frame 22 and the upper portion 46 of the handle frame 22 may be oriented substantially parallel to one another. As shown, when the handle frame 22 is in the storage position, the lower portion 48 of the handle frame 22 may be positioned between the rear leg frame 26 and the upper portion 46 of the handle frame 22 when folded. However, embodiments where the upper portion 46 is arranged between the rear leg frame 26 and the lower portion 48 of the handle frame 22 are also contemplated herein.

[0062] The axial length of the upper portion 46 of the handle frame 22 may be less than or equal to the axial length of the lower portion 48. Accordingly, in the storage position, the overall length of the handle frame 22 is defined between the joint structures 44a, 44b and the joints 50a, 50b defining the hinge axis Y. The length of the handle frame 22 in the storage position is therefore reduced by the length of the upper portion 46. This reduced length of the handle frame 22 may decrease the overall size occupied by the stroller frame 20, such as when the stroller frame 20 is in the collapsed configuration.

[0063] The stroller frame 20 is transformable between an expanded or extended configuration (FIG. 1A and 1B) and a stowed or collapsed configuration (FIG. 2). In the expanded configuration, the stroller frame 20 is configured to receive a child seat thereon, to be described in more detail below, such that the child travel apparatus 10 as a whole is moved or pushed by applying a force to the handle frame 22, such as to the handle cross-member 38 for example.

[0064] In the expanded configuration, as shown in FIGS. 1A and 1B, the front leg frame 24 is arranged at a non-parallel angle relative to the rear leg frame 26. As shown, the angle between the front leg frame 24 and the rear leg frame 26 when in the expanded configuration, is between about 60° and 120°. In an embodiment, the angle formed between the front leg frame 24 and the rear leg frame 26 when the stroller frame 20 is in the expanded configuration is approximately 90°. However, any suitable angle is within the scope of the disclosure.

[0065] When the stroller frame is in the expanded configuration, the handle frame 22, is in the use position such that both the upper portion 46 and the lower portion 48 of the handle frame 22 are oriented generally parallel to and coplanar with the front leg frame 24. As described herein, the handle frame 22 may be considered generally parallel to and

coplanar with the front leg frame 24 when the handle frame 22 is arranged within $\pm 10^\circ$ of the front leg frame 24.

[0066] The stroller frame 20 is transformable to the collapsed configuration to stow the stroller frame 20 when not in use. With reference to FIG. 2, in the collapsed configuration, one or more of the handle frame 22, the front leg frame 24, and the rear leg frame 26 are rotated relative to the joint structures 44a, 44b to reduce the overall size envelope of the stroller frame 20.

[0067] In the collapsed configuration, the front leg frame 24 is positioned adjacent to the rear leg frame 26 such that the clearance between the front leg frame 24 and the rear leg frame 26 of the stroller frame 20 is minimized. As shown, the front leg frame 24 may be positioned directly adjacent to the rear leg frame 26. Accordingly, the angle between the front leg frame 24 and the rear leg frame 26 may also be minimized. In an embodiment, the front leg frame 24 and the rear leg frame 26 of the stroller frame 20 are generally parallel to one another, such as within $\pm 10^\circ$ for example, when the stroller frame 20 is in the collapsed configuration. The lateral spacing between at least a portion of the first front leg side segment 30a and a corresponding portion of the second front leg side segment 30b may be less than the lateral spacing between an adjacent portion of the first rear leg side segment 32a and the second rear leg side segment 32b. As a result, when the stroller frame 20 is in the collapsed configuration, the front wheels 34a, 34b may be arranged at an interior of the rear leg side segments 32a, 32b, such as within the lateral spacing defined between the first and second rear leg side segments 32a, 32b.

[0068] When the stroller frame 20 is in the collapsed configuration, the handle frame 22 is arranged in the storage position. Accordingly, the lower portion 48 of the handle frame 22 is rotated about the axis X to a position generally parallel to the rear leg frame 26 and the upper portion 46 of the handle frame 22 is folded about the Y axis to a position generally parallel to the lower portion 48 of the handle frame. The entirety of the handle frame 22 is therefore positioned vertically beneath the joint structures 44a, 44b, or between the joint structures 44a, 44b and the periphery of the wheels 34a, 34b, 36a, 36b. The reduction in the length of the handle frame 22 via folding the upper portion 46 reduces the overall size occupied by the folded front leg frame 24, rear leg frame 26, and handle frame 22 when the stroller frame 20 is in the collapsed configuration.

[0069] When the stroller frame 20 is in the collapsed configuration, such that the handle frame 22 is folded into the storage position, the handle frame 22 may act to stabilize the stroller frame 20. For example, the wheels may support the stroller collapsed stroller

frame 20 at a first location, and the joints 50a, 50b formed at the handle frame 22 may be operable to support the collapsed stroller frame 20 at a second location spaced from the first location. Accordingly, in some embodiments, the stroller frame 20 may be able to stand upright (as shown in FIG. 2) when in a collapsed configuration.

[0070] To initiate a folding operation to collapse the stroller frame 20, a user may apply a force to a release actuator 52 mounted about the stroller frame 20. Although the release actuator 52 is illustrated at a position located along the handle frame 22, such as at the handle cross-member 38 for example, embodiments where the release actuator 52 is arranged at another position about the stroller frame 20 are also contemplated herein. The release actuator 52 may be operably coupled to the one or more portions 22, 24, 26 of the stroller frame 20 pivotable about the axis X of the joint structures 44a, 44b. In an embodiment, the stroller frame 20 includes a lock (not shown) associated with the handle frame 22 and/or the front leg frame 24. The lock may be arranged at a joint structure 44a, 44b, or alternatively or additionally may be arranged at a linkage 60a, 60b to be described in more detail below. The release actuator 52 may be operable to disengage the lock, thereby allowing rotation of the handle frame 22 and/or the front leg frame 24 about the axis X to collapse the stroller frame 20. However, embodiments where operation of the release actuator 52 not only disengages the lock, but also causes the one or more portions 22, 24, 26 of the stroller frame 20 to automatically rotate about the axis X toward the collapsed configuration are also contemplated herein.

[0071] In response to operation of the release actuator 52, the lock associated with at least one of the handle frame 22 and the front leg frame 24 is unlocked. Accordingly, the handle frame 22 and/or the front leg frame 24 are free to rotate about the axis X of the joint structures 44a, 44b. For example, the front leg frame 24 is rotated about the axis X in a first direction toward the rear leg frame 26, such as by applying a force to the front leg frame 24 in the direction of the rear leg frame 26. Similarly, the handle frame 22 is rotated about the axis X in a second, opposite direction toward the rear leg frame 26, such as via application of a force to the handle frame 22 toward the rear leg frame 26. The upper portion 46 of the handle frame 22 may be rotated about the axis Y towards the lower portion 48 of the handle frame 22 after the lower portion of the handle frame 22 has reached a final rotated position, or alternatively, the upper portion 46 of the handle frame 22 may rotate relative to the lower portion 48 about the hinge axis Y as the handle frame 22 pivots about the X axis of the joint structures 44a, 44b toward the rear leg frame 26.

[0072] In an embodiment, the stroller frame 20 includes at least one linkage configured to drive movement of the front leg frame 24 relative to the rear leg frame 26. For example, the at least one linkage may be operable to drive the front leg frame 24 away from the rear leg frame 26 when the stroller frame 20 is transitioning to the expanded configuration and/or may be operable to drive the front leg frame 24 toward the rear leg frame 26 when the stroller frame 20 is transitioning to the collapsed configuration. The at least one linkage may include a first linkage 60a arranged at a first side of the stroller frame 20 and a second linkage 60b arranged at the second side of the stroller frame 20.

[0073] In the illustrated, non-limiting embodiment, the linkages 60a, 60b include a first link 62a, 62b and a second link 64a, 64b, respectively. The first link 62a, 62b and the second link 64a, 64b of each linkage 60a, 60b may be shaped as a bar, plate, or any other suitable shape. Adjacent ends of the first link 62a, 62b and the second link 64a, 64b of a linkage 60, 60b may be pivotally connected to one another at a link hinge 66a, 66b defining a link axis Z. In an embodiment, the link hinge 66a, 66b and therefore the link axis Z is vertically offset from, such as beneath for example, the axis X about which at least one of the front leg frame 24 and the rear leg frame 26 rotates. Further, the link axis Z and the axis X of the joint structures 44a, 44b may be aligned with one another along a vertical axis, or alternatively, the link axis Z may be offset from the axis X in a longitudinal direction. For example, the link axis Z may be arranged forward of the axis X, such that the link axis Z is closer to the front of the stroller frame 20 than the axis X of the joint structures 44a, 44b. In an embodiment, the first link 62a, 62b is pivotally coupled to one of the front leg side segments 30a, 30b. However, embodiments where the first link 62a, 62b is fixedly coupled to one of the front leg side segments 30a, 30b are also contemplated herein. Alternatively, or in addition, the second link 64a, 64b may be fixedly coupled to one of the rear leg side segments 32a, 32b or may be pivotally coupled thereto. In an embodiment, the lock operated by the release actuator 50 is associated with, and in some embodiments is located at the at least one linkage 60a, 60b. For example, the lock may be associated with or located at the link hinge 66a, 66b.

[0074] The child travel system 10 additionally includes at least one child seat mountable to the stroller frame 20. Examples of the at least one child seat include but are not limited to an infant car seat, a toddler seat, a bassinet, or carrycot. The at least one child seat is detachably couplable to the stroller frame 20. As shown, a first child seat 100 (FIG. 3) configured to support a first child and having a first size range (including a first weight range), a second child seat 200 (FIGS. 8A-9) configured to support a second child and having

a second size range (including a second weight range), and a third child seat 300 (FIG. 10) configured to support a third child and having a third size range (including a third weight range), are interchangeably connectable to the stroller frame 20. In the illustrated, non-limiting embodiment, the first child seat 100 is an infant car seat intended for use with an infant, such as having a weight between 0lbs and 35lbs, or 4lbs and 35lbs, and typically less than 24 months old. An infant car seat 100 may include a carrying handle 101 to allow for portability of the infant child seat 100 when separated from the stroller frame 20. The second child seat 200 may be a first toddler seat or a toddler car seat. This first toddler seat 200 may be adjustable relative to the stroller frame 20 when connected thereto. For example, the first toddler seat 200 may be rotatable between a generally upright position and a generally horizontal position. In an embodiment, the first toddler seat 200 is intended for use with a child at least 3 months in age and up to approximately 35lbs, 40lbs, or 50lbs. The third child seat 300 may be a second toddler seat. The second toddler seat 300 may be suitable for use by a child that has outgrown the first toddler seat 200 (e.g., a taller and/or heavier child/toddler). In an embodiment, the second toddler seat 300 is intended for use by a child at least 1 year old and weighing up to 50lbs. The connection between a child seat 100, 200, 300 and the stroller frame 20 will be described in more detail below.

[0075] A child seat 100, 200, 300 connectable to the stroller frame 20 may be positionable in contact with the at least one linkage 60a, 60b, such as with a support surface 68a, 68b of the at least one linkage 60a, 60b for example. In some embodiments, the support surface 68a, 68b is configured to support a child seat thereon. With reference to FIG. 4, the first child seat, such as an infant car seat 100, includes a seat shell 102 having two rails 104a, 104b defined at a bottom thereof. When the infant car seat 100 is connected to the stroller frame 20, as shown in FIG. 4, the rails 104a, 104b may be arranged in direct contact with the upwardly facing support surface 68a, 68b of the at least one linkage 60a, 60b. In embodiments where a linkage 60a, 60b is formed by a first link 62a, 62b and a second link 64a, 64b, in combination, both the first link 62a, 62b and the second link 64a, 64b may each define a portion of the support surface 68a, 68b. The first link 62a, 62b may include a first upper surface 70a, 70b and the second link 64a, 64b include a second upper surface 72a, 72b. As shown, the first and second upper surfaces 70a, 70b, 72a, 72b of the first and second links 62a, 62b, 64a, 64b of each linkages 60a, 60b are aligned with one another when the stroller frame 20 is in the expanded configuration, and a bottom surface of a child seat coupled to the stroller frame 20 may rest or engage one or both of the first and second upper surfaces 70a,

70b, 72a, 72b. This engagement may prevent downward movement of the child seat relative to the stroller frame 20.

[0076] With reference to FIGS. 4-7B, the stroller frame 20 includes at least one seat connection hub, described as 80a, 80b, 90a, 90b below, operable to removably connect or couple the at least one child seat 100, 200, 300 to the stroller frame 20 such that movement of the child seat 100, 200, 300 relative to the stroller frame 20 in at least one of a vertical direction, a longitudinal direction, and a lateral direction is limited. The at least one seat connection hub may include a plurality of seat connection hubs. For example, the at least one seat connection hub may include a first pair of seat connection hubs 80a, 80b disposed at a first side of the stroller frame 20 and a second side of the stroller frame 20, respectively. In the illustrated, non-limiting embodiment, one or more seat connection hubs, such as the first pair of seat connections hubs 80a, 80b for example, are located generally adjacent to the joint structures 44a, 44b of the stroller frame 20. However, embodiments where the seat connection hubs 80a, 80b are located remotely from the joint structures 44a, 44b are also contemplated herein.

[0077] The first seat connection hub 80a of the first pair may be configured to attach to a first lateral side of a child seat 100, 200, 300, and the second connection hub 80b of the first pair may be configured to couple to a second lateral side of the child seat 100, 200, 300. The first pair of seat connection hubs 80a, 80b may be removably connectable to a rigid portion of the child seat 100, 200, 300, such as to a rigid body or frame 102, 202 of the child seat for example. Further, the first pair of seat connection hubs 80a, 80b may be connectable to a plurality of different child seats suitable for use with the stroller frame 20, or alternatively, may be suitable for use with only one of the plurality of child seats 100, 200, 300 connectable to the stroller frame 20. In the illustrated, non-limiting embodiment, the first pair of seat connection hubs 80a, 80b are operable to couple a first child seat 100, such as an infant car seat, to the stroller frame 20. The first pair of seat connection hubs 80a, 80b may be used to couple only the first child seat 100 to the stroller frame 20.

[0078] Each of the first pair of seat connection hubs 80a, 80b can define a receiving feature 82a, 82b (see FIG. 4), such as an opening or protrusion for example, that is configured to receive or engage a corresponding engagement feature 106a, 106b, such as another of a protrusion and opening for example, of the child seat 100, 200, 300. In the illustrated, non-limiting embodiment, the first pair of seat connection hubs 80a, 80b includes an opening 82a, 82b at an inner surface thereof. The opening 82a, 82b is configured to receive a corresponding protrusion 106a, 106b extending outwardly from the child seat, such as the

first child seat 100 for example. As shown, each seat connection hub 80a, 80b of the first pair is operable to engage a different lateral side of the first child seat 100 so as to limit movement of the first child seat 100 along the lateral direction A. Further, the receiving feature 82a, 82b of each seat connection hub 80a, 80b of the first pair is configured to engage a corresponding engagement feature 106a, 106b of the first child seat 100 to limit movement of the first child seat 100 along the vertical direction V (e.g., along at least one of an upward and downward direction), and/or the longitudinal direction L. Although the first pair of seat connection hubs 80a, 80b is illustrated and described with respect to connection to an infant car seat 100, it should be understood that embodiments where another type of seat as described herein may be connectable to the first pair of seat connection hubs 80a, 80b via a feature such as 106a, 106b.

[0079] With reference now to FIGS. 6-9, in an embodiment, , the at least one seat connection hub of the stroller frame 20 includes a second pair of seat connection hubs 90a, 90b in addition to the first pair of seat connection hubs 80a, 80b. The first seat connection hub 90a of the second pair may be configured to attach to a first lateral side of a child seat 100, 200, 300 and the second connection hub 90b of the second pair may be configured to couple to a second lateral side of the child seat 100, 200, 300. In an embodiment, each of the second pair of seat connection hubs 90a, 90b is a bayonet. As shown, the bayonet may extend upwardly beyond a surface of the stroller frame 20. For example, each bayonet 90a, 90b can be elongated generally along the vertical direction. In the illustrated, non-limiting embodiment, each of the second pair of seat connection hubs 90a, 90b is not in vertical alignment with a corresponding joint structure 44a, 44b. Rather, the seat connection hubs 90a, 90b may be longitudinally offset from the joint structures 44a, 44b. The second pair of seat connection hubs 90a, 90b may be located forward of the joint structures 44a, 44b, such as closer to the front leg frame for example (see FIGS. 6-7B) or alternatively, may be positioned rearward of the joint structures (see FIGS. 8A-9). In embodiments where the second pair of seat connection hubs 90a, 90b are located rearward of the joint structures 44a, 44b, the second pair of seat connection hubs 90a, 90b may be affixed to the handle side segments 28a, 28b of the handle frame 22, such as at a position in vertical alignment with a portion of the rear leg frame 26 for example.

[0080] An example of the second child seat 200 is illustrated in more detail in FIGS. 8A and 8B. As shown, the second child seat 200 may include a seat frame 202, an upper frame 204 and a lower frame 206. The upper frame 204 and lower frame 206 may be connectable to one another at one or more seat mounts. For example, a first side of the upper

frame 204 and the lower frame 206 may be connected via a first seat mount 208a and a second, opposite side of the upper frame 204 and the lower frame 206 are connected via a second seat mount 208b. The upper frame 204 may extend generally upward from the at least one seat mount 208a, 208b and the lower frame 206 may extend generally downward from the at least one seat mount 208a, 208b. In an embodiment, at least one of the upper frame 204 and the lower frame 206 is pivotally connected to the seat mount 208a, 208b. An arm bar 210 can extend between opposite sides of the seat frame 202, and in some embodiments, is connected to the at least one seat mount 208a, 208b. The arm bar 210 may but need not be pivotally connected to the seat mounts 208a, 208b.

[0081] The second child seat 200 may be connectable to the stroller frame 20 in a plurality of configurations. In an embodiment, the seat frame 202 of the second child seat 200 is connectable to the stroller frame 20 in a first, forward-facing mode (FIG. 8A). The seat frame 202 of the second child seat 200 may alternatively, or additionally, be connectable to the stroller frame 20 in a second, rearward facing mode (FIG. 8B). In an embodiment, each of the second pair of seat hub connections 90a, 90b includes a receiving feature, such as a slot for example, configured to engage a corresponding engagement feature of the child seat 200 to attach the seat frame 202 of the second child seat 200 to the stroller frame 20. A plurality of seat mounts 208a, 208b may be arranged at the second child seat 200, and each of the seat mounts 208a, 208b is an engagement feature configured to cooperate with the seat hub connections 90a, 90b to removably couple the second child seat 200 to the stroller frame 20. For example, the seat mounts 208a, 208b may be protrusions 208a, 208b insertable into a corresponding slot formed in the seat connection hubs 90a, 90. However, embodiments where the seat mounts 208a, 208b are slots and the seat connection hubs 90a, 90b include a protrusion receivable within a respective seat mount 208a, 208b are also contemplated herein.

[0082] The engagement features of the seat mounts 208a, 208b of the second child seat 200 may have a different size and/or shape than the engagement features 106a, 106b of the first child seat 100. Further, the engagement features of the seat mounts 208a, 208b of the second child seat 200 may extend at a different orientation relative to the stroller frame 20 than the engagement features 106a, 106b of the first child seat 100. Accordingly, the engagement features of the second child seat 200 may not be suitable for connection with the first pair of seat hub connections 80a, 80b. Similarly, the engagement features 106a, 106b of the first child seat may not be suitable for connection with the second pair of seat hub connections 90a, 90b. Accordingly, seat connection hubs 80a, 80b, 90a 90b having a different

configuration may be required for each child seat 100, 200 connectable to the stroller frame 20.

[0083] As shown in FIG. 9, the stroller frame 20 may be transformable between an expanded configuration and a collapsed configuration while a child seat, such as the second child seat 200 for example, remains connected thereto. An example of the stroller frame 20 and second child seat 200 in the collapsed configuration is shown at FIG. 9 (FIGS. 8A and 8B show the stroller frame 20 and second child seat 200 in expanded configurations). As shown in FIG. 9, when the second child seat 200 is attached to the stroller frame 20 via the second pair of seat connection hubs 90a 90b, the seat frame 202 of the second child seat 200 is oriented generally parallel to the handle frame 22. In embodiments where each of the second pair of seat connection hubs 90a, 90b is affixed to the lower portion 48 of the handle frame 22, the seat frame 202 will maintain its generally parallel orientation relative to the lower portion 48 of the handle frame 22 as the lower portion of the handle frame 22 rotates about the axis X of the joint structures 44a, 44b.

[0084] An example of the third child seat 300 mountable to the stroller frame 20 is illustrated in FIG. 10. The non-limiting embodiment of the third child seat 300 includes a body 302, such as at least partially formed from soft goods. For example, the body 302 may include a structural frame (not shown) surrounded by soft goods. In other embodiments, the majority of the body 302 of the third child seat 300 may be formed from a structurally rigid material, such as plastic.

[0085] The body 302 of the third child seat 300 may be connectable to the stroller frame 20 via at least one engagement feature (not shown). In some embodiments, the at least one engagement feature is connectable with a seat connection hub of the stroller frame 20. In an embodiment, the third child seat 300 is connectable to the first pair of seat connection hubs 80a, 80b. In other embodiments, the third child seat 300 is alternatively, or additionally, connectable to the stroller frame 20 via the second pair of seat connection hubs 90a, 90b.

[0086] In yet another embodiment, the at least one engagement feature of the third child seat 300 is not connectable to one of the plurality of seat connection hubs 80a, 80b, 90a, 90b. Rather, the at least one engagement feature may be associated with the stroller frame 20 and may be connectable to itself or to another portion of the third child seat 300. For example, at least one engagement feature of the third child seat 300 may be a strap configured to wrap about a corresponding handle side segment 28a, 28b or leg side segment 30a, 30b, 32a, 32b of the stroller frame 20 to couple the third child seat 300 to the stroller frame 20. In an embodiment, the at least one engagement feature of the third child seat 300

includes snaps, magnets, hook and loop fasteners, or any other suitable fasteners operable to mechanically couple the third child seat 300 to the stroller frame 20.

[0087] The stroller frame 20 may be transformable between an expanded configuration and a collapsed configuration while the third child seat 300 is connected thereto. When the third child seat 300 is attached to the stroller frame 20 the third child seat 300 is oriented generally parallel to the handle frame 22. The third child seat 300 will maintain its generally parallel orientation relative to the lower portion 48 of the handle frame 22 as the lower portion of the handle frame 22 rotates about the axis X of the joint structures 44a, 44b. In embodiments where the third child seat 300 is formed by a frame surrounded by soft goods, at least a portion of the soft goods and/or a portion of the frame may be foldable to collapse the third child seat 300. Similar to the second child seat, this is achievable because the at least one engagement feature of the third child seat 300 may be configured to maintain the relative orientation of between the third child seat and the handle frame 22 as the stroller frame 20 collapses. However, in other embodiments, such as where the body 302 of the third child seat 300 is a rigid structure, the stroller frame 20 may not be collapsible with the third child seat 300 mounted thereto.

[0088] In an embodiment, the stroller frame 20 is additionally transformable to a third configuration, also referred to herein as a luggage configuration. As will be described in more detail below, the third configuration is referred to as a luggage configuration because in the third configuration, the plurality of wheels 24a, 34b, 36a, 36b, may function as castors similar to those used on upright rolling luggage. With reference to FIGS. 11-13B, the luggage configuration may be considered a partially stowed configuration. Specifically, the luggage configuration occurs when the handle frame 22 is transformed to the storage position without adjusting the relative position of the front and rear leg frames 24, 26. As shown in FIG. 11, in the luggage configuration, the front leg frame 24 and the rear leg frame 26 remain separated from one another by a clearance similar to the expanded configuration. However, the handle frame 22 is rotated about the axis X of the joint structures 44a, 44b to the storage position to a position vertically beneath the seat connection hubs 80a, 80b. Accordingly, when the stroller frame 20 is in the luggage configuration, the handle frame 22 is not intended to be used by an operator to push the child travel system 10. Rather, a portion of a child seat connected to the stroller frame 20 may be used to drive the stroller frame 20.

[0089] As previously noted, when the handle frame 22 is in the storage position, the lower portion 48 of the handle frame 22 is arranged adjacent and generally parallel to the rear leg frame 26. Further, the upper portion 46 of the handle frame 22 is rotated about the hinge

axis Y at the hinges 50a, 50b such that the upper portion 46 is oriented generally parallel to the lower portion 48 and/or the rear leg frame 26. As shown in FIG. 11, when the handle frame 22 is in the storage position, the entirety of the handle frame 22 is arranged within the clearance defined between a bottom of the plurality of wheels 34a, 34b, 36a, 36b, and a plane P tangent to the joint structures 44a, 44b and parallel to the plane including the bottom of the plurality of wheels 34a, 34b, 36a, 36b. In embodiments where the pair of seat connections hubs 80a, 80b are located at or generally adjacent to the joint structures 44a, 44b of the stroller frame 20, the entirety of the handle frame 22 may be positioned vertically beneath a seat connection hub 80a, 80b, such as between a seat connection hub 80a, 80b and a plane including the bottom of the plurality of wheels 34a, 34b, 36a, 36b. In such a position, the handle frame 22 is stowed without impeding the mobility of the stroller frame 20 or the connection of at least one child seat, such as the first child seat 100 for example, to the seat connection hubs 80a, 80b of the stroller frame 20.

[0090] The stroller frame 20 may be transformable to the luggage configuration when a child seat 100, 200, 300 is connected to the stroller frame 20 and/or when a child seat 100, 200, 300 is not connected to the stroller frame 20. In the illustrated, non-limiting embodiment of FIG. 11, the stroller frame 20 is shown in the luggage configuration with a first child seat 100, such as an infant car seat, attached thereto. In such embodiments, the handle carrying of the first child seat 100 may be used to move or manipulate the child travel system 10.

[0091] With continued reference to FIG. 11, and further reference to FIGS. 12A-13B, a mode of operation of at least one wheel 34a, 34b, 36a, 36b of the stroller frame 20 may vary based on the configuration of the stroller frame 20. For example, when the stroller frame 20 is in the expanded configuration, at least one wheel 34a, 34b, 36a, 36b of the stroller frame 20 is rotatable about only a first axis, and when the stroller frame 20 is in the luggage configuration, and in some embodiments in the collapsed configuration, the at least one wheel 34a, 34b, 36a, 36b of the stroller frame 20 is rotatable about both the first axis and a second axis. In the illustrated, non-limiting embodiment, the wheels 34a, 34b attached to the front leg frame 24 are configured as castors and each is rotatable about a horizontal axis and a respective vertical axis regardless of the configuration of the stroller frame 20. However, each of the rear wheels 36a, 36b connected to the rear leg frame 26 may be rotatable about only the horizontal axis when the stroller frame 20 is in the expanded configuration and may additionally be rotatable about a respective vertical axis when the stroller frame 20 is in the luggage configuration.

[0092] An example of a wheel rotation lock 400 or mechanism for selectively locking rotation of the at least one wheel, such as wheels 36a, 36b for example, about a respective vertical axis is illustrated in FIGS. 12A and 12B. The wheel rotation lock 400 is transitionable between a locked position in which the at least one wheel is prevented from rotation about a vertical axis, and an unlocked position, in which the at least one wheel is free to rotate about the vertical axis. As shown, a slot 402 may be formed at an end of the at least one wheel 36b adjacent to the rear leg frame 26, and a corresponding pin 404 extending from the end of the rear leg frame 26 is receivable within the slot 402. When the pin 404 is arranged within the slot 402, and therefore is engaged with the at least one wheel 36b, the at least one wheel is not rotatable about its vertical axis, illustrated in FIGS. 12A-13B at V.

[0093] The handle frame 22, such as the lower portion of the handle frame 22, may be operable as an actuator to move the pin 404 out of engagement with the slot 402. In the illustrated, non-limiting embodiment, a tension member 406, such as a cable for example, is operably coupled to the pin 404 and to a portion of the handle frame 22. As the handle frame 22 rotates about the axis X of the joint structures 44a, 44b, the handle frame 22 applies a tension to the tension member 406. This increased tension causes the pin 404 to translate upwardly, out of engagement with the slot 402 of the at least one wheel 36b. The pin 404 will remain in this position allowing rotation of the at least one wheel 36b about its vertical axis V until the handle frame 22 is rotated back to a use position or operation position generally aligned with the front leg frame 24. Although the wheel rotation lock 400 is illustrated and described herein with respect to exemplary rear wheel 36b, it should be understood that any of the wheels 34a, 34b, 36a, 36b of the stroller may include such a locking mechanism 400. Further, the wheel rotation lock 400 illustrated and described herein is intended as an example only, and any other suitable mechanism operable to selectively unlock rotation of at least one wheel of the stroller frame 20 when the handle frame 22 is in a storage position is also contemplated herein.

[0094] A child travel system 10 as described herein is suitable for use with a child as the child transitions between a plurality child seats. Further, the stroller frame 20 of the child travel apparatus provides a reduced envelope, allowing for improved portability.

[0095] The term “about” is intended to include the degree of error associated with measurement of the particular quantity based upon the equipment available at the time of filing the application. As used herein, the term “substantially” and derivatives thereof, and words of similar import, when used to describe a size, shape, orientation, distance, spatial relationship, or other parameter includes the stated size, shape, orientation, distance, spatial

relationship, or other parameter, and can also include a range up to 10% more and up to 10% less than the stated parameter, including 5% more and 5% less, including 3% more and 3% less, including 1% more and 1% less.

[0096] The terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the present disclosure. As used herein, the singular forms “a,” “an” and “the” are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will be further understood that the terms “comprises” and/or “comprising,” when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, element components, and/or groups thereof.

[0097] While the present disclosure has been described with reference to an exemplary embodiment or embodiments, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted for elements thereof without departing from the scope of the present disclosure. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the present disclosure without departing from the essential scope thereof. Therefore, it is intended that the present disclosure not be limited to the particular embodiment disclosed as the best mode contemplated for carrying out this present disclosure, but that the present disclosure will include all embodiments falling within the scope of the claims.

What is Claimed:

1. A travel system comprising:
a stroller frame having at least one seat connection hub, at least one wheel, and a handle frame, the handle frame being movable between a use position and a storage position;
an infant car seat detachably connectable to the at least one seat connection hub; and
wherein when the handle frame is in the storage position, the handle frame is positioned between the at least one seat connection hub and the at least one wheel.
2. The travel system of claim 1, wherein the handle frame includes an upper portion and a lower portion, the upper portion being pivotally coupled to the lower portion about a hinge axis.
3. The travel system of claim 2, wherein when the handle frame is in the use position, the upper portion is coplanar with the lower portion and when the handle frame is in the storage position, the upper portion is folded about the hinge axis relative to the lower portion.
4. The travel system of claim 2, wherein in the storage position, the upper portion is parallel to the lower portion.
5. The travel system of claim 1, wherein the stroller frame is transformable between an expanded configuration and a collapsed configuration, the handle being in the storage position in both the expanded configuration and the collapsed configuration.
6. The travel system of claim 5, wherein when the stroller frame is in the expanded configuration, the handle frame is in the use position and when the stroller frame is in the collapsed configuration, the handle frame is in the storage position.
7. The travel system of claim 5, wherein the stroller frame stands upright when in the collapsed configuration.
8. The travel system of claim 5, further comprising a front leg frame pivotally coupled to a rear leg frame, wherein when the stroller frame is in the expanded configuration, the front leg frame is spaced away from the rear leg frame, and when the stroller frame is in the collapsed configuration, the front leg frame is adjacent to the rear leg frame.
9. The travel system of claim 8, wherein the stroller frame is further transformable to a luggage configuration and the handle frame is in the storage position when the stroller frame is in the luggage configuration.
10. The travel system of claim 9, wherein when the stroller frame is in the luggage configuration, the front leg frame is spaced away from the rear leg frame.

11. The travel system of claim 1, wherein the stroller frame further includes a wheel rotation lock, the wheel rotation lock being transitionable between a locked position, in which the at least one wheel is prevented from rotation about a vertical axis, and an unlocked position, in which the at least one wheel is free to rotate about the vertical axis.

12. The travel system of claim 11, wherein the stroller frame is transformable between an expanded configuration and a luggage configuration and when the stroller frame is in the expanded configuration, the wheel rotation lock is in the locked position and when the stroller frame is in the luggage configuration, the wheel rotation lock is in the unlocked position.

13. The travel system of claim 12, further comprising an actuator operably coupled to the wheel rotation lock to transform the wheel rotation lock between the locked position and the unlocked position, wherein the handle frame is the actuator.

14. The travel system of claim 13, wherein rotation of the handle frame is operable to transform the wheel rotation lock between the locked position and the unlocked position.

15. A travel system comprising:
a stroller frame,
a first child seat detachably connectable to the stroller frame, the first child seat configured to support a first child having a first size range;
a second child seat detachably connectable to the stroller frame, the second child seat configured to support a second child having a second size range;
a third child seat detachably connectable to the stroller frame, the third child seat configured to support a third child having a third size range; and
wherein the first size range, the second size range, and the third size range are different from one another.

16. The travel system of claim 15, wherein the first child seat is an infant car seat.

17. The travel system of claim 15, wherein the second child seat is a toddler car seat.

18. The travel system of claim 15, wherein the second child seat can be connected to the stroller frame in a forward-facing mode and a rearward facing mode.

19. The travel system of claim 15, wherein the stroller frame is foldable when the second child seat is connected to the stroller frame.

20. The travel system of claim 17, wherein the third child seat is a toddler seat, and the third size range is larger than the second size range.

21. The travel system of claim 15, wherein the stroller frame further includes at least one seat connection hub, the at least one seat connection hub being detachably connectable to at least one of the first child seat, the second child seat, and the third child seat.

22. The travel system of claim 21, wherein the at least one seat connection hub is configured to removably couple to a rigid portion of the at least one of the first child seat, the second child seat, and the third child seat.

23. The travel system of claim 21, wherein the at least one seat connection hub includes a first pair of seat connection hubs positioned about the stroller frame.

24. The travel system of claim 23, wherein the first pair of seat connection hubs is detachably connectable to only the first child seat.

25. The travel system of claim 23, wherein the stroller frame further includes a second pair of seat connection hubs, the second pair of seat connection hubs being detachably connectable to at least one of the first child seat, the second child seat, and the third child seat.

26. The travel system of claim 25, wherein the second pair of seat connection hubs are longitudinally offset from the first pair of seat connection hubs.

27. The travel system of claim 25, wherein the second pair of seat connection hubs are bayonets.

28. The travel system of claim 21, wherein the at least one seat connection hub includes a receiving feature and the at least one of the first child seat, the second child seat, and the third child seat includes an engagement feature receivable within the receiving feature to removably couple the at least one of the first child seat, the second child seat, and the third child seat to the stroller frame.