UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BABY GENERATION, INC., d/b/a MOCKINGBIRD;
EVENFLO COMPANY, INC.; and
MONAHAN PRODUCTS, LLC, d/b/a UPPABABY,
Petitioners,

v.

BABY JOGGER, LLC,
Patent Owner.

U.S. Patent No. 11,505,231

DECLARATION OF DOUGLAS S. PRAIRIE, P.E.

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… [1.a]-[1.b] a pair of rear wheels; a pair of front wheels; 133
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… [17] The stroller system of claim 1, wherein the front seat attachment is further configured to connect to one or more sides of the front stroller seat. 306
… [19] The stroller system of claim 1, wherein the pair of front wheels includes only two front wheels. 307
… [20] The stroller system of claim 19, wherein the only two front wheels are laterally spaced apart from each other on a left side and a right side of the front wheel support portion. 307
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List of Exhibits

Exhibit Number	Description
EX1001	RESERVED
EX1002	U.S. Provisional Application No. 61/119,920 (First Provisional) File History
EX1003	U.S. Publication No. 2010/0140902 (Zehfuss)
EX1004	U.S. Patent No. 8,955,869 ('869 Patent)
EX1005	U.S. Patent No. 9,403,550
EX1006	U.S. Provisional Application No. 62,311,224 (Second Provisional) File History
EX1007	U.S. Patent No. 9,944,305 ('305 CIP)
EX1008	U.S. Patent No. 10,730,543
EX1009	U.S. Patent No. 11,192,568
EX1010	U.S. Patent No. 11,731,682
EX1011	U.S. Patent No. 11,577,771
EX1012	U.S. Patent No. 11,505,231 ('231 Patent)
EX1013	U.S. Patent No. 11,878,729
EX1014	U.S. Application No. 12/631,375 (First Non-Provisional) File History
EX1015	U.S. Application No. 14/261,558 ('869 Patent) File History
EX1016	U.S. Application No. 14/597,420 ('550 Patent) File History
EX1017	U.S. Application No. 15/225,326 ('305 CIP) File History
EX1018	U.S. Application No. 15/912,901 ('543 Patent) File History
EX1019	U.S. Application No. 16/832,429 ('568 Patent) File History
EX1020	U.S. Application No. 16/903,292 ('682 Patent) File History
EX1021	U.S. Application No. 17/876,492 ('771 Patent) File History
EX1022	U.S. Application No. 17/877,323 ('231 Patent) File History
EX1023	U.S. Application No. 18/051,053 ('729 Patent) File History
EX1024	U.S. Application No. 18/448,417 ('449 Patent) File History
EX1025	Samuel J. Sewell, *The History of Children's and Invalids' Carriages*, Journal of the Royal Society of Arts, Vol. 71, No. 3694 (September 7, 1923)
EX1026	U.S. Patent No. 405,600
EX1027	U.S. Patent No. 510,355
EX1028	RESERVED
EX1029	U.S. Patent No. 4,191,397
EX1030	U.S. Patent No. 6,513,827

EX1031	Declaration of Hollie Schultz
EX1032	Declaration of Greg Allen
EX1033	U.S. Patent No. 7,641,216
EX1034	U.S. Patent No. 4,398,748
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EX1038	Contours Options Tandem Stroller Instruction Sheet
EX1039	French Publication FR2615155A1
EX1040	U.S. Patent No. 6,209,892 (Schaaf)
EX1041	EP Publication No. EP0980810
EX1042	U.S. Patent No. D514,036
EX1043	Evenflo CitiTour Manual
EX1044	U.S. Patent No. 6,045,145
EX1045	U.S. Patent No. 5,794,951
EX1046	Comparison of Specifications of First Non-Provisional and '305 CIP
EX1047	Plaintiff Baby Jogger, LLC's Opening Claim Construction Brief
EX1048	U.S. Publication No. 2009/0127810 (Dotsey)
EX1049	U.S. Provisional Application No. 60/988,635 File History
EX1050	U.S. Publication No. 2007/0194545 (Van Dijk)
EX1051	U.S. Patent No. D593,459 (Liao)
EX1052	U.S. Publication No. 2007/0126206 (Nash)
EX1053	Certified English Translation of TW Design Patent No. D129880
EX1054	Merriam-Webster, Parallel, https://www.merriam-webster.com/dictionary/parallel
EX1055	*McGraw-Hill Dictionary of Scientific and Technical Terms* (6th ed. 2003), Definition of "parallel"
EX1056	*Barron's Dictionary of Mathematics Terms* (3d ed. 2009), Definition of "parallel"
EX1057	Second Amended Complaint in *Baby Jogger, LLC v. Evenflo Company, Inc.*, No. 24-723-GBW (D. Del.)
EX1058	First Amended Complaint in *Baby Jogger, LLC v. Baby Generation, Inc. d/b/a Mockginbird*, No 24-725-GBW (D. Del.)

EX1059	Baby Jogger's Infringement Contentions for the '231 Patent in *Baby Jogger, LLC v. Monahan Products, LLC d/b/a UPPAbaby*, No. 1:24-cv-11582-ADB (D. Mass)

List of Challenged Claims

Claim 1	
[1.pre]	A stroller system for supporting a front stroller seat and a rear stroller seat, the system comprising:
[1.a]	a pair of rear wheels;
[1.b]	a pair of front wheels;
[1.c.i]	a frame including a handle portion, a rear wheel support portion, a front wheel support portion and a folding mechanism connecting the front wheel support portion and the handle portion in both an unfolded configuration and in a folded configuration,
[1.c.ii]	wherein the folding mechanism connects the rear wheel support portion to the front wheel support portion and the handle portion,
[1.c.iii]	wherein the frame includes a stroller seat support portion positioned at a first vertical position adjacent the handle portion, and
[1.c.iv]	wherein the front wheel support portion and the handle portion are substantially parallel when the frame is in the unfolded configuration; and
[1.d]	a front seat attachment configured for attachment to the front wheel support portion at a second vertical position substantially lower than the first vertical position,
[1.e]	wherein the front seat attachment is configured to releasably connect to and support the front stroller seat in either a forward-facing configuration or a backward-facing configuration,
[1.f]	wherein the front seat attachment is configured to support the front stroller seat substantially over the front wheels so that a center of gravity of the stroller system is between the front wheels and the rear wheels;
[1.g]	wherein the rear wheel support portion extends diagonally from the front wheel support portion when the frame is in the unfolded configuration, and the rear wheel support portion is disposed adjacent

	to both the front wheel support portion and the handle portion when the frame is in the folded configuration; and
[1.h]	wherein the stroller seat support portion positioned at the first vertical position and the front seat attachment at the second vertical position create an inline descending configuration of the rear stroller seat and the front stroller seat.
Claim 2	
[2]	The stroller system of claim 1, wherein the folding mechanism includes at least one pivot point.
Claim 3	
[3]	The stroller system of claim 1, wherein the stroller seat support portion is configured to support the rear stroller seat substantially over the rear wheels.
Claim 4	
[4]	The stroller system of claim 1, wherein the front seat attachment includes a first connector portion and a second connector portion, the first connector portion configured to removably attach to a left side of the front wheel support portion, and the second connector portion configured to removably attach to a right side of the front wheel support portion.
Claim 5	
[5]	The stroller system of claim 4, wherein the front seat attachment includes a pair of seat attachment elements configured to releasably support the front stroller seat in either the forward-facing configuration or in the backward-facing configuration.
Claim 6	
[6]	The stroller system of claim 5, wherein the front wheel support portion includes a first attachment portion and a second attachment portion, the first attachment portion on the left side and configured to support the

	first connector portion, and the second attachment portion on the right side and configured to support the second connector portion.
Claim 7	
[7]	The stroller system of claim 6, wherein the front seat attachment includes at least one attachment frame member.
Claim 8	
[8]	The stroller system of claim 4, wherein the front wheel support portion includes a pair of parallel support members.
Claim 9	
[9]	The stroller system of claim 8, wherein the parallel support members include a pair of attachment portions configured to support the first connector portion and the second connector portion.
Claim 10	
[10]	The stroller system of claim 9, wherein the attachment portions include left and right slots in the parallel support members configured to receive the first connector portion and the second connector portion.
Claim 11	
[11]	The stroller system of claim 8, wherein the parallel support members include a pair of tubular structures, each of the tubular structures having a rounded cross-section.
Claim 12	
[12]	The stroller system of claim 8, wherein the rear wheel support portion includes a pair of parallel support members connected by the folding mechanism to the parallel support members of the front wheel support portion.
Claim 13	
[13]	The stroller system of claim 12, wherein the folding mechanism includes a pair of pivots spaced apart and configured to connect

	corresponding ones of the parallel support members of the rear and front wheel support portions.
Claim 14	
[14]	The stroller system of claim 13, wherein the handle portion includes a pair of parallel support members and a crossbar, wherein the parallel support members of the handle portion connect to the parallel support members of the front wheel support portion via the folding mechanism, and wherein the parallel support members of the handle portion and of the front wheel support portion extend diagonally downwards from the crossbar of the handle portion.
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[15]	The stroller system of claim 1, wherein the stroller seat support portion is configured to releasably support the rear stroller seat.
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[16]	The stroller system of claim 1, wherein the stroller seat support portion is configured to support the rear stroller seat in either a forward-facing configuration or a backward-facing configuration.
Claim 17	
[17]	The stroller system of claim 1, wherein the front seat attachment is further configured to connect to one or more sides of the front stroller seat.
Claim 19	
[19]	The stroller system of claim 1, wherein the pair of front wheels includes only two front wheels.
Claim 20	
[20]	The stroller system of claim 19, wherein the only two front wheels are laterally spaced apart from each other on a left side and a right side of the front wheel support portion.
Claim 21	

[21]	The stroller system of claim 1, wherein the folded configuration includes at [least][1] partially overlapping the front wheel support portion and the handle portion.
Claim 22	
[22]	The stroller system of claim 1 wherein the front seat attachment is configured to releasable attach to the front wheel support portion.

[1] This listing of claims incorporates the '231 Patent's Certificate of Correction. EX1012, p.30.

I, Douglas S. Prairie, hereby declare as follows:

1. I am making this declaration at the request of Petitioners in the matter of *Inter Partes* Review of U.S. Patent No. 11,505,231 ("the '231 Patent").

2. I am being compensated at my normal consulting rate of $150/hour for my work, but my opinions are based on my own views of the patented technology and the prior art. My compensation is not dependent on the outcome of this proceeding and in no way affects the substance of my statements in this Declaration.

3. In preparation of this declaration, I have studied the exhibits as listed in the Exhibit List shown above in my report.

4. In forming the opinions expressed below, I have considered:

   a. The documents listed above, as well as additional patents and documents referenced herein;

   b. The relevant legal standards, including the standard for obviousness provided in *KSR International Co. v. Teleflex, Inc*., 550 U.S. 398 (2007), and any additional documents cited in the body of this declaration; and

   c. My knowledge and experience based upon my work and study in this area as described below.

I. Qualifications and Professional Experience

5. I am currently a lecturer at South Dakota State University and a

registered Professional Engineer in the State of Idaho. I hold an M.S. in Mechanical Engineering from Boise State University, which I received in 2004. I also hold a B.S. in Agricultural Engineering (with a focus on power and machinery) from South Dakota State University, which I received in 1997.

6. I have worked in the engineering industry for over twenty-five years in various roles, including as a test engineer, product developer, engineering department manager, sales manager, mechanical research manager for an innovation group, mechanical and industrial design engineer, and consultant. My professional work experience has included the design, development, and testing of strollers like those being referenced in this case. I am also the proud father of triplets, so I am well versed in child mobility gear. In my present position as a lecturer at South Dakota State University, I lecture and lead the development of engineering and technical-based coursework. Courses I am responsible for involve the design, operation and ownership of various types of mechanical equipment.

7. From May 1996 until September 1996 (while I was completing my B.S.), I worked for Ag-Chem Equipment Co., where I performed product testing on various mechanical systems. (I understand that after my work there, Ag-Chem Equipment Co. was acquired by AGCO Corporation in 2001.)

8. From October 1996 until July 2000, I worked for Case Corporation, a large manufacturer of construction and agricultural equipment, as a New Product

Development Engineer. In that role, I was involved in the conception, design, development, and production of mechanical equipment.

9. From December 2000 until February 2003 and again from September 2005 until December 2007, I worked for Multiquip, a manufacturer and supplier of products for construction, industrial, telecom, government, and other industries, as an Engineering Department Manager. In that role, I managed a team of 15 engineers, designers, drafters, and technicians in support of over 200 different products. I also managed a $1.3 million budget for product development and engineering product support. My responsibilities also included designing equipment to comply with applicable safety and homologation standards.

10. From February 2003 until September 2005, I worked for Bratney Companies as a Construction/Mechanical Project Engineer of Industrial Processes. My role involved the development and management of construction projects.

11. From December of 2007 to March of 2010, I performed full time contract engineering work through my own company, Prairie West LLC, which was based in Boise, ID. One of the long-term contracts I performed during that period was for BOB Gear (a high-end jogging stroller manufacturer and marketer) as a designer, developer, and test engineer on projects involving single and double jogging strollers. My engineering education and extensive experience involving product design, development, testing, and safety standard compliance for

mechanical products made me well-suited for the role. Also, as a parent of triplets who were toddlers at this point in my life, I was able to provide BOB Gear with not only engineering expertise but also direct applied knowledge of strollers from a parent's perspective. I worked on a variety of projects for BOB Gear, including an updated design of their single and double jogging strollers. My early work at BOB Gear involved taking a new stroller design concept produced by an external industrial designer and analyzing the concept's ability to meet functional goals, manufacturability cost goals, and be compliant with child safety guidelines and homologation standards. This effort required extensive knowledge of the stroller market landscape, manufacturing methods and materials utilized within the stroller industry, and global child safety standards for strollers and child seats. This project produced some innovative concepts that I worked on integrating into some of BOB Gear's existing line of strollers. Some of this work included updating stroller suspension systems, improving stroller folding systems, and designing a new removable adapter system that could be used for cup holder trays and infant car seat adapters. My work at BOB Gear involved developing concepts in SolidWorks CAD software, producing physical prototypes, and then testing these concepts with a variety of popular infant car seat brands attached to the stroller. Tests I performed were to check for general performance, ease of installation and removal of the adapters and car seats, compliance with domestic and international child safety

standards, and ease of adapting to a variety of popular infant car seat brands. One test I performed multiple times involved placing the stroller on a flat surface that could be pivoted to increase the pitch and yaw angle until such point the stroller would start to tip over. The purpose of this test was to check for the center of gravity (CG) location and make sure the stroller would comply with global safety standards. I performed tests on the base stroller along with various brands of car seats and various types of stroller accessories. This test often involved placing a sandbag style weight in the infant car seat or stroller seat to simulate the weight of a child. These tests produced valuable results that allowed BOB Gear's engineering team to better understand how their design choices affected the stability of the stroller and its attachments. BOB Gear still produces the strollers that I helped design. I understand that BOB Gear is now owned by Britax Child Safety, Inc.

12. From March 2010 until March 2015, I worked for Raven Industries (now part of CNHi), first as a Project Manager and then as the North American Sales Manager. In those roles, I oversaw development and launch of multiple mechanical products.

13. From June 2015 until June 2016, I worked for POET Research as a Mechanical Research Manager in the research and innovation group. POET Research develops and produces clean and renewable biofuels.

14. From August 2016 until the present, I have taught as a Lecturer at South

Dakota State University in the Agriculture and Biosystems Engineering Department. I have taught and led the development of courses for undergraduate students that go on to receive Bachelor of Science degrees in Mechanical Engineering (ME), Agriculture Systems Technology (AST), Precision Agriculture (PRAG), and Agriculture and Biosystems Engineering (ABE). Examples of specific courses I lead and/or instruct include ABE 234 Digital Tools for Agriculture Engineers, ABE 314 Agriculture Power and Machinery; ABE 411/422 Capstone Design; ABE 350 Hydraulic Systems; ABE 464 Monitoring and Controls; AST 412 Fluid Power Technology; PRAG 304 Electrical Diagnostics of Farm Machinery; and AST 313 Farm Machinery Management.

15. I am a named inventor on multiple U.S. patents and applications, including: U.S. Patent Nos. 5,915,312, 6,047,652, 6,116,172, 6,386,127, 6,640,732, 6,644,223, 6,454,019, and U.S. Patent Application No. 13/842,326.

16. I am a member of multiple professional organizations, including the American Society of Mechanical Engineers (ASME) and American Society of Agricultural and Biological Engineers (ASABE).

17. A copy of my curriculum vitae is attached as Appendix A, which contains further details regarding my experience, education, and other qualifications to render an expert opinion in connection with this proceeding.

II. Relevant Legal Standards

18. I have been asked to provide opinions on certain claims of the '231 Patent (Ex. 1012) in light of the prior art.

A. Anticipation

19. Counsel has advised me that for a patent claim to be valid, the claimed invention must be novel. Counsel has further advised me that if each and every element of a claim is disclosed in a single prior art reference, then the claimed invention is anticipated, and the invention is not patentable. For the invention to be anticipated, all of the elements and limitations of the claim must be shown in a single prior art reference, arranged as in the claim. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. For a reference to inherently disclose a limitation, that claim limitation must necessarily be present in the reference.

B. Obviousness

20. Counsel has also advised me that a claimed invention is unpatentable if the differences between the invention and the prior art are such that the subject matter as a whole would have been obvious at the time the alleged invention was made to a person having ordinary skill in the art to which the subject matter pertains. I also understand that an obviousness analysis takes into factual inquiries including the level of ordinary skill in the art, the scope and content of the prior art, and the differences between the prior art and the claimed subject matter.

21. It is my understanding that the Supreme Court has recognized several rationales for combining references or modifying a reference to show obviousness of the claimed subject matter. Some of these rationales include the following: combining prior art elements according to known methods to yield predictable results; simple substitution of one known element for another to obtain predictable results; a predictable use of prior art elements according to their established functions; applying a known technique to a known device to yield predictable results; choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; and some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

22. I am informed that obviousness should not be determined using hindsight; rather, the inquiry must be from the perspective of a person of ordinary skill in the art at the time that the invention was made. I am informed that there is no requirement that the prior art contain an express suggestion to combine known elements to achieve the claimed invention; a suggestion to combine known elements to achieve the claimed invention may come from the prior art as a whole or individually, and will be viewed in light of the knowledge of one skilled in the art. The inferences and creative steps a person of ordinary skill in the art would typically employ are also relevant to the determination of obviousness.

23. When a work is available in one field, design alternatives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the art can implement a predictable variation and would see the benefit of doing so, that variation is likely to be obvious. When there is design need or market pressure and there are a finite number of predictable solutions, a person of ordinary skill in the art has good reason to pursue those known options.

24. It is my understanding that there is no rigid rule that a reference or combination of references must contain a "teaching, suggestion, or motivation" to combine references. But, I understand that a "teaching, suggestion, or motivation" can be a useful guide in establishing a rationale for combining elements of the prior art.

C. Priority

25. In order to determine whether a reference qualifies as prior art for a given patent claim, one must determine the applicable priority date for that patent claim. I understand that in many cases the priority date is the actual filing date of the patent application or patent at issue. In certain cases, however, patent claims may be entitled to "priority" based on one or more earlier applications referenced on the face of the patent.

26. In order for a claim of a patent to be entitled to claim priority to an earlier filed application, I understand that the earlier filed application needs to have

sufficient "written description" to support that claim.

27. When determining whether an application contains adequate written description of the claimed invention, I understand that one must make an objective inquiry into the four corners of the application from the perspective of a POSITA.

28. Further, I understand that the standard for written description is stricter than the standard for determining whether or not a patent claim would have been obvious based on the prior art.

29. In particular, the question for purposes of written description is not merely whether the claimed invention is an obvious variant of what the specification discloses. Instead, the application itself must disclose the invention, and do so in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the date when the application was filed.

30. Similarly, I understand that the issue of written description is separate from the question of "enablement" (*i.e.*, whether a specification allows a person of ordinary skill to practice the claimed invention without undue experimentation). A specification may adequately enable a claimed invention yet fail to provide written description support.

31. Finally, I understand that the standard for whether or not a disclosure is sufficient to support a claim is different than the standard for whether a disclosure anticipates a claim. To support a claim, the disclosure must be sufficient to convey

to a POSITA that the inventors were in possession of the full scope of the claimed subject matter.

32. By contrast, a disclosure anticipates a claim if it discloses even a single species within the scope of the claim. Thus, in the case of "genus" claims covering two or more different species, I understand that there can be situations in which a given disclosure is sufficient to anticipate the claim even though that same disclosure is not adequate to support the claim and entitle the inventors to an earlier priority date.

33. I understand that in order to claim priority to an application through a chain of applications, every single application in the chain (going back to the particular application on which the inventors want to rely) needs to support the claim as a matter of written description.

34. In other words, each application in the chain must allow a person of ordinary skill to discern that the inventors were in possession of the claimed invention at the time of the application.

III. Qualifications of A Person Having Ordinary Skill in the Art (POSITA)

35. I understand that a patent should be analyzed from the perspective of a POSITA at the time of the alleged invention. I have been informed that the factors considered in determining the level of ordinary skill of a POSITA include: (1) the educational level of the inventor; (2) the type of problems encountered in the art; (3)

prior art solutions to those problems; (4) the rapidity with which innovations are made; (5) the sophistication of the technology; and (6) the educational level of active workers in the field. I understand that these factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.

36. It is my opinion that a person of ordinary skill in the art would have had a bachelor's degree in a relevant field (*e.g.*, mechanical engineering or industrial design), and at least two years of product design experience and/or industry experience with juvenile products. More education can replace product design experience, and vice versa. It is my opinion that this level of ordinary skill in the art would apply regardless of whether the date of alleged invention is around 2008 (the earliest claimed priority date) or later.

37. I meet or exceed these requirements for a POSITA. I have worked with many POSITAs and can evaluate documents from their perspective.

IV. State of the Art

A. Overview of Strollers

38. A stroller is a rolling device used to transport children. Strollers (also known as perambulators, pram, push chairs, or bassinettes) have existed for several centuries. (EX1025, Sewell, 716–728.) Samuel J. Sewell's article from the 1920s described some well-known aspects of stroller designs.

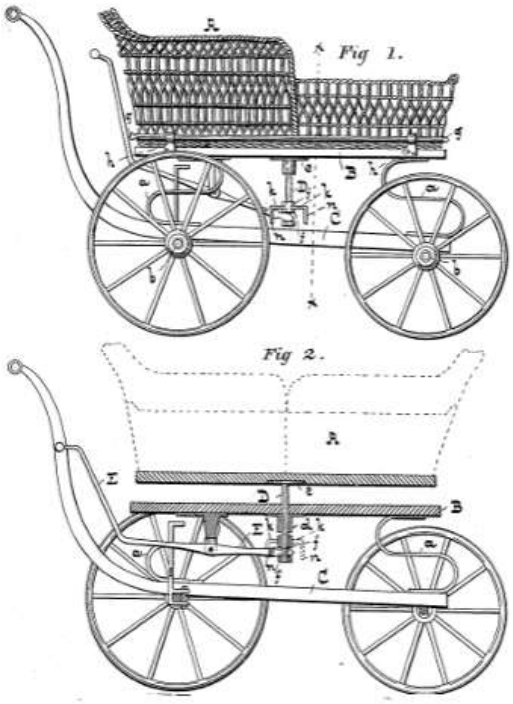
1. **Wheels** – including how the wheels could be detachable to allow the stroller to be folded. (EX1025, Sewell, 724.)

2. **Springs** – allowing for a smoother stroller ride. (EX1025, Sewell, 724–725.)

3. **Variable Bodies** – allowing for "folding, converting, adjusting and reversing" the body frame. (EX1025, Sewell, 725.) This allowed adjustability so the stroller allowed for one child to lie down while another child could sit. (EX1025, Sewell, 725–726.)

39. Early designs for strollers put an emphasis on stopping the stroller from tipping over, preventing the child from falling out, or having the stroller roll away. (EX1025, Sewell, 724.)

40. Strollers include one or more seats to accommodate one or more children. The seat or seats may be fixed or movable. Strollers with a reversible seat have been around more than a century. In the 1880s, William Richardson designed a reversible baby stroller that permitted the user to decide whether the child faced the user, or faced in the direction the stroller was pushed. (EX1026, U.S. Patent No. 405,600 ("Richardson").) U.S. Patent No. 405,600 also discloses how the stroller seat can be reversible in direction via rotation around a "king bolt."



"In the invention described in the said application the body of the carriage, when elevated, may be rotated or turned entirely around on its axial king-bolt …."

(EX1026, Richardson, 1:15–18 and Figs. 1, 2.)

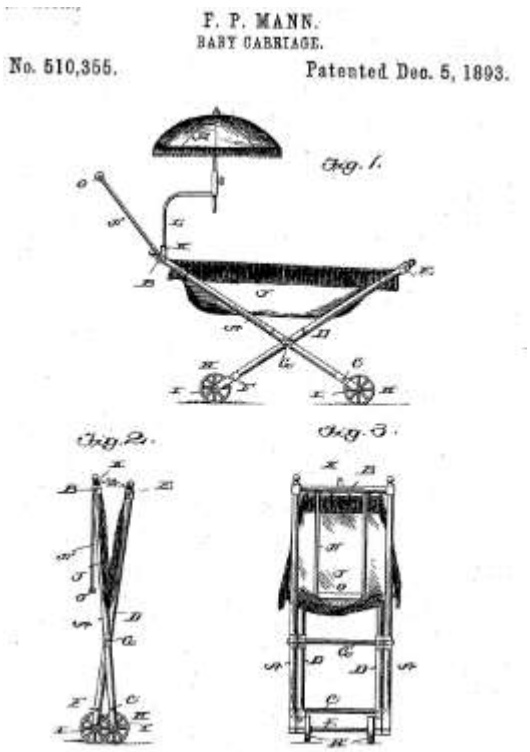
B. Basics of Stroller Structure

1. Basics of Stroller Structure

41. A stroller frame is the backbone of the stroller and supports the seat(s) and other components. Stroller frames are typically formed of metal or plastic. The frame will generally include a handlebar or push bar for pushing and steering the stroller and three or more wheels. The handlebar is typically connected to, or integral with, a pair of longitudinal side members. One or more crossbars may connect between the longitudinal sides. The front wheel(s) may be directly or indirectly connected to the longitudinal side members. The rear wheels are usually connected to the longitudinal sides by one or more intermediary components.

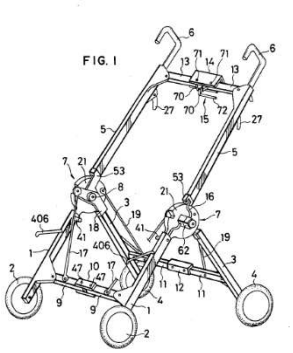
42. The X-frame was an early design from the late 1890s and included two main crossbars in an "X" configuration. (EX1027, U.S. Patent No. 510,355.) A pivot

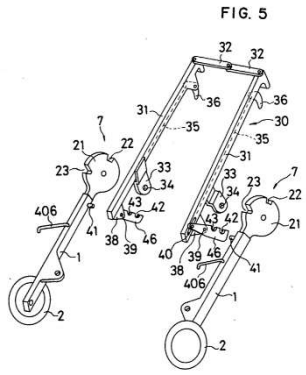
point was located in the center of the "X" to allow the stroller to be collapsed for "compactness." (EX1027, U.S. Patent No. 510,355, ll. 22–31.)



EX1027, U.S. Patent No. 510,355, Figs. 1–3

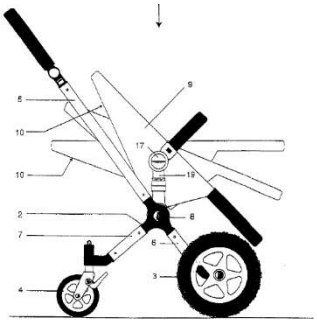
43. Another well-known stroller frame design included an upper frame tube and a lower frame tube joined together to form the longitudinal side members. (See *e.g.*, Exs., 1029, 1033, and 1040.) The joint between the upper and lower tube usually allowed movement between the upper and lower tube as explained in Exhibits 1029, 1033, and 1040.

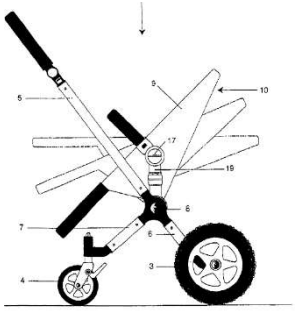




The hammock supporting frame 30 comprises side links 31 and foldable-in-two back-rest connecting links 32 interposed between the upper ends of said links 31. Secured to relatively lower regions of the side links 31 are support frame pivotal mounts 33 having openings 34 for receiving the previously mentioned pivot pins 8 for the pivotal mounts 8, said hammock support frame 30 being pivotally supported with respect to the front legs 3 similarly to the push rods 5 and rear legs 3.

(EX1029, U.S. Patent No. 4,191,397, 4:26–35 and Figs. 1, 5.)





FIGS. 1 to 4 show the buggy 1, which comprises a frame 2 with front wheels 3 and rear wheels 4, a pull and push bar 5, front wheel bars 6 and rear wheel bars 7, which support the front wheels 3 and rear wheels 4 and which are connected to the pull and push bar 5 by means of a coupling device 8.

(EX1030, U.S. Patent No. 6,513,827 to Barenbrug, 2:50–55 and Figs. 1, 2.)

44. A 2007 YouTube video for the "UPPAbaby Vista" stroller also

discloses a foldable frame having a U-shape bottom frame assembly.[2, 3]



EX1031, Holly Schultz Dec., Ex. 2 at 21secs., 1 min. 18secs.

[2] *See* Exhibit 1031, Declaration of Hollie Schultz ("Hollie Schultz Dec."), ¶¶14-17.

[3] I understand the Ms. Schultz has provided a declaration confirming this video was uploaded and made publicly available without restrictions on YouTube on June 12, 2007.



EX1032, Declaration of Greg Allen, Ex. 3[4] [5]

2. Folding Mechanism

45. The foldability or collapsibility of child strollers is a common and well-known design element allowing strollers to be easily stored (*e.g.*, within a trunk of a vehicle) or transportable when not in use. These developments were widely documented in the patent literature and demonstrated the industry's focus on balancing convenience with structural integrity.

46. By 2008, various folding mechanisms for child strollers existed. These included flat fold, umbrella fold/three-dimensional fold, two-piece fold, compact tri-fold, one-hand fold, one-touch fold, one-step fold, five-second fold, quick fold

[4] See EX1032, Declaration of Greg Allen ("Greg Allen Dec."), ¶¶ 14-15 and Ex. 3—*How Sweet Is The iCandy Apple Stroller?* DaddyTypes Blog, (July 7, 2006) https://daddytypes.com/2006/07/07/how_sweet_is_the_icandy_apple_stroller.php

[5] I understand Greg Allen has provided a declaration confirming these images were uploaded and made publicly available without restrictions on his blog DaddyTypes on July 7, 2006.

system, and standing fold. (EX1031, Hollie Schultz Dec., Ex. 10, 284–286.)

47. Examples of "flat fold" mechanisms are described in U.S. Patent Nos. 7,641,216, 3,390,893, and 4,398,748. As shown below, these patents disclose a stroller that can fold flat (*i.e.*, collapse upon itself) so as not to increase the footprint of the stroller when folded. These strollers use a folding joint between the upper and lower tubes of the longitudinal frame members.

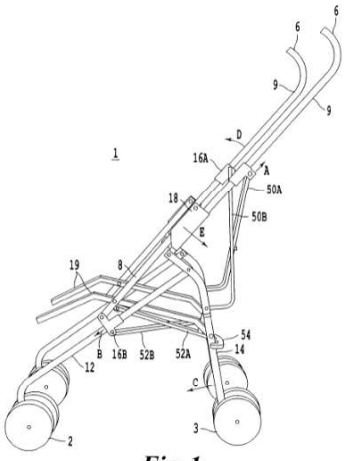


Fig.1

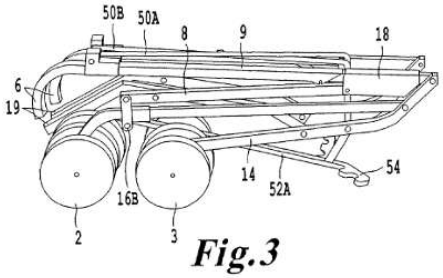


Fig.3

Exemplary aspects of the invention provide a method of folding a stroller including two handle frames, two front legs and two rear legs configured to support the stroller in an upright position, the front legs pivotally attached to respective rear legs, a chair portion, including a back rest, a seat and a leg rest pivotally attached to the seat, two pivot frames pivotally attached to respective handle frames, the back rest and the rear legs, two arm rests, and two sliders pivotally attached to respective pivot frames, the back rest, respective arm rests and the seat and configured to slide along the respective front legs.

(EX1033, U.S. Patent No. 7,641,216, 3:15–24 and Figs. 1, 3.)

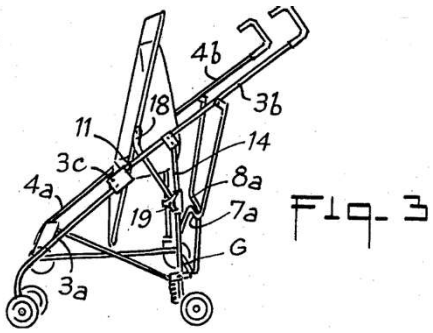


Fig. 3

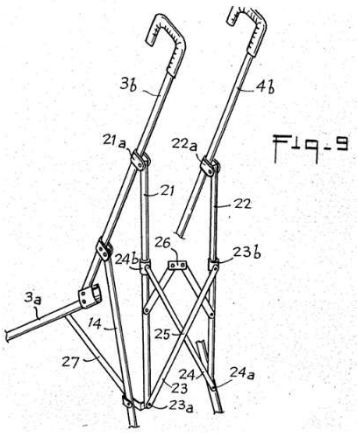


Fig. 9

[C]hild's stroller constituted by a frame 1 and a body 2 pivoted on the frame. The frame 1 comprises in known manner two lateral carrier elements 3 and 4, substantially parallel to each other, defining in unfolded position an inclined frontal plane. Each of these carrier elements 3 and 4 is composed of two parts 3*a*, 3*b*; 4*a*, 4*b*, articulated on one another (at 3*c* for the carrier element 3) so as to be foldable on themselves about this articulation.

(EX1034, U.S. Patent No. 4,398,748, 3:27–35 and Figs. 3, 9.)

48. These folding designs continue to be used in modern commercial products. For instance, foldable strollers available in 2007–2008 included the UPPAbaby Vista stroller, the Joovy Caboose stroller, the Mutsy 4Rider stroller, the Valco Baby TriMode stroller, the Dreamer Design Park Avenue stroller, the Graco Quattro Tour Duo stroller, and the Peg Perego Skate stroller—all featured in videos showing folding and unfolding on the Baby Gizmo YouTube channel.[6]

[6] *See, e.g.*, Ex. 1031, Hollie Schultz Dec., Ex. 2—BabyGizmoCompany, *Baby Gizmo Uppa Baby Vista*, *YouTube*, https://www.youtube.com/watch?v=9IrmQs8kL5I (June 12, 2007); *see also* Ex.



EX1031, Hollie Schultz Dec., Ex. 2 at 2 mins. 5 secs., 2 mins. 15 secs.

49. The folding mechanisms include an associated actuator, such as a button or pull strap, that is operably coupled thereto and releases the locks of the folding mechanism, allowing the stroller to be folded. An example of this is disclosed in U.S. Patent Publication No. 2008/0238042. (EX1035.)

1031, Hollie Schultz Dec., ¶¶14, 18 (It is my understanding that paragraph 18 mistakenly identifies the Uppa Baby Vista stroller as the Baby Planet Unity Sport Double stroller).

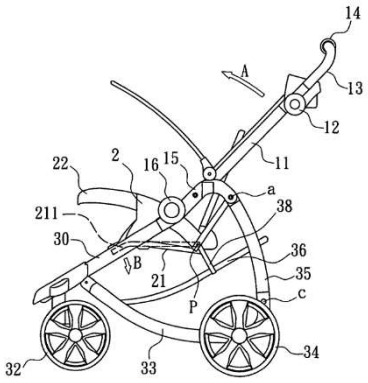


Fig.5A

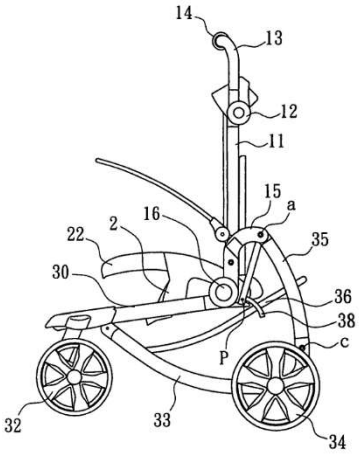


Fig.5B

The stroller shown in FIG. 5A is in a fully expanded state and when the stroller needs to be collapsed, the user first operate **the collapsing operation device 14** disposed on the handle 13 to actuate the locking member (a first locking device) disposed on the upper frame tube 11 or the connecting member 15 to cause the upper frame tubes 11 unlocked from the front legs 30 and thus the upper frame tubes 11 and the handle 13 is able to pivot forwardly about the connecting seat 16 toward the front legs 30 (as indicated by arrow A), and the front legs 30 in turn pivot downwardly toward the base frame tubes 33 (as indicated by arrow B) and into a state in which they are substantially parallel to the supporting tubes 211 of the seat portion 21 of the seat unit 2 (i.e., the biasing spring 50 is not twisted), as shown in FIG. 5B.

(EX1035, U.S. Patent Publication No. 2008/0238042, ¶ 0034 (emphasis added) and Figs. 5A, 5B.)

3. Stroller Wheels

50. It is also well known that strollers may include any combination of front and rear wheels. The number of wheels and location are not design critical and are typically chosen to comply with other more critical aspects of the design.

> **The number of wheels is irrelevant**; you're looking for a good turning radius, easy maneuverability, and quality wheels.

(EX1031, Hollie Schultz Dec., Ex. 10—*The Baby Gizmo Buying Guide*, 291.)

51. Most strollers include two wheels (or wheel pairs) in the rear, whereas

the front varies with common configurations being one, two, or three wheels (or wheel pairs). For instance, jogging strollers commonly have a single, large front wheel. (EX1031, Hollie Schultz Dec., Ex. 10—*The Baby Gizmo Buying Guide*, 324–325.) In contrast lightweight/umbrella strollers come in both three-, four-, or other multi-wheel variants. (EX1040 (three wheels), EX1029 (four wheels), EX1033 (eight wheels).) Designers have long understood the pros and cons of different wheel sizes, placements, and configurations; therefore, choosing among them is a routine exercise for stroller designers.

4. Rotatable and Detachable Seats

52. Another known design aspect of strollers—both single and doubles—is the ability to have one or both seats be detachable/reversible thereby providing various functionality for the stroller.

53. As I previously discussed, U.S. Patent No. 405,600 describes a stroller having a rotating carriage that allowed the child to face forward or backward. (EX1026, Richardson, 2:54–58.)

54. U.S. Patent No. 6,513,827 ("'827 Patent") (EX1030, Barenbrug) is a more modern example of a stroller having a reversible seat. Unlike earlier designs, the seat of the '827 Patent is completely detachable from the frame to allow for reversal.

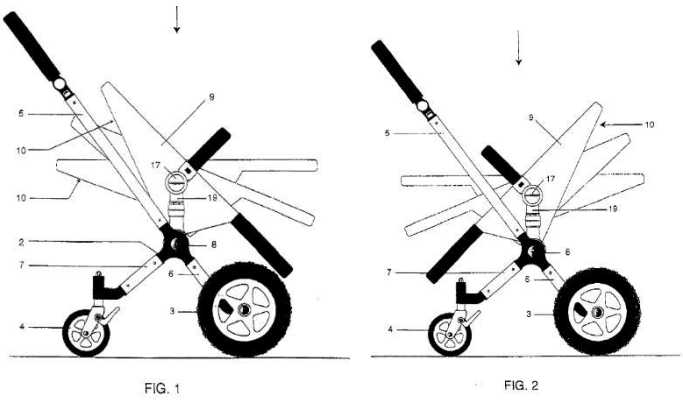


FIG. 1 FIG. 2

EX1030, Barenbrug, Figs. 1, 2

55. The design disclosed in the ’827 Patent proved to be a commercial success and has been widely copied. The assignee of the ’827 Patent, Royalty Bugaboo Sarl, is a well-known stroller manufacturer that came to market in the United States in the early 2000s as the commercial “Bugaboo” stroller line.

56. The success of the Bugaboo design (which was commensurate with the embodiments disclosed in the ’827 Patent) resulted in other stroller manufacturers launching similar designed strollers. (*See, e.g.*, EX1032, Greg Allen Dec., Ex. 1[7].)

57. Other strollers having detachable seats became available in 2007–2008. For example, the UPPAbaby Vista stroller, the Mutsy 4Rider stroller, and the Dreamer Design Park Avenue stroller all featured detachable and rotatable seats.

[7] Ex. 1032, Greg Allen Dec., ¶ 7 and Ex. 1—*In The Beginning was the Bugaboo*, DaddyTypes Blog, (Sept. 13, 2004) https://daddytypes.com/2004/09/13/in_the_beginning_was_the_bugaboo.php.

The Baby Gizmo YouTube channel includes many videos showing how the seats of these strollers could detach, rotate, and reattach. (See EX1031, Hollie Schultz Dec., ¶¶ 14, 24, 41 and Exs. 2, 4, 7.)

58. Double strollers may also have reversible and detachable seats. For example, U.S. Patent No. 6,086,087 to Yang (EX1037) shows a double tandem stroller with a front seat facing forward, facing backward, and a removable back seat.

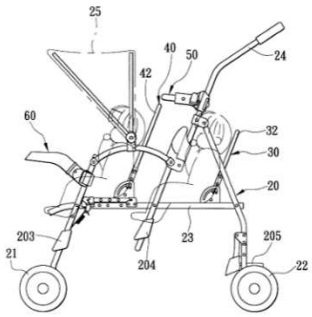


FIG. 12

FIG. 12 illustrates the preferred embodiment in a first state of use. As shown, the detachable seat member 40 is mounted on the stroller frame 20 such that the child to be seated thereon can face forwardly.

(EX1037, Yang, 6:51–54, Fig. 12.)

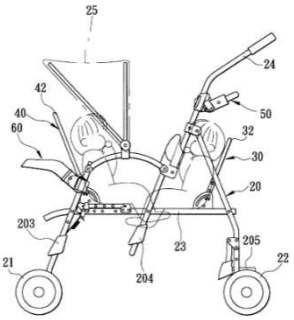


FIG. 13

FIG. 13 illustrates the preferred embodiment in a second state of use. As shown, the detachable seat member 40 is mounted on the stroller frame 20 such that the child to be disposed thereon can sit in a face-to-face relationship with another child seated on the non-detachable seat member 30.

(EX1037, Yang, 6:55–59, Fig. 13.)

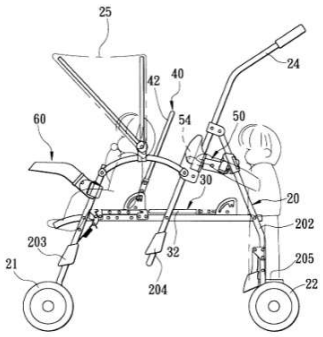


FIG. 14

FIG. 14 illustrates the preferred embodiment in a third state of use. As shown, the detachable seat member 40 is mounted on the stroller frame 20 such that the child to be seated thereon can face forwardly.

(EX1037, Yang, 6:60–63, Fig. 14.)

59. Another example may be seen in U.S. Patent No. 5,338,096 to Huang, showing the front seat capable of being locked in a forward position or backward position.

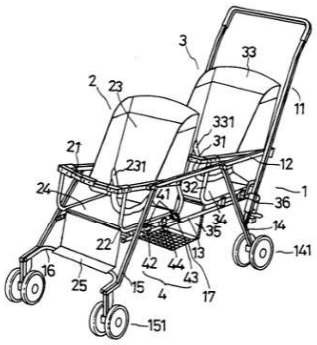


FIG.1

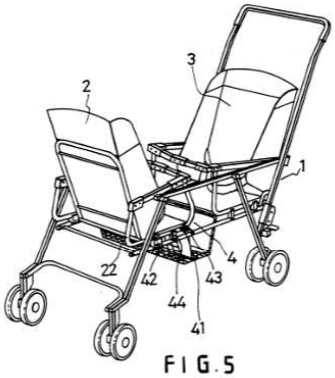


FIG.5

This invention has been devised to offer a double stroller with a front seat capable to be turned around to face a rear seat so that two babies sitting on the two seats may play with each other.

(U.S. Patent No. 5,338,096, 1:15–18.)

60. Further, there were commercial products available before late 2008 that had rotatable and detachable seats. For example, the Kolcraft Contours Options Tandem stroller had reversible seats capable of being oriented so either (A) both seats faced the parent, (B) both seats faced away from the parent, (C) the seats faced each other, (D) the seats were oriented back-to-back, or (E) only one seat was

attached. (EX1038, Kolcraft Contours Options Tandem Instruction Sheet, 15[8] (obtained from https://web.archive.org/web/20081010100559/http://common.csnstores.com/common/marketing/baby/kolcraft/cnt1016instruction.pdf., Oct. 10, 2008), Ex. A to Affidavit of Christopher Butler.)



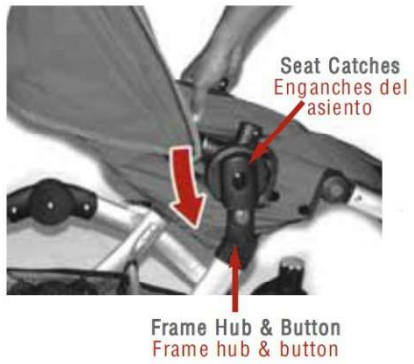
EX1038, Kolcraft Contours Options Tandem Instructions, Cover Page



EX1038, Kolcraft Contours Options Tandem Instructions, 15

61. The Kolcraft Contours Options Tandem instructions also disclosed how to attach the reversible seats to the frame:

[8] Referenced page numbers are those found in the middle of each page directly below the instruction images.





1 Align ***Reversible Seat*** catches over frame hubs as shown and push Reversible Seat down onto the frame hubs until a "Click" is heard on both sides.

2 The button on the frame hubs should be seen through both ***Reversible Seat*** catches. Pull up on the seat to make sure the seat is securely attached.

3 Repeat Steps 1 and 2 for other ***Reversible Seat***.

NOTE: To remove ***Reversible Seat***, push both buttons on the frame hub in, than lift the Reversible Seat up.

EX1038, Kolcraft Contours Options Tandem Instructions, 15–16

C. Stroller Types

62. Considering the state of the art of the stroller industry as of late 2008, the stroller market could be subdivided into the following general categories: carriages, single standard strollers, travel systems, lightweight-plus strollers, lightweight/umbrella strollers, luxury stroller systems, all-terrain strollers, jogging strollers, double standard strollers, double lightweight/umbrella strollers, double all-terrain strollers, double jogging strollers, strollers-and-a-half, and multiples strollers. (EX1031, Hollie Schultz Dec., Ex. 10—*The Baby Gizmo Buying Guide*, 279–281.) I summarize these design types below.

1. Single Strollers

63. Single-seat strollers, designed for transporting one child at a time, have been a staple for parents for decades. These strollers offer a compact and convenient solution for caregivers, allowing for easy navigation through crowded spaces and narrow pathways. While families with multiple children often own more than one single-seat stroller, managing multiple strollers simultaneously can be impractical for a single caregiver. As a result, the single-seat stroller remains the go-to option for parents prioritizing individualized attention and mobility for a single child. There were numerous issued patents and commercial products (*e.g.*, Bugaboo and iCandy) that exemplified the common nature of these stroller designs.

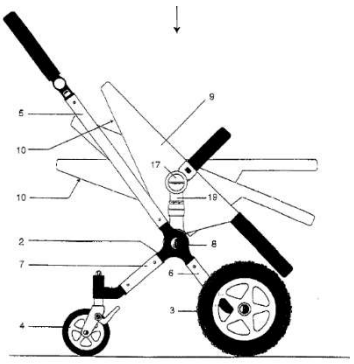


FIG. 1

EX1030, Barenbrug, Fig. 1



EX1032, Greg Allen Declaration, Exhibit 1 – Bugaboo Stroller



EX1032, Greg Allen Declaration, Exhibit 3 – iCandy Apple Stroller

2. Double Strollers

64. Double strollers for transporting more than one child at a time were also well known by 2008. Many parents with multiple children have two or more single strollers, but it is cumbersome for one person to safely push and control multiple strollers simultaneously. To address the need to transport more infants, multi-child

strollers were developed. One of the earliest examples of a double stroller may be seen in U.S. Design Patent No. 162,495 granted in 1951:



U.S. Design Patent No. 162,495, Fig. 1

65. Double strollers can generally be split into two main types: side-by-side orientation of the seats and tandem orientation of the seats.

a. Side-by-Side Double Strollers

66. The side-by-side configuration places two seats next to each other, which may be ideal for families with twins or children of similar ages. Side-by-side strollers provide both children with an equal view and experience, often making them wider and harder to maneuver in narrow spaces. (EX1031, Hollie Schultz Dec., Ex. 10—*The Baby Gizmo Buying Guide*, 330.)

67. Exemplary side-by-side double strollers include U.S. Design Patent No. D382,516:



U.S. Design Patent No. D382,516, Fig. 1

b. Tandem Double Strollers

68. A tandem-configured double stroller positions one child behind the other, significantly reducing the stroller's overall width compared to side-by-side designs. This configuration allows parents to navigate narrow doorways, crowded sidewalks, and other tight spaces more easily, making it a popular choice for urban environments.

69. Tandem strollers often feature seats that can be adjusted independently, providing flexibility in positioning each child for comfort and convenience. Some models also offer options to reconfigure the seats to face each other or the parent, adding versatility.

70. An exemplary tandem double stroller is disclosed in U.S. Patent No 5,911,432 to Song.

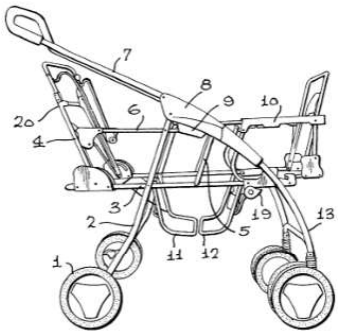
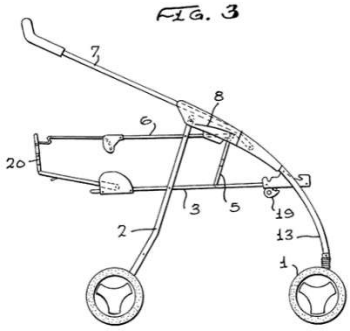


FIG. 1

FIG. 3



This invention is directed to a baby carriage which can be easily switched from two seats to one seat and vice versa without making it difficult to fold the carriage.

(U.S. Patent No 5,911,432, 1:18–20 and Fig. 1.)

Because the front seat is connected to the carriage frame through a locking device and can be removed from the carriage frame by unlocking the locking device, this two seat carriage can be easily converted into a one seat carriage. The additional space created when the two seat carriage is converted into a one seat carriage allows the remaining seat to be adjusted to permit the child to lie flat in the seat.

(U.S. Patent No 5,911,432, 1:49–56 and Fig. 3.)

71. Tandem strollers can be sub-divided further into a sub-category called "stadium seating" tandem strollers. In contrast with Song, which shows each of the two seats at the same horizontal level, stadium seating places the children at different heights from the ground, allowing both children to have unobstructed views.

Tandem Seating

The most popular seating arrangement in double strollers is the tandem, where one seat sits in front of the other. Many tandems go one step further and offer stadium seating, giving the little guy in back a view from the top. Tandem strollers are usually very stable, but can be a nightmare to maneuver. To make things easier, you should load the heaviest weight in the back seat, over the back wheels. While many manufacturers recommend placing an infant car seat carrier in the rear seat for safety (presumably so you can be closer to your baby), if you have a heavier toddler, this arrangement can be almost impossible to push. Many tandems only offer a full recline on the back seat, which is a total pain, because everyone wants to kick back sometimes. We look for tandems that allow both seats to recline. Many newer tandem strollers allow you to reverse the direction each seat faces independently, so your children can see where they're going, look at you, or even face each other.



EX1031, Hollie Schultz Dec., Ex. 10
***The Baby Gizmo Buying Guide*, 329–330**

72. Tandem stadium-style double strollers may have the seats directly attached to the main frame of the stroller. For example, French Patent 2,615,155 to Boidin that issued in 1987. (EX1039.)

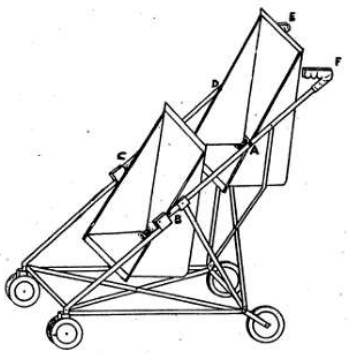


FIGURE 2

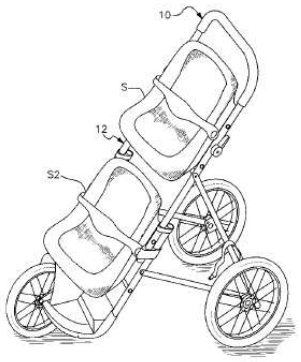
This stroller has two seats located on the same chassis at different heights.

(EX1039, FR 2,615,155, ¶ 0003 and Fig. 2.)[9]

73. Another example of a tandem stadium-style double stroller is U.S.

[9] Ex. 1039 is a non-certified translation of French Patent 2,615,155 to Boidin.

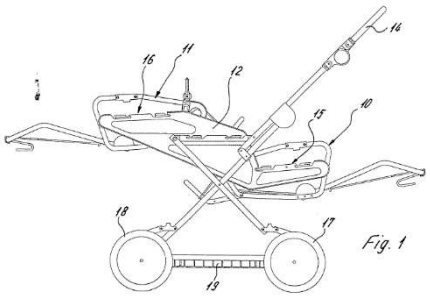
Patent No. 6,209,892 to Schaaf that issued in 2001. (EX1040.)



It is a further object of this invention to provide a baby stroller for twins and other multiple numbers of children that supports the babies vertically with respect to one another such that the stroller is conveniently maneuverable and the babies' observation positions can be readily adjusted when desired.

(EX1040, Schaaf, 2:27–32, Fig. 10.)

74. Some tandem double strollers include a subframe structure attached to the stroller frame to which two seats may be attached in a stadium-style orientation. An example may be seen in EP 0980810 to Götting and assigned to stroller manufacturer Britax, which issued in 2000. (EX1041.)



In a preferred embodiment, the seats are attached to two adapters on the sides of the frame. These adapters are designed such that they can be mounted in two positions, to obtain the above possibilities for overlapping the seats.

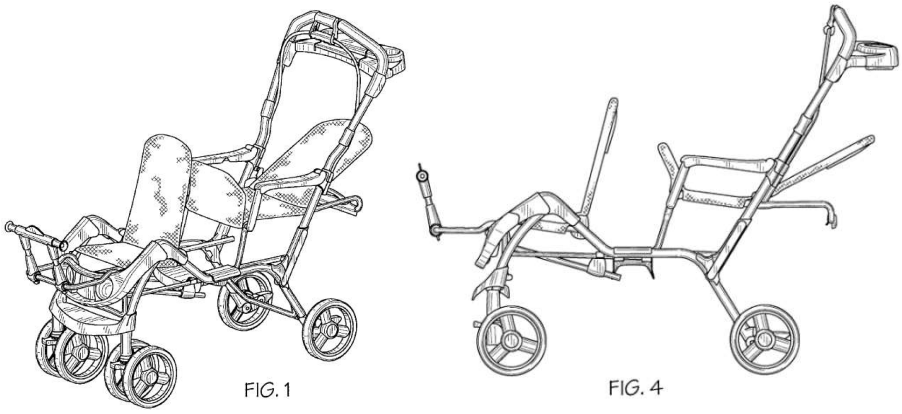
(EX1041, EP 0980810, ¶ 0007.)

75. Another example is the commercial "Bebe Confort" which was introduced in 2004.

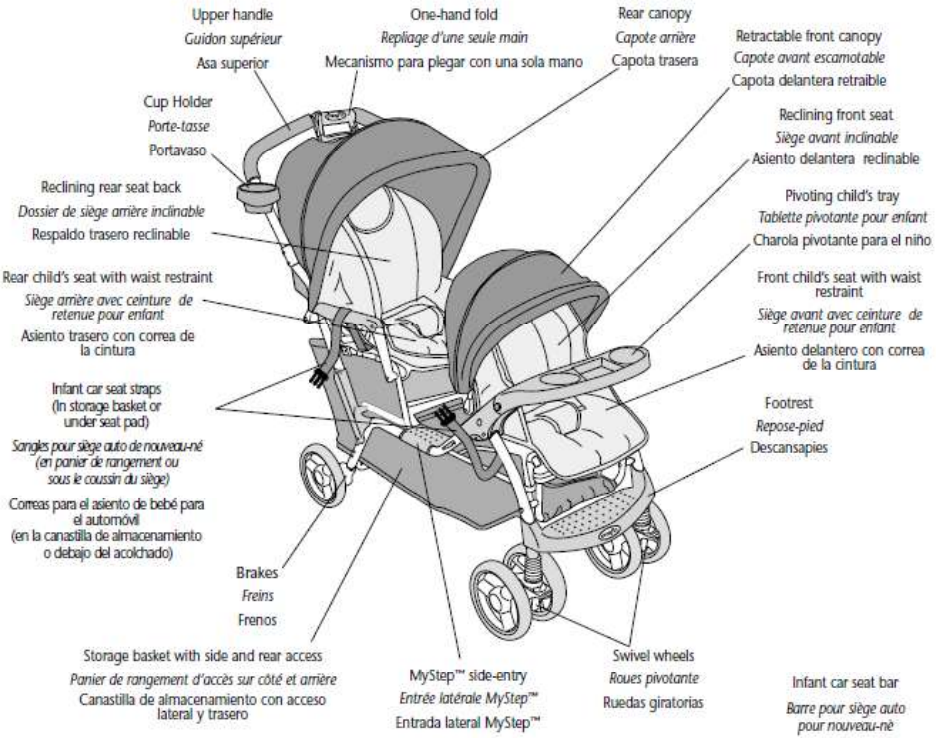


EX1032, Greg Allen Dec., Ex. 2—*Bebe Confort Twin Stroller*

76. Another example of a tandem double stroller is disclosed in U.S. Design Patent 514,036, which was granted in 2006 and is assigned to Evenflo Co. Inc. (EX1042.) As seen in the Figures of U.S. Design Patent 514,036, the front seat is oriented at a lower vertical position than the back seat. A 2004 stroller by Evenflo called the "Take Me Too" illustrates a commercial version of a tandem double stroller.



EX1042, U.S. Patent Design 514,036, Figs. 1 and 4



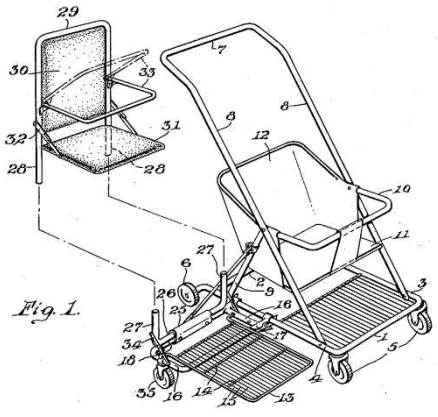
EX1043, Take Me Too Manual, p. 1

77. Each of these strollers demonstrate how stadium-style seating can be achieved through variations in frame structure and seat attachment mechanisms and that these designs were well known by at least 2008. These designs illustrate different approaches to elevating one seat relative to the other to provide improved visibility and accessibility for the child seated in the rear position and underscore the evolution of double tandem stadium strollers before 2008. This plethora of example stadium style seating prior to 2008 underscores that mixing and matching various features of these disclosed designs was merely routine design work to a POSITA by 2008.

3. Single-to-double or Double-to-triple Strollers

78. By 2008, designs for strollers capable of converting from a single stroller to a double stroller upon the birth of a second child were well established in the art. These convertible stroller designs provided a practical solution for growing families, offering flexibility and cost savings by eliminating the need to purchase a separate double stroller. Typically, such strollers featured modular systems that allowed for the addition of a second seat or a ride-along platform, enabling parents to adapt the stroller to their changing needs. Designs for single-to-double strollers included attachments intended to convert any single stroller into a double stroller, while other strollers were specifically designed to expand from a single to a double.

79. Single-to-double strollers that attached a second auxiliary seat were well known in the art to create a tandem stroller. For example, U.S. Patent No. 3,000,645 to Schmidt disclosed a removably attachable second seat attachable to the side of the stroller, creating a side-by-side orientation of the children.



A further object, therefore, is to provide the combination of any well known form of baby carriage with a readily attachable and detachable auxiliary vehicle, which preferably is supported at its outer free edge portion by a single wheel, and otherwise essentially comprises a platform capable of satisfactorily supporting one or more children other than the occupant of the baby carriage, and upon which may be readily mounted a preferably detachable seat[] … .

(U.S. Patent No. 3,000,645, 1:20–28.)

80. Other single-to-double strollers attached a second seat in front of the first seat to create a tandem stroller. For example, U.S. Patent No. 6,045,145 to Lan discloses a stroller and an auxiliary seat unit mountable to the stroller. (EX1044.)

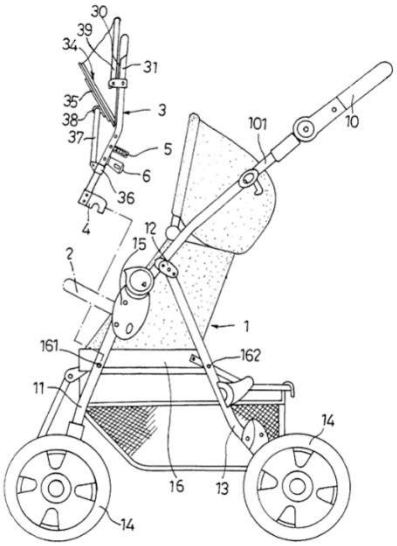


FIG. 1

Referring to FIGS. 1 and 3, the auxiliary seat unit 3 is to be mounted on a front side of the main frame 1, and generally includes an auxiliary frame 31, a seat portion 34, and a support frame member 37.

(EX1044, U.S. Patent No. 6,045,145, 2:22–25.)

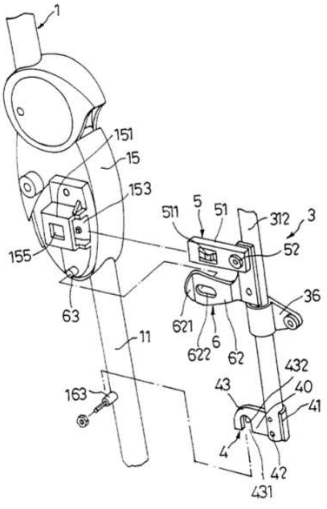


FIG. 4

Referring to FIG. 4, the locking unit 5 includes a pair of hollow locking seats 151 formed on inner sides of the connecting seats 15, and a pair of first insert members 51 mounted pivotally and held frictionally on the mounting posts 312 of the auxiliary frame 31 by means of a pair of pivot pins 52. Each of the locking seats 151 is formed with an insert hole 153 which opens forwardly, and has a side wall formed with a locking opening 155 communicated with the insert hole 153. Each of the first insert members 51 is insertable into the insert hole 153 of a respective one of the locking seats 151, and is formed with a resilient locking protrusion 511 which extends through and which engages the locking opening 155 when the first insert member 51 is inserted into the respective locking seat 151, thereby preventing undesired removal of first insert members 51 from the locking seats 151. The auxiliary seat unit 3 can thus be mounted on the front side of the main frame 1. The locking protrusions 511 are depressible for retraction into the locking seats 151 to permit release of the first insert members 51 from the locking seats 151.

(EX1044, U.S. Patent No. 6,045,145, 3:13–32.)

81. A commercial stroller design by iCandy included a conversion kit or subframe that allowed a single-seat stroller to be converted for use as a double-seat stroller. This subframe assembly would use the existing connection mechanism that existed when the stroller was used solely as a single-seat stroller. As shown below right, the subframe would then connect to the stroller frame allowing for either one or two seats to then be connected (shown below middle).



EX1032, Greg Allen Dec., Exs. 3 and 5

4. Travel Systems

82. Travel stroller systems allow a compatible infant car seat to be securely attached to the stroller frame. These systems allow parents to use the stroller frame with an infant car seat during the early months and transition to a standard stroller seat as the child grows. This design is often marketed as providing convenience for caregivers because it proports to enable seamless transitions between a vehicle and the stroller without disturbing the child. In practice, some of these systems are easier to use than others.

83. The basic travel stroller system offered was a standard single or double stroller with one or two seats for children and the ability to either directly or indirectly attach and secure an infant car seat to the stroller frame. Strollers that allowed for direct attachment of an infant car seat are disclosed in U.S. Design Patent No. 429,476 assigned to Graco Children's Products, Inc. (See also U.S. Design Patent No. 430,076.) Design Patent No. 429,476 is shown below:

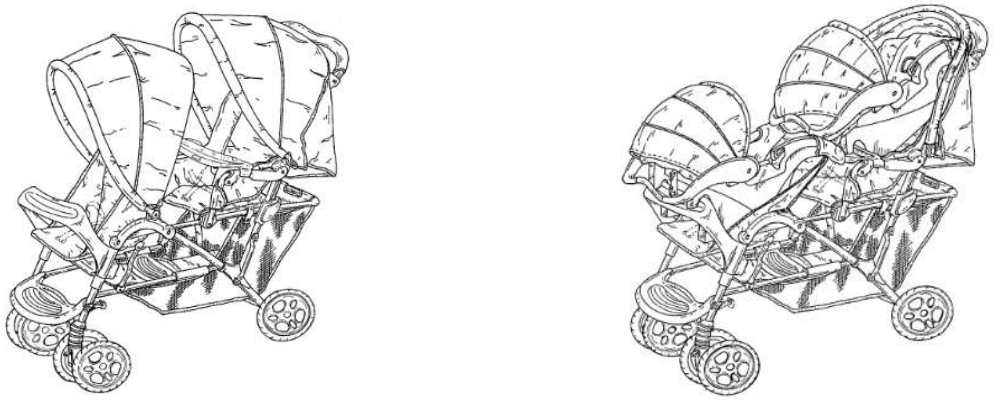
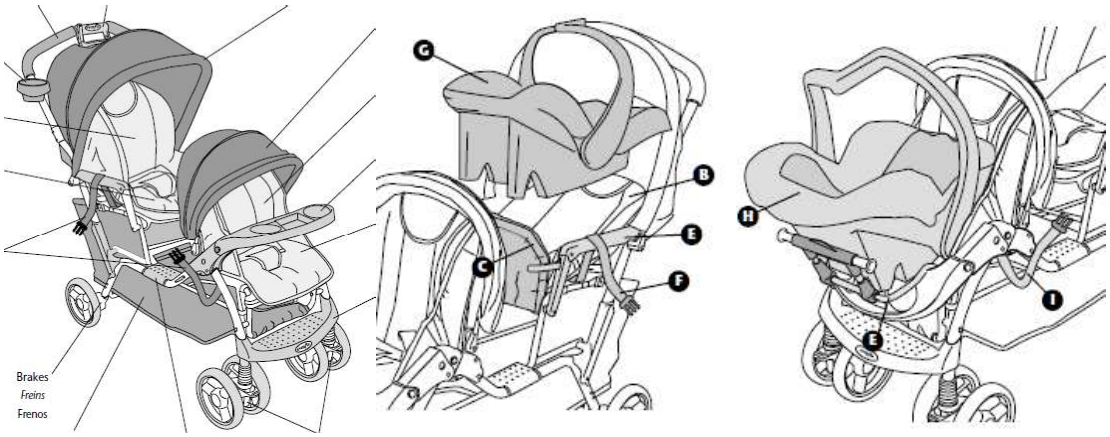


FIG. 1 FIG. 8

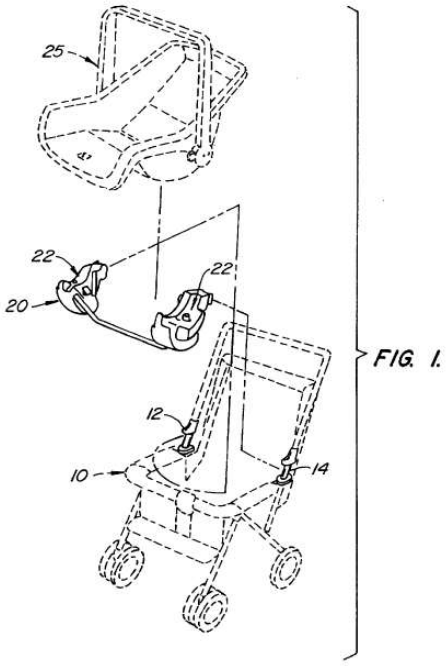
U.S. Design Patent No. 429,476, Figs. 1 and 8

84. Exemplary commercial products include the Evenflo Take Me Too (EX1043, Evenflo Take Me Too Manual, Oct. 2004,) which each allowed for placement of an infant car seat over the back seat, or over the front seat.



EX1043, Evenflo Take Me Too Manual, 1, 13, 14

85. Strollers designed for indirect attachment of an infant car seat typically required the use of an infant seat adapter. Once installed, the adapter enabled users to securely attach the car seat to the stroller frame, providing a stable and reliable connection. For example, U.S. Patent No. 5,794,951 to Corley discusses use of auxiliary attachments to install prior to infant car seat installation. (EX1045.)



Turning now to the drawings, FIG. 1 is an exploded perspective view illustrating the latching mechanism of the invention as applied to a combination child's car seat and stroller combination. As seen in this figure, a stroller shown in broken lines in part and generally designated with reference numeral 10 has a pair of support posts 12, 14 incorporated into the frame structure of the stroller 10. As described more fully below, support post 12 functions as a latch support post while support post 14 functions as a pivot support post.

(EX1045, U.S. Patent No., 5,794,951, 2:35–44.)

86. Related to travel systems, stroller frames designed exclusively for use with an infant car seat were also widely commercially available by 2008. These lightweight and compact frames served as a minimalist solution for parents seeking a convenient and portable option during the early stages of their child's life. The frames typically featured universal adapters or brand-specific compatibility, allowing the infant car seat to securely click into place. Once the child outgrew the infant car seat, these frames were often retired, making them a short-term but practical investment for newborns and infants.

87. Stroller frames containing attachments for car seats were available on the market by 2008. For example, the Bebe Confort was commercially available and offered for sale before 2008. (EX1032, Greg Allen Dec., ¶¶ 10-11 and Ex. 2.)[10]



EX1032, Greg Allen Dec., Ex. 2

[10] *Bebe Confort Twin Club Looks Great*, DaddyTypes Blog, (Sept. 24, 2004) https://daddytypes.com/2004/09/24/bebe_confort_twin_club_looks_great.php

88. Each of these strollers demonstrate how stadium-style seating can be achieved through variations in frame structure and seat attachment mechanisms. These designs illustrate different approaches to elevating one seat relative to the other to provide improved visibility and accessibility for the child seated in the rear position and underscore the evolution of double tandem stadium strollers before 2008.

89. Another known travel system was the "Vista" stroller which was designed by UPPAbaby and commercially available by June 2007. (*see* EX1031, Declaration of Holly Schultz, ¶¶14-18).



***See* Youtube video at: https://www.youtube.com/watch?v=9IrmQs8kL5I**

90. On September 10, 2008, UPPAbaby introduced a device called the "RumbleSeat" which could be the Vista stroller at the ABC Kids Expo in Las Vegas. The RumbleSeat was an optional seat assembly connectable to the Vista to provided

a dual-seat configuration. (EX1032, ¶¶30-35, Ex. 7.)

> Though the details are still shrouded in flash glare--or cropped out of the photo entirely, Pish Posh Baby has the scoop from ABC Kids Expo in Las Vegas, where Uppababy debuted a poster of a removable underseat seat for their flagship stroller, the Vista. The RumbleSeat allows you to stack your kids Phil & Teds-style, only they're facing toward you, so it's totally different.

(EX1032, Ex. 7, 46.)



EX1032, Ex. 7, 46



See **https://www.flickr.com/photos/24570716@N06/2844563925/**[11]

91. According to the 2008 blog post, the RumbleSeat was a removable "underseat .. for [Uppababy's] flagship stroller, the Vista." (EX1032, Ex. 7, 46.) that was connected to the lower tubes of the frame. As I have annotated below, attached to the ends of the U-shape frame were right and left beige/black brackets that allowed the RumbleSeat to be removably coupled to the right and left support members of the frame (see red circles). Each of the brackets included a receptacle located on the

[11] This "Flickr" link was provided in the September 2008 post by daddytypes. (*See* EX1032, ¶33 and Ex. 7, 46.)

top of the bracket for receiving the corresponding end of the U-shaped frame therein. The lower portion of each bracket was configured to couple with the lower tube of the frame.



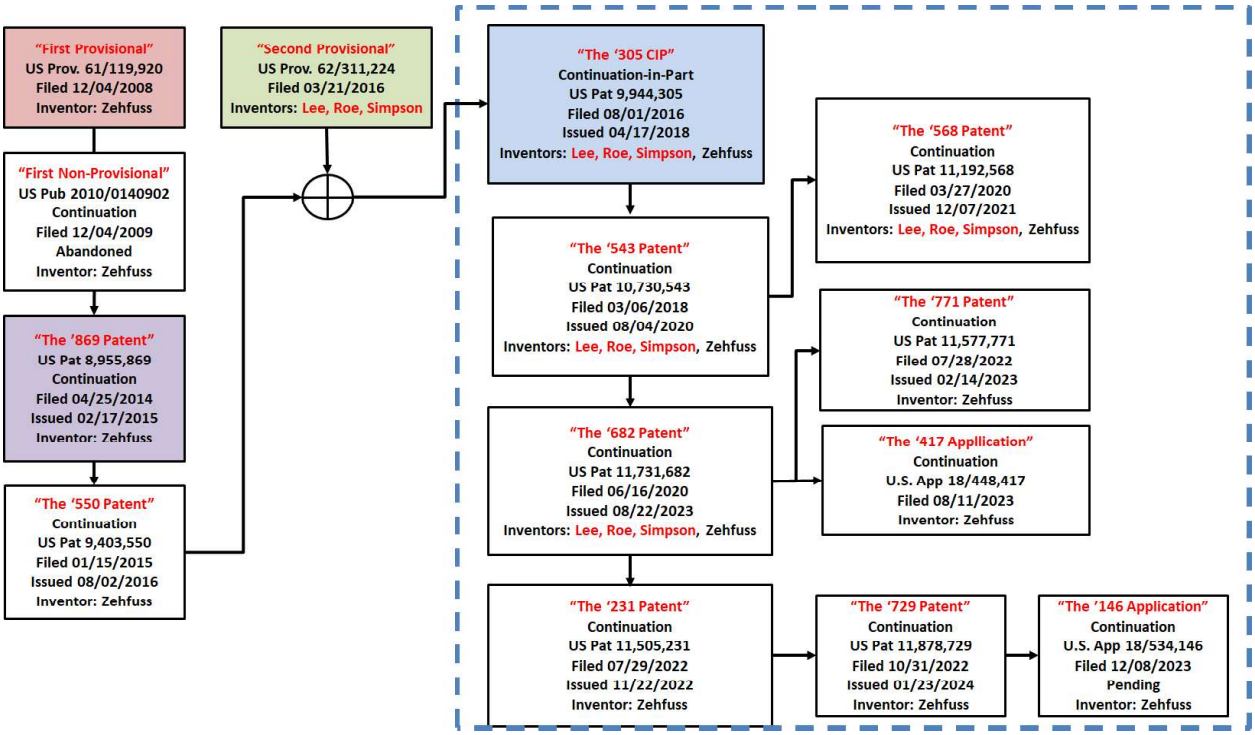
UPPAbaby Rumbleseat

V. Overview of the Baby Jogger Patent Family

92. The Baby Jogger family of related patents is illustrated below. As shown, and further explained below, both a December 4, 2008 application ("First Provisional") and a December 4, 2009 original application ("First Non-Provisional") named only Mark Zehfuss as the inventor.

93. A March 21, 2016 second provisional application ("Second Provisional") and a subsequent August 1, 2015 continuation-in-part application ("the '305 CIP"), which claimed priority to both the First and Second Provisional applications, identified Mr. Zehfuss **and** three new inventors—John Lee, Megan

Roe, and Noel Simpson.



Baby Jogger Patent Family

A. The First Provisional

94. As shaded in red in the above graphic, the Baby Jogger Patent Family begins with the December 4, 2008 filing of U.S. Provisional Patent Application No. 61/119,920 (EX1002; "the First Provisional").

95. The First Provisional only lists Mark Zehfuss as the sole inventor.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE RECD	ATTY DOCKET NO	TOT CLAIMS	IND CLAIMS
61/119,920	12/04/2008		110	DYN005		

CONFIRMATION NO. 6909

6980
TROUTMAN SANDERS LLP
600 PEACHTREE STREET , NE
ATLANTA, GA 30308

FILING RECEIPT

OC00000003821601

Date Mailed: 01/02/2009

Receipt is acknowledged of this provisional patent application. It will not be examined for patentability and will become abandoned not later than twelve months after its filing date. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, 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 Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections 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**

Applicant(s)

MARK ZEHFUSS, Residence Not Provided;

Power of Attorney: None

EX1002, First Provisional, 1

96. In reviewing the First Provisional, I have identified two different embodiments relating to a single seat stroller convertible to a double-seat stroller. The first embodiment, which I reference as "Embodiment A," for converting a single-seat stroller to a double-seat stroller is disclosed using Figures 1-3.

[0018] 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 a folding mechanism 16 that allows the stroller 10 to be folded to a more convenient size for storing or transporting the stroller 10.

■ ■ ■

[0020] The embodiment of the stroller 10 comprises two connector portions 17. The connector portions are preferably on the front of the stroller to allow the attachment and the seat to be connected to the front of the stroller 10. The connector portions 17 allow an attachment such as a conversion kit for converting the single stroller 10 to a double stroller, as shown in Figure 3, to be connected to the stroller. The embodiment of the stroller 10 has a left side and right side connector portions 17. An embodiment of an attachment of stroller 10 will comprise corresponding attachment portions capable of connecting to the stroller frame at the connector

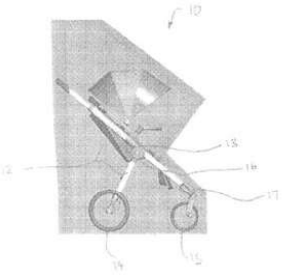


FIGURE 1

■ ■ ■

[0021] An embodiment of an attachment 20 of the invention is shown in Figure 2. The attachment of Figure 2 is in an unlocked and folded configuration. The attachment 20 comprises a pair of attachment portions 21 capable of connecting to the stroller frame 12, two seat attachment elements 22 capable of supporting a seat; and a wheel 23. In this embodiment, the attachment portions are connected to the rear of the attachment 20 allowing the attachment 20 to be connected to the front of a stroller, such as stroller 10 shown in Figure 1. Other embodiments of the stroller attachment may include more than one wheel, one attachment element, one seat attachment element, or combinations of these elements, for example or may not include a wheel. In an embodiment of the stroller with one wheel, the connector portion may be on the forks of the front wheel, for example.

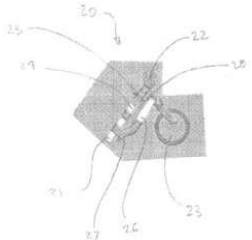


FIGURE 2

[0026] In Figure 3, the 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 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 attachment element of the attachment may be capable of supporting the front stroller seat in either a forward or backward position.

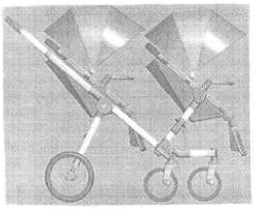
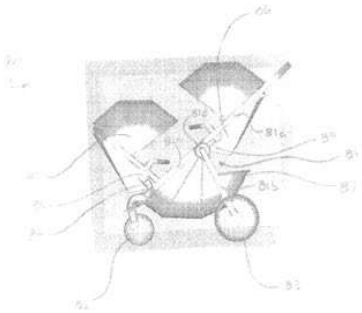


FIGURE 3

EX1002, First Provisional, 36-38, 40; Figs. 1-3

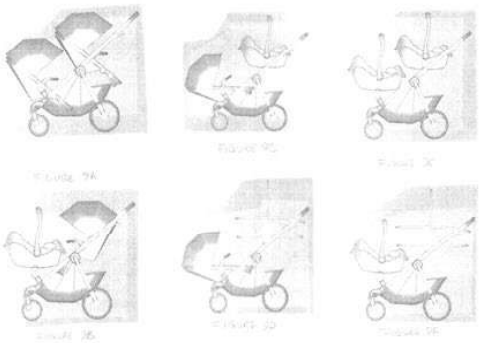
97. The second embodiment, which I reference as "Embodiment B," for converting a single-seat stroller to a double-seat stroller is disclosed using Figures 8 and 9A-9H.

[0033] 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.



■ ■ ■

[0036] Embodiment of the stroller 80 comprises a first seat attachment portion 84. The seat attachment portion 84 is connected to the stroller 80 front wheel support frame 81a. The seat attachment portion 84 is adjacent to the front wheel support portion 81a of frame 81. The seat attachment portion is capable of supporting a second seat in front of the stroller seat 86. This provides convenience and versatility to a user of stroller 80. Seat attachment portion may be fixedly attached or removably attached to front wheel support portion 81a. The front seat may be positioned substantially over the front wheels so the stroller remains stable. 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 attachment portion 84 comprises a seat connector 88. Seat connector 88 may be a multipurpose general connector that allows different seats to interchanged on the seat attachment portion 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.



■ ■ ■

[0016] Figures 9A, 9B, 9C, 9D, 9E, and 9F show various configurations of the embodiments of the stroller shown in Figure 8.

EX1002, First Provisional, 34, 42-43; Figs. 8, 9A-9F

B. The First Non-Provisional

98. On December 4, 2009 U.S. patent application No. 12/631,375 was filed. I understand this application published as U.S. Publication No. 2010/0140902. (EX1003, "the First Non-Provisional".)

99. The First Non-Provisional appears to have included the First Provisional's disclosure of "Embodiment A."

[0028] A side view of an embodiment a single stroller **10** is shown in FIG. **1**. As a note, FIG. **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 FIG. **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**.

■ ■ ■

[0030] 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 FIG. **3**, to be connected to the stroller. Only one seat attachment is shown in FIG. **3**, the stroller **10** would use two seat attachments as shown in FIG. **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.

[0031] An embodiment of a seat attachment **20** of the invention is shown in FIG. **2**. The seat attachment of FIG. **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 FIG. **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.

■ ■ ■

[0036] In FIG. **3**, the seat attachment **20** of FIG. **2** is shown connected to the single stroller **10** of FIG. **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.

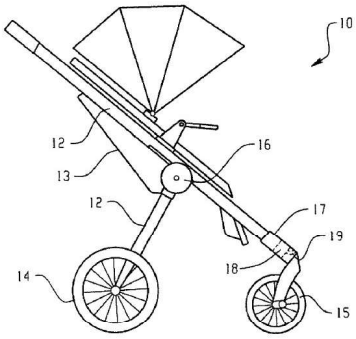


Fig. 1

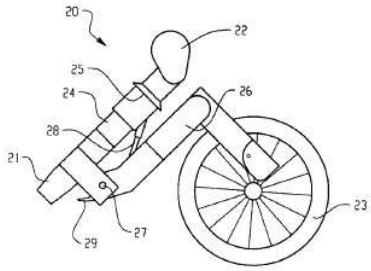


Fig. 2

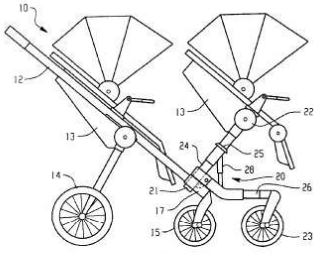


Fig. 3

EX1003, First Non-Provisional, ¶¶ 0028, 0030-0031, 0036, Figs. 1-3

100. The First Non-Provisional also appears to have included the First Provisional's disclosure of "Embodiment B" related to Figures 8 and 9A-9F.

[0043] A further embodiment of the stroller **80** is shown in FIG. **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 **81***a*, a back wheel support portion **81***b*, and a handle portion **81***c*. The frame **81** of the embodiment of the stroller **80** further comprises a folding mechanism **81***d* that connects front wheel support portion **81***a*, a back wheel support portion **81***b*, and a handle portion **81***c*. The folding mechanism **81***d* allows the stroller to be folded in a more compact size for storing or transportation. FIG. **8**A shows stroller **80** in a folded configuration.

[0046] 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 **81***a*. The seat support element **84** is adjacent to the front wheel support portion **81***a* 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 **81***a*. 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.

[0026] FIGS. **9**A, **9**B, **9**C, **9**D, **9**E, and **9**F show various configurations of the embodiments of the stroller shown in FIG. **8**.

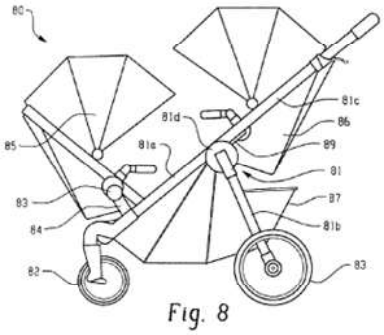
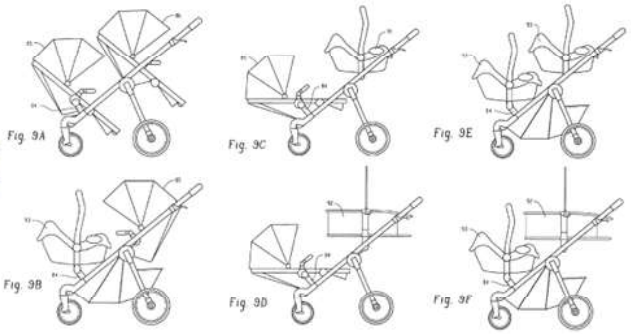


Fig. 8



EX1003, First Non-Provisional, ¶¶ 0026, 0043, 0046, Figs. 8, 9A-9F

101. On March 28, 2013, while prosecution of the First Non-Provisional was ongoing, the Examiner indicated a figure was needed to illustrate how "Embodiment A" (*i.e.*, Figures 1-3) discloses "one attachment portion" being attached to one front wheel and "the other attachment portion" being attached to the other front wheel.

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 following from Claim 16 must be shown or the feature(s) canceled from the claim(s): "wherein one attachment portion is connected adjacent to one front wheel and the other attachment portion is connected to the frame adjacent to the other front wheel." 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.

EX1014, File History of First Non-Provisional, 183-184

102. On June 12, 2013, the Patent Owner responded by attempting to amend the specification to include Figures 10 and Figure 11 (shown below). The Patent Owner also attempted to amend the specification to include the following description for both Figures 10 and 11.

AMENDMENT TO THE SPECIFICATION

Please add the following paragraphs to the specification after paragraph [0026]:

"FIG. 10 shows a perspective view of an embodiment of a stroller comprising two attachment frame members 17 capable of reversibly receiving two separate seat attachments 20 84, wherein the seat attachments each comprise a seat attachment member 22 for converting the stroller into a double stroller, the seat attachment comprising a connector portion capable of reversibly connecting to one of the attachment portions above a front wheel of the stroller and a seat attachment member capable of supporting a second seat in either a forward or backward position;

FIG. 11 shows a close up on the stroller, stroller front wheel, attachment portion 17 of the stroller adjacent to the front wheel comprising slot 18 and the seat attachment 84."

EX1014, File History of First Non-Provisional, 221

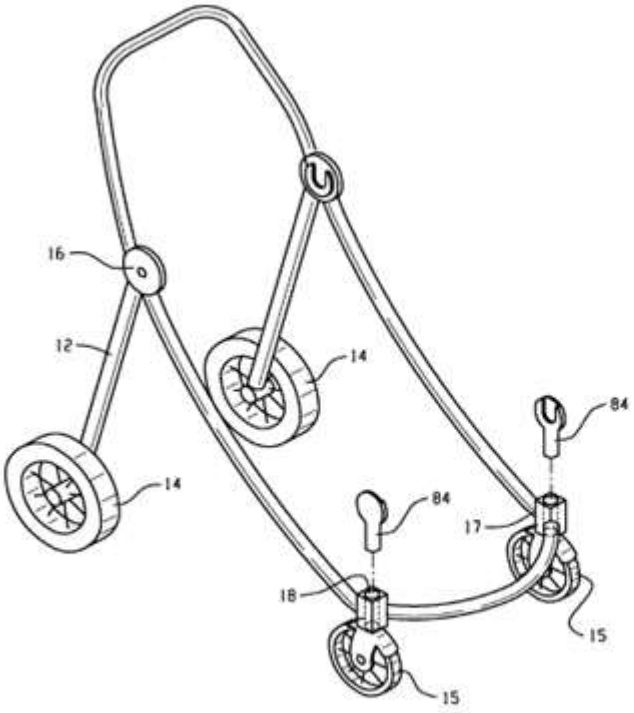


Fig. 10

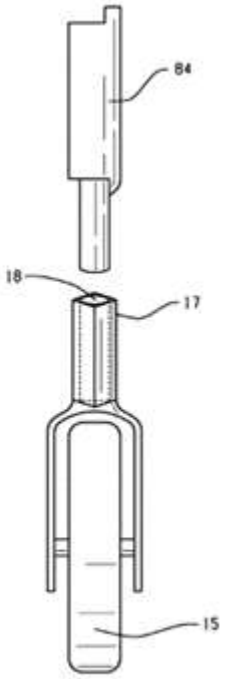


Fig. 11

EX1014, File History of First Non-Provisional, 233-234

103. On August 2, 2013, the Examiner objected stating Figures 10-11 do not appear to be directed to the embodiment disclosed by Figures 1-3. The Examiner

instead indicated Figures 10-11 appear to be directed to "a different embodiment and do not contain the same elements as claimed[.]"

7. The new drawings submitted 6/12/2013 labeled Figures 10 and 11 (along with the previously submitted Figures 1-3) are objected to as failing to comply with 37 CFR 1.84(p)(4). Specifically, it is unclear whether the new Figures are the requested "frontal view" showing "how the seat attachment and stroller mate" pertaining to the elected embodiment in Figures 1-3. As best understood, the new figures appear to be directed to a different embodiment and do not contain the same elements as claimed nor do they illustrate "how the seat attachment and stroller mate." Furthermore, they do not contain the seat attachment or its extra wheel as claimed (See, e.g., Claims 2 and 16). Claim 16, as currently claimed, provides for a stroller with at least three wheels in the front which the drawings do not currently illustrate. 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. 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.

EX1014, File History of First Non-Provisional, 276-277

104. It does not appear this objection was ever addressed and the Patent Owner ultimately elected to abandon the First Non-Provisional. (EX1014, File History of First Non-Provisional, 520-521.)

◉ Applicant hereby expressly abandons the instant application (any attorney/agent signing for this reason must have power of attorney pursuant to 37 CFR 1.32(b)).

EX1014, File History of First Non-Provisional, 521

C. The '869 Patent

105. On Apr. 25, 2014, just before the First Non-Provisional was abandoned, Patent Owner filed U.S. patent application No. 14/261,558 which issued as U.S. Pat. No. 8,955,869 (EX1004, "the '869 Patent"). I understand the '869 Patent claims priority to the First Provisional.

106. As filed, the '869 Patent appears to include the disclosure regarding "Embodiment A" (*see* EX1004, the '869 Patent, 4:40-48, 5:11-44, 7:5-13) and "Embodiment B" (*see* EX1004, the '869 Patent, 8:49-62, 9:36-56, 3:66-67).

107. But when filed, the Patent Owner elected to include Figures 10-11. As I explained above, these figures had been objected to by the Examiner during prosecution of the First Non-Provisional on June 12, 2013.

108. When added to the '869 Patent, Figures 10-11 included only the following description.

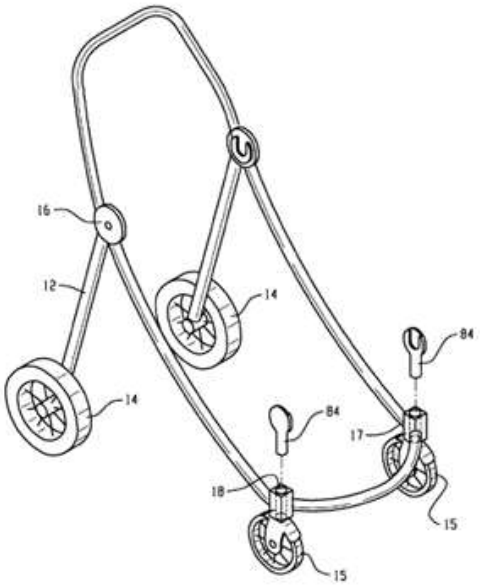


Fig. 10

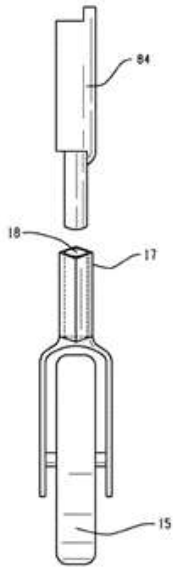


Fig. 11

FIG. **10** shows a stroller with left and right attachment frame members for attaching a second seat; and

FIG. **11** shows an attachment frame member with a cylindrical post to be received in a slot in a stroller frame.

EX1004, '869 Patent, 4:1-4, Figs. 10-11

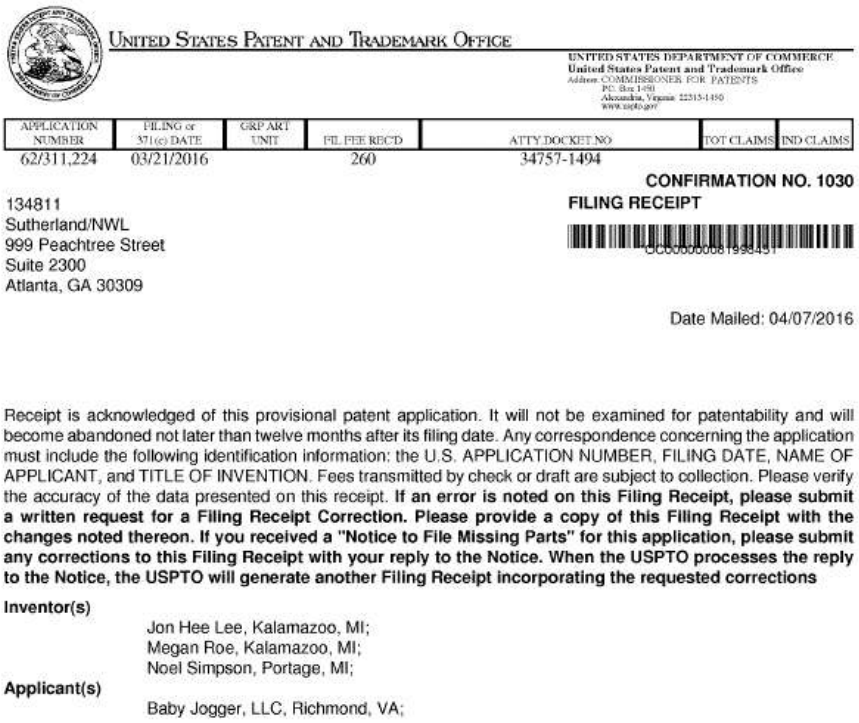
109. As I explained above, I understand the Examiner objected to these two drawings when introduced as not being representative of the embodiment shown by Figures 1-3, *i.e.,* "Embodiment A." (EX1014, First Non-Provisional File History, 276-277.)

D. The Second Provisional

110. On March 21, 2016 the Patent Owner filed U.S. Provisional Patent

Application No. 62/311,224 (EX1006, "Second Provisional".)[12]

111. The Second Provisional does not list Mr. Zehfuss as a named inventor. Instead, as shown below the Second Provisional lists John Lee, Megan Roe, and Noel Simpson as named inventors.



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Date Mailed: 04/07/2016

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Inventor(s)

Jon Hee Lee, Kalamazoo, MI;
Megan Roe, Kalamazoo, MI;
Noel Simpson, Portage, MI;

Applicant(s)

Baby Jogger, LLC, Richmond, VA;

EX1006, Second Provisional, 1

112. The Second Provisional disclosed multiple new embodiments not previously disclosed.

113. In general, the Second Provisional discloses multiple embodiments

[12] I have been informed by my attorneys the Second Provisional is not permitted to claim priority to the originally filed First Provisional application.

disclosing the novel design and operation of "seat attachment adapters" and "seat attachment housings" to allow a single-seat stroller to be adjusted to a double-seat stroller.

114. For instance, Embodiment C[13] discloses and provides exemplary drawings (Figures 1A-1H, 2, and 4A-4C) pertaining to features of the "seat attachment adapters" and "seat attachment housings." In stepping through the various drawings, the Second Provisional also details how the "seat attachment adapters" can operate in conjunction with the either the "stroller frame" or the "seat attachment housings."

[13] To avoid confusion, I maintain the labels Embodiments A-B pertaining to the First Non-Provisional and will use Embodiments C-D for what is disclosed by the Second Provisional. I also note that Embodiment C could be considered multiple different embodiments based on what is disclosed.

Figures 1A-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. Referring now to Figures 1A-H, the example stroller apparatus 10 can include a stroller frame 11 capable of supporting one or more stroller seats 15, 16. In one example embodiment, the stroller frame 11 can made of one or more pieces fixedly coupled and/or removably coupled to one another. The stroller frame 11 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.

■ ■ ■

decoupled from the frame 11 and stored when a second stroller seat is not being used with the stroller 10. In one example embodiment, each removable seat attachment adapters can be coupled to the frame by coupling the adapter 14 into a seat attachment housing disposed along the frame 11. In one example, the seat attachment housing (such as that described in Figures 2-5C below) can be integrally formed with all or a portion of the stroller frame (e.g., integrally formed with front wheel support frame 11a). Alternatively, the seat attachment housing can be a separate apparatus that is coupled to the frame 11 or incorporated into the frame 11 by coupling multiple pieces of the frame 11 together. The frame 11 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 1A, a typical embodiment of the stroller 10 will include at least two removable seat attachment adapters 14 (at least one along each left and right side of the stroller 10 along the stroller frame 11). For example, at least one removable seat attachment adapter can support each lateral side of the second stroller seat 15. In certain example embodiments, each of the removable seat attachment adapters 14 may be made up of one piece or multiple parts. The removable seat attachment adapters 14 may be of any design capable of securely supporting a seat on the stroller. In one example, the removable seat attachment adapter 14 is configured to have a first end that removably coupled to the frame 11 and/or seat attachment housing and a distal second end that is configured to be removably coupled to a second stroller seat 15. The removable seat attachment adapter 14 is designed to be capable of supporting the second stroller seat 15 in front of the first stroller seat 16. The stroller 10 may also include a storage basket 17.

■ ■ ■

In certain example embodiments, the removable seat attachment adapter 14 is capable of supporting a second stroller seat 15 such that a child in the second stroller seat 15 is substantially above the frame 11 of the stroller 10 that is substantially adjacent to the connection point of the second stroller seat 15. This positioning of the second stroller seat 15 with respect to the frame 11 provides easier access to the second stroller seat 15, does not block access to the storage basket 17, allows more versatile configurations of the seats 15, 16, allows more variety of seats 15, 16 to be attached to the frame 11, and allows the parent or guardian to more easily monitor and see the child in each stroller seat 15, 16.

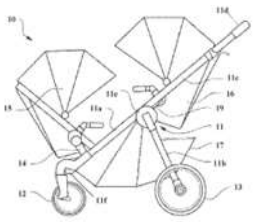


FIGURE 1A

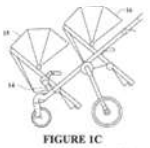


FIGURE 1C

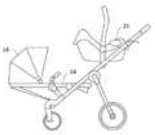


FIGURE 1E



FIGURE 1D



FIGURE 1F



FIGURE 1G

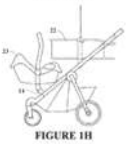


FIGURE 1H

EX1006, Second Provisional, 8, 10-11; Figs. 1A, 1C-1H

Figure 2 is a partial perspective view of the stroller 10 showing a seat attachment housing 205 according to one example embodiment of the disclosure. Referring now to Figures 1A and 2, the example stroller 10 can include a first seat attachment housing 205 and the second seat attachment housing 210. The first seat attachment housing 205 can include a first end 205a having a cavity for slidably receiving and fixedly or slidably coupling the first end 205a to a first end of the left front wheel support frame 11a. For example, the left front wheel support frame 11a can have a substantially circular or oval cross-section and the cavity of the first end 205a can have a corresponding circular or

■ ■ ■

decoupled from the frame 11 and stored when a second stroller seat is not being used with the stroller 10. In one example embodiment, each removable seat attachment adapters can be coupled to the frame by coupling the adapter 14 into a seat attachment housing disposed along the frame 11. In one example, the seat attachment housing (such as that described in Figures 2-5C below) can be integrally formed with all or a portion of the stroller frame (e.g., integrally formed with front wheel support frame 11a). Alternatively, the seat attachment housing can be a separate apparatus that is coupled to the frame 11 or incorporated into the frame 11 by coupling multiple pieces of the frame 11 together. The frame 11 and each seat attachment housing can be made from the same or different materials, including, metals and plastics

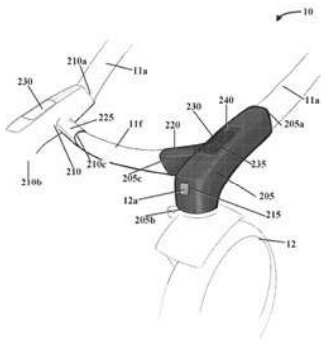


FIGURE 2

EX1006, Second Provisional, 10, 12; Fig. 2

Figures 4A-C are partial perspective views of the removable seat attachment adapter 14 coupled to the seat attachment housing 205 according to one example embodiment of the disclosure. Now referring to Figures 1A, 2, 3, and 4A-C, once the door 235 has been moved into the open configuration exposing the opening 230 and the adapter receiving cavity 305, a first end 14a of the removable seat attachment adapter 14 can be inserted into the adapter receiving cavity 305. In certain example embodiments, the adapter receiving cavity 305 can include one or more stop flanges 415, 420 that extend out from an inner surface of the cavity 305 and into the cavity area to abut against a bottom side of the first end 14a of the removable seat attachment adapter 14 when the adapter 14 has penetrated a sufficient amount into the adapter receiving cavity 305. Once the adapter 14 is inserted into the cavity 305 and removably coupled to the seat attachment housing 205, a stroller seat can be removable coupled to a seat connector disposes on or adjacent to the second end 14b of the removable seat attachment adapter 14. The seat connector on the second end 14b can be a multipurpose general connector that allows different seats to be interchangeably connected to the removable seat attachment adapter 14. 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.

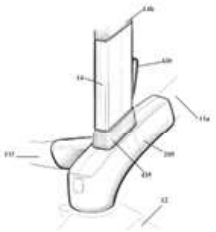


FIGURE 4A

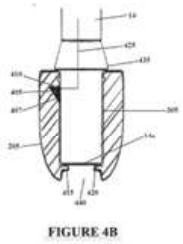


FIGURE 4B

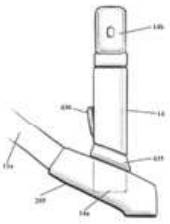


FIGURE 4C

EX1006, Second Provisional, 15-16; Figs. 4A-4C

115. Embodiment D of the Second Provisional, details and illustrates (Figures 5A-C) an "alternative embodiment" of the "seat attachment housings" and how it may operate with the "seat attachment adapters."

Figures 5A-C are partial perspective views of an alternative embodiment of the seat attachment housing 505, 510 according to another example embodiment of the disclosure. Referring now to Figures 1A, 2 and 5A-C, the seat attachment housings 505, 510 are substantially the same as the seat attachment housings 205, 210 described in Figures 2-4C except for as described below. Therefore, the description of the seat attachment housings 205, 210 in Figures 2-4C above is incorporated herein for the alternative seat attachment housings 505, 510, except with regard to the distinctions described below.

Each seat attachment housing 505, 510 can include a rotating door 515 rotatably coupled to the seat attachment housing 505, 510. For example, the rotating door 515 can have a fixed end that is rotatably coupled to the top side of the seat attachment housing 505, 510 or an interior wall of the opening 230 or adapter receiving cavity 305 by way of or more hinges 520. Alternatively, other devices may be used to allow the door 515 to rotate from a closed configuration 515a to an open configuration 515b, as shown in Figure 5C. In certain example embodiments, the door 515 and/or the rotating mechanism or hinge 520 that the door 515 is coupled to can be spring-biased into the closed configuration 515a through the use of a spring or other biasing means. Spring-biasing the door 515 into a closed configuration 515a can help to prevent fluids and other material contaminants from entering the adapter receiving cavity 305 when the removable seat attachment adapter 14 is not coupled into the adapter receiving cavity 305.

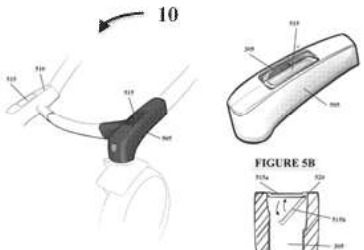


FIGURE 5A

FIGURE 5B

FIGURE 5C

EX1006, Second Provisional, 17-18; Figures 5A-5C

116. Although I understand it to not be common practice, the Second Provisional also included a set of "claims" near the end of the specification. As I show below, claim 1 recites how the disclosed "seat attachment adapter(s)" could be "configured to be removably coupled" to the "seat attachment housing(s)."

What is claimed is:

1. A stroller, comprising:
a stroller frame;
a plurality of wheels;
a first seat coupled to the stroller frame;
a first seat attachment housing disposed along a first portion of the stroller frame;
a second seat attachment housing disposed along a second portion of the stroller frame;
a first removable seat attachment adapter configured to be removably coupled to the first seat attachment housing; and
a second removable seat attachment adapter configured to be removably coupled to the second seat attachment housing.

EX1006, Second Provisional, 20

117. Again, the Second Provisional discloses as part of Embodiment C that

the "removable seat attachment adapter 14 is configured to have a first end that removably coupled to the frame 11 and/or seat attachment housing and a distal second end that is configured to be removably coupled to a second stroller seat 15." (EX1006, Second Provisional, 10.) The above claim therefore recites an aspect of Embodiment C where the first/second adapters are "removably coupled" to a first/second housings.

E. The '305 CIP

118. On August 1, 2016, the Patent Owner filed continuation-in-part U.S. patent application No. 15/225,326, which issued as U.S. Pat. No. 9,944,305. (EX1007, "the '305 CIP"). The '305 CIP claimed priority to back to the First Provisional and claimed the benefit of the Second Provisional.

119. In reviewing the '305 CIP specification, I noticed the '305 CIP specification: (1) adds and incorporates Embodiments C and D from the Second Provisional; (2) incorporates a modified version of Embodiment A from the First Provisional; (3) adds Embodiment E using Figures 9 and 10 (which were added by the Patent Owner during prosecution in 2013) based on some aspects of Embodiment B from the First Provisional.

120. I have included a red-line comparison between the First Non-Provisional specification and the '305 CIP specification to illustrate the comprehensive and significant modifications that occurred when the '305 CIP

application was filed. (EX1046, Comparison of First-Non Provisional (EX1003) and the '305 CIP specification (EX1007).)[14] This comparison was done using the filed specification for the First Non-Provisional in comparison to the filed specification for the '305 CIP. (*i.e.*, comparison between EX1014, First Non-Provisional File History –3-14 and EX1017, File History of the '305 CIP –1-22).

121. First, the '305 CIP now includes Embodiments C and D from the Second Provisional regarding the design and operational aspects of the "seat attachment adapters" and "seat attachment housings." (*See e.g.*, EX1046, Comparison of First Non-Provisional specification and the '305 CIP specification – 15-27; EX1007, the '305 CIP - 8:63-11:58; 12:37-16:67.)

122. Second, the '305 CIP includes but modifies the disclosure of Embodiment A from the original disclosure. (*See e.g.*, EX1046, Comparison –9-13.)

123. Third, the '305 CIP includes a new embodiment – which I reference as "Embodiment E" – when describing Figures 9 and 10,[15] which the Patent Owner had introduced during prosecution of the First Non-Provisional in June 2013. (EX1014,

[14] The comparison "strikes out" material that has been removed from the First Non-Provisional specification and underlines material that has been added into the '305 CIP specification.

[15] These two figures were originally included and introduced as Figures 10 and 11.

First Non-Provisional File History, 221, 233-234.)

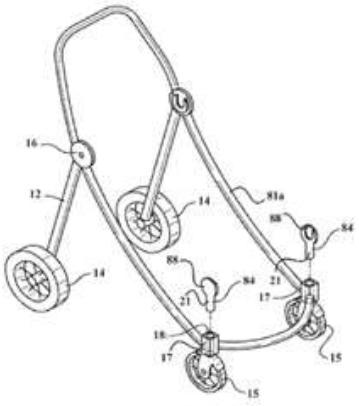


FIGURE 9

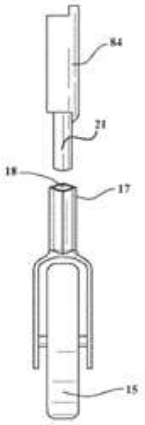


FIGURE 10

In one example embodiment, as shown in FIGS. **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 **81***a*. In certain example embodiments, the seat support element **84** is adjacent to the front wheel support portion **81***a* 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** (FIG. **8**A) 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 FIG. **8**A). 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 **81***a*. 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 FIG. **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 FIG. **9-10** to secure the seat attachment and convert the single stroller into a double stroller, as shown in FIG. **8**A. 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.

EX1007, the '305 CIP, 11:59-12:36

124. With regards to Figures 9 and 10, I noted the Patent Owner selectively chose to describe "seat support element 84" as connecting to an "attachment portion 17" ***instead*** of describing them as "seat attachment adapters" coupling to "seat attachment housings."

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 FIG. **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**

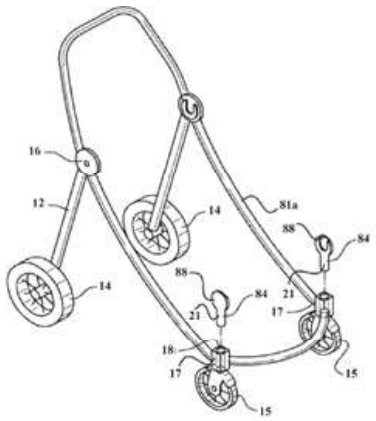


FIGURE 9

EX1007, the '305 CIP, 12:21-25, Fig. 9

125. In my opinion the distinction between describing the various items using different terms is meant to inform a POSITA the embodiments are different and unique. Given the description pertaining to Figures 9 and 10 is new, the Patent Owner could have used the term "seat attachment adapters" instead of "seat support elements." Or the Patent Owner could have included a statement indicating the "seat support elements" are like or intended to be the same as "seat attachment adapters."

126. But the Patent Owner did not convey to a POSITA what is being described and shown by Figures 9 and 10 are "seat attachment adapters." This is noteworthy given there is extensive discussion of the "seat attachment adapters 84"/"seat attachment housings 1105" (highlighted in yellow below) both right before and after the disclosure regarding Figures 9 and 10 (highlighted in orange below).

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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 FIG. **8**A 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 **81***d* 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 FIGS. **8**B-**8**C. 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.

FIGS. **8**C-**8**H 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 FIG. **8**D, 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 FIG. **8**E, 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 FIG. **8**F, the child carrier **91**, of FIG. **8**E, 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 FIG. **8**G, 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 FIG. **8**H.

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 **81***c*. 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 FIGS. **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 **81***a*. In certain example embodiments, the seat support element **84** is adjacent to the front wheel support portion **81***a* 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

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stroller seat **86** (FIG. **8**A) 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 FIG. **8**A). 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 **81***a*. 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 FIG. **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 FIG. **9**-**10** to secure the seat attachment and convert the single stroller into a double stroller, as shown in FIG. **8**A. 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.

FIG. **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 FIGS. **8**A 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 **1105***a* having a cavity for slidably receiving and fixedly or slidably coupling the first end **1105***a* to a first end of the left front wheel support frame **81***a*. For example, the left front wheel support frame **81***a* can have a substantially circular or oval cross-section and the cavity of the first end **1105***a* can have a corresponding circular or oval cross-section to slidably receive a portion of the left front wheel support frame **81***a* into the cavity. In one example, the left front wheel support frame **81***a* can be held in the cavity of the first end **1105***a* by a press fit hold. Alternatively, a spring-loaded button on the left front wheel support frame **81***a* 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 **1105***b* 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 **1105***b* of the first seat attachment housing **1105** by a press fit hold. Alternatively, a spring-loaded button **82***a* on the front wheel apparatus **82** can be positioned into the cavity of the second end **1105***b* 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

***See e.g.*, EX1007, the '305 CIP, 11:1-12:67**

127. The additional disclosure of this and other material within the '305 CIP is relevant to certain patents and claims I have reviewed and been asked to provide opinions about.

VI. Overview of the '231 Patent

A. The '231 Patent

128. U.S. Patent No. 11,505,231 (EX1012, "the '231 Patent") was filed on

July 29, 2022, and issued on November 22, 2022. It is a continuation of U.S. patent Application Ser. No. 16/903,292, filed Jun. 16, 2020 and issued as U.S. Pat. No. 11,731,682 (EX1010), which is a continuation of U.S. patent application Ser. No. 15/912,901, filed Mar. 6, 2018 and issued as U.S. Pat. No. 10,730,543 (EX1008), which is a continuation of U.S. patent application Ser. No. 15/225,326, filed Aug. 1, 2016 and issued as U.S. Pat. No. 9,944,305 (EX1007), which both (i) claims the benefit of U.S. application Ser. No. 62/311,224 (EX1006), filed Mar. 21, 2016, and (ii) is also a continuation-in-part of U.S. patent application Ser. No. 14/597,420, filed Jan. 15, 2015 and issued as U.S. Pat. No. 9,403,550 (EX1005), which is a continuation of U.S. patent application Ser. No. 14/261,558, filed on Apr. 25, 2014 and issued as U.S. Pat. No. 8,955,869 (EX1004), which is a continuation of U.S. patent application Ser. No. 12/631,375, filed Dec. 4, 2009 and published as U.S. Pat. Pub. No. 2010/0140902 (EX1003), which claims the benefit of U.S. application Ser. No. 61/119,920 (EX1002), filed Dec. 4, 2008. (EX1012, '231 Patent, 1:7-23).

129. The '231 Patent's purported invention is related to a "Removable Seat Attachment for a Stroller." (EX1012, '231 Patent, Title).

> Embodiments include strollers having removable seats. An example stroller may include rear wheels, front wheels, and a frame including a handle portion, a rear wheel support portion, a front wheel support portion and a folding mechanism connecting the front wheel support portion and the handle portion in both an unfolded configuration and in

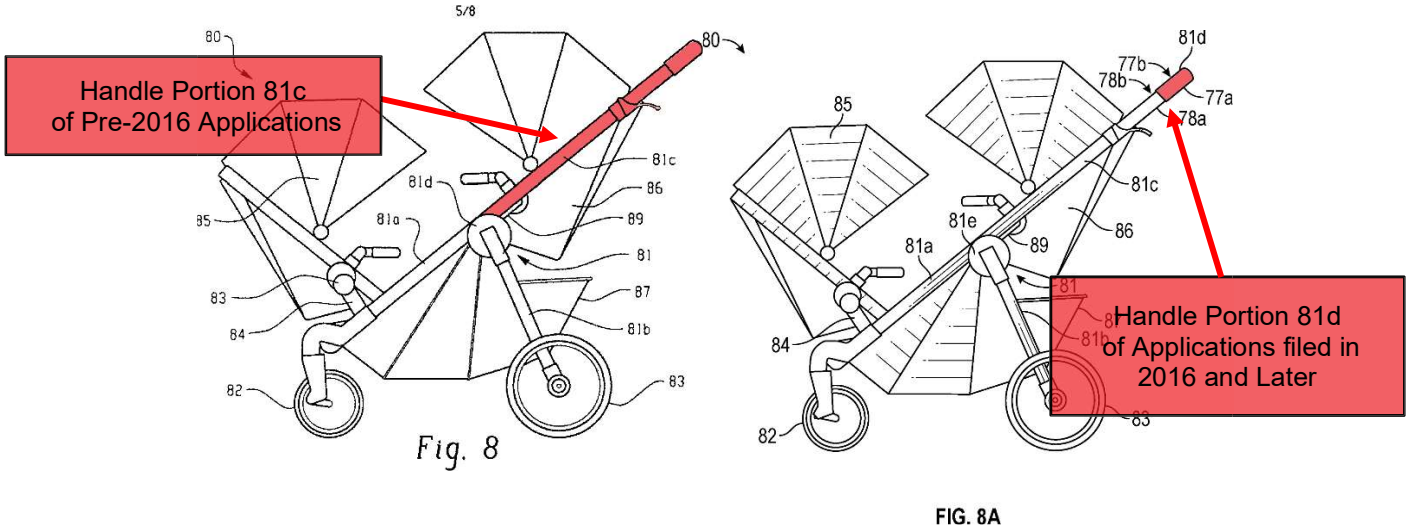
> a folded configuration. The frame may include a stroller seat support portion positioned at a first vertical position adjacent the handle portion, and a front seat attachment configured for attachment to the front wheel support portion at a second vertical position substantially lower than the first vertical position. The front seat attachment may be configured to support the front stroller seat substantially over the front wheels so that a center of gravity of the stroller system is between the front wheels and the rear wheels.

(EX1012, '231 Patent, Abstract.)

130. The '231 Patent allegedly solves the problem of when "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 a double stroller." (EX1012, '231 Patent, 3:57-60.) The alleged solution is a "seat attachment" for a stroller that is "capable of converting a single stroller into a double stroller." (EX1012, '231 Patent, 3:61-63.)

131. Before addressing the '231 Patent's claim language, I first note that terminology in the claims of the '231 Patent is sometimes inconsistent with the names of components in the specification. An example of such an inconsistency is the term "handle portion." As depicted in the figure on the left below, the priority applications filed before 2016 call the entire part of the frame above the folding mechanism 81d the "handle portion" ("handle portion 81c," colored red below (left)). (EX1003, First Non-Provisional, [0043].) However, as shown in the figure

on the right below, the specifications of the applications filed on or after March 21, 2016 call only the top crossbar (*i.e.*, the segment that is grabbed by a caregiver and extends laterally between the left and right frame sides) the "handle portion" ("handle portion 81d," colored red below (right)). (EX1012, '231 Patent, 9:1-4.)



EX1003, First Non-Provisional, Fig. 8 and EX1012, '231 Patent, Fig. 8A

132. Based on my review of the '231 Patent's claims, the "handle portion" recited in the claims of the '231 Patent corresponds to the "handle portion 81c" of the pre-2016 priority applications, but not the "handle portion 81d" of the specification of the '231 Patent. For example, claim 1 recites, "a stroller seat support portion positioned at a first vertical position adjacent the handle portion," and claim 14 recites, "the handle portion includes a pair of parallel support members and a crossbar." (EX1012, '231 Patent, 17:21-23, 18:33-35.) The component 89 that supports the (rear) stroller seat is positioned adjacent the handle portion 81c in Fig. 8 above (left), but not the handle portion 81d in Fig. 8A above (right). Additionally,

the handle portion 81d in Fig. 8A does not include parallel support members and a crossbar. Therefore, the term "handle portion" in the claims of the '231 Patent corresponds to the "handle portion 81c" in the pre-2016 priority applications, but not the "handle portion 81d" in the applications filed on or after March 21, 2016.

133. Fig. 8A of the '231 Patent below shows a side view of a stroller. Below, various components of the illustrated stroller are labeled using terminology from the claims.

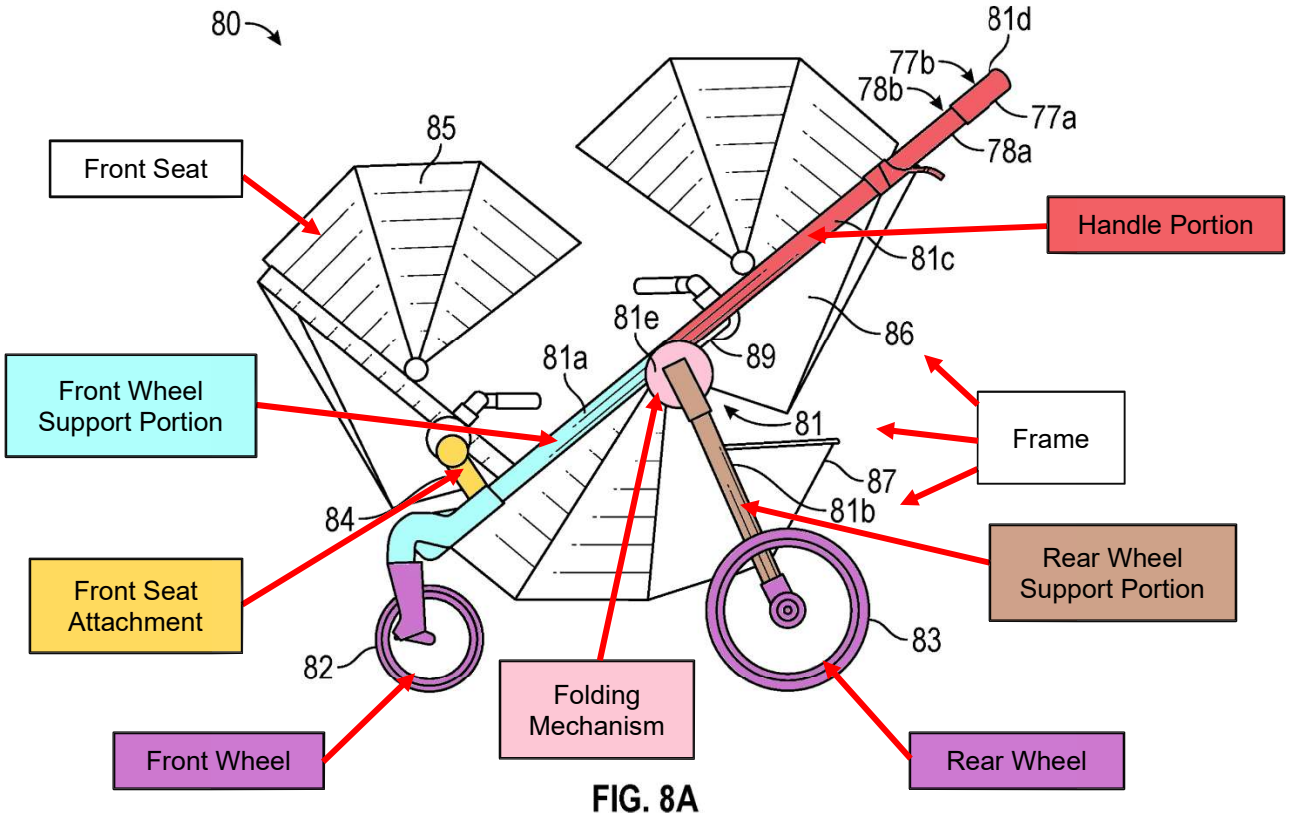


FIG. 8A

EX1012, '231 Patent, Fig. 8A

B. '231 Patent File History

134. The application for the '231 Patent was filed with 30 claims, with claims 1 and 28 being independent. Original claim 1 recited:

1. A stroller system for supporting a front stroller seat and a rear stroller seat, the system comprising:

a pair of rear wheels;

a pair of front wheels;

a frame including a handle portion, a rear wheel support portion, a front wheel support portion and a folding mechanism connecting the front wheel support portion and the handle portion in both an unfolded configuration and in a folded configuration,

wherein the frame includes a stroller seat support portion positioned at a first vertical position adjacent the handle portion; and

a front seat attachment configured for attachment to the front wheel support portion at a second vertical position substantially lower than the first vertical position, and

wherein the front seat attachment is configured to releasably connect to and support the front stroller seat in either a forward-facing configuration or a backward-facing configuration, and

wherein the front seat attachment is configured to support the front stroller seat substantially over the front wheels so that a center of gravity of the stroller system is between the front wheels and the rear wheels.

EX1022, File History of the '231 Patent, 25

135. I understand the application was filed with 9 different species (Species A-I), and the Patent Office required Applicant to elect one of the species for examination:

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).

EX1022, File History of the ’231 Patent, 244-245

136. I understand the Applicant elected to prosecute Species F directed to Figures 8A-8H and claim grouping 1-27. I further understand that claims 28-30 were

withdrawn from consideration.

> 2. During a telephone conversation with Umar R. Bakhsh (Applicant's representative) on 9/23/2022 a provisional election was made without traverse to prosecute the invention of Species (Fig.8A-8H), and claim grouping 1-27. Affirmation of this election must be made by applicant in replying to this Office action. Claims 28-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

EX1022, File History of the '231 Patent, 244

137. I understand that the Examiner and Applicant had a telephone interview in which Applicant canceled original claims 18-21 and 27-30 and amended claim 1.

> 8. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
>
> Authorization for this examiner's amendment was given in an interview with Umar R. Bakhsh (Applicant's representative) on 9/29/2022.
>
> The application has been amended as follows:
>
> Cancel Claims 18-21, and 27-30.
>
> Replace Claim 1, with the following:

EX1022, File History of the '231 Patent, 247

138. The changes between original claim 1 and amended claim 1 are shown below (with underline showing additions and strike-through showing deletions):

> 1. A stroller system for supporting a front stroller seat and a rear stroller seat, the system comprising:

a pair of rear wheels;

a pair of front wheels;

a frame including a handle portion, a rear wheel support portion, a front wheel support portion and a folding mechanism connecting the front wheel support portion and the handle portion in both an unfolded configuration and in a folded configuration, wherein the folding mechanism connects the rear wheel support portion to the front wheel support portion and the handle portion, wherein the frame includes a stroller seat support portion positioned at a first vertical position adjacent the handle portion, and wherein the front wheel support portion and the handle portion are substantially parallel when the frame is in the unfolded configuration; and

a front seat attachment configured for attachment to the front wheel support portion at a second vertical position substantially lower than the first vertical position, ~~and~~

wherein the front seat attachment is configured to releasably connect to and support the front stroller seat in either a forward-facing configuration or a backward-facing configuration, ~~and~~

wherein the front seat attachment is configured to support the front stroller seat substantially over the front wheels so that a center of gravity of the stroller system is between the front wheels and the rear wheels;

wherein the rear wheel support portion extends diagonally from the front wheel support portion when the frame is in the unfolded configuration, and the rear wheel support portion is disposed adjacent

to both the front wheel support portion and the handle portion when the frame is in the folded configuration; and

wherein the stroller seat support portion positioned at the first vertical position and the front seat attachment at the second vertical position create an inline descending configuration of the rear stroller seat and the front stroller seat.

(EX1022, 248-249.)

139. Original dependent claim 19, which was cancelled at the time that claim 1 was amended, was directed to a front wheel support portion and handle portion that "extend linearly within a common plane when the frame is in the unfolded configuration."

19. The stroller system of claim 18, wherein the front wheel support portion and the handle portion extend linearly within a common plane when the frame is in the unfolded configuration.

EX1022, File History of the '231 Patent, 27

140. The additions to claim 1 did not include the limitations in original claim 19.

141. I understand the amendments to claim 1 resulted in the claims being allowed.

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 Oral Election to Restriction Requirement and Applicant's representative elected Species F (Fig.8A-8H) and independent Claim 1-27 grouping without traverse, and discussed amendments to the claims to be made by the Examiner in order to put the application in condition for allowance for which agreement was reached with the Applicant ..

EX1022, File History of the '231 Patent, 253

142. I understand the Examiner provided the following reasons for allowing the claims, with the bolded text identifying the alleged "allowable limitations not suggested or taught by the prior art":

> 10. 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 system for supporting a front stroller seat and a rear stroller seat, the system comprising: a pair of rear wheels; a pair of front wheels; a frame including a handle portion, a rear wheel support portion, a front wheel support portion and a folding mechanism connecting the front wheel support portion and the handle portion in both an unfolded configuration and in a folded configuration, wherein the folding mechanism connects the rear wheel support portion to the front wheel support portion and the handle portion, ***wherein the frame includes a stroller seat support portion positioned at a first vertical position adjacent the handle portion, and wherein the front wheel support portion and the handle are substantially parallel when the frame is in the unfolded configuration; and a front seat attachment configured for attachment to the front wheel support portion at a second vertical position substantially lower than the first vertical position, and wherein the front seat attachment is configured to releasably connect to and support the front stroller seat in either a forward-facing configuration or a backward-facing configuration, and wherein the front seat attachment is configured to support the front stroller seat substantially over the front wheels so that a center of gravity of the stroller system is between the front wheels and the rear wheels; wherein the rear wheel support portion extends diagonally from the front wheel support portion when the frame is in the unfolded configuration, and the rear wheel support portion is disposed adjacent to both the front wheel support portion and the handle portion when the frame is in the folded configuration; and wherein the stroller seat support portion positioned at the first vertical position and the front seat attachment at the second vertical position create an inline descending configuration of the rear stroller seat and the front stroller seat***, as claimed in amended Claim 1 (emphasis added to allowable limitations not suggested or taught by the prior art).

EX1022, File History of the '231 Patent, 249-250

143. I disagree with the Examiner's conclusion because, as I discuss herein, the prior art teaches and/or suggests the limitations that the Examiner believed were

not suggested or taught by the prior art.

VII. Claim Construction

144. I have been asked to review claims 1–17 and 19–22 of the ’231 Patent. In order to properly evaluate these claims, I understand that the terms of the claims must first be construed. I understand that a claim term is interpreted according to its ordinary and customary meaning as a POSITA would have understood the term in light of the surrounding claim language, other claims, the specification, and the patent’s prosecution history, which are referred to as “intrinsic evidence.” I further understand that evidence outside the patent and its prosecution history (*e.g.*, dictionaries and technical articles), may inform the context in which a POSITA would have understood the claims of a patent. I understand this ordinary and customary meaning applies absent unique circumstances, such as where a patent clearly expresses an intent to set forth a special meaning for a term.

145. For my analysis, I have applied the ordinary and customary meaning of claim terms as would have been understood by one of ordinary skill in the art in light of the specification and prosecution history. I have applied the following explicit constructions of the terms below.

A. “releasably connect” and “releasably attach”

146. The ’231 Patent explicitly defined “releasably connect” and “releasably attach” as follows:

> 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.

(EX1012, 4:26-30.) My analysis applies this definition for these two terms.

B. "substantially parallel"

147. The '231 Patent explicitly defined "substantially parallel" as follows:

> 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.

(EX1012, 3:52-55.)

148. I understand that in district court litigation, Patent Owner made the following arguments in its claim construction briefing regarding the term "substantially parallel":

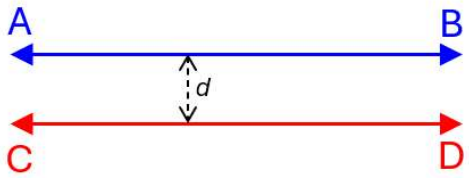
- "A POSITA would readily understand that 'substantially parallel' permits some deviation from exactly parallel." (EX1047, p. 30.)
- "The claim term 'substantially parallel' should be given its plain and ordinary meaning, which is consistent with the definition provided in the specification for this term: 'the parallel relationship is not a strict relationship.'" (EX1047, p. 31-32.)

149. I have been asked by counsel to apply the following construction for "substantially parallel" for my analysis: "the parallel relationship is not a strict

relationship, such that some deviation from exactly parallel is permitted." I also apply alternative interpretations in grounds below, as further discussed in those sections.

150. Because the construction of "substantially parallel" is based on there being a "parallel relationship" (although not necessarily a "strict relationship") it is useful to discuss parallelism. Parallelism refers to the relationship between two lines, planes, curves, or other things that maintain a constant distance apart, so that they never intersect no matter how far they are extended. Thus, in general, for two things to be parallel, they must maintain a constant distance apart and never intersect. Dictionary definitions confirm these principles. EX1054, Merriam-Webster Dictionary, 1; EX1055, McGraw-Hill Dictionary of Scientific and Technical Terms, 1528; EX1056, Barron's Dictionary of Mathematics Terms, 241.

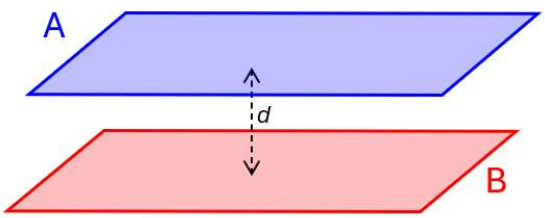
151. To illustrate, two parallel lines are shown below:



Parallel Lines

Line AB (blue) and line CD (red) are parallel because the distance (*d*) between line AB and line CD is the same at all points. This constant separation by the distance (*d*) results in line AB never intersecting with line CD, no matter how far the lines are extended.

152. To illustrate further, two parallel planes are shown below:



Parallel Planes

Plane A (blue) and plane B (red) are parallel because the distance (*d*) between plane A and plane B is the same at all points. This constant separation by the distance (*d*) results in plane A never intersecting with plane B, no matter how far the planes are extended.

153. Although the construction of "substantially parallel" permits "some deviation" from exact parallelism, for two things to be "substantially parallel" there must be at least **some** amount of separation and **some** lack of intersection between the components. Otherwise, the words "substantially" and "parallel" in "substantially parallel" would both be meaningless.

VIII. Priority

154. The '231 Patent was filed on July 29, 2022 and claims priority to several patent applications, with the earliest filed on December 4, 2008. (EX1012, 1:7-23.) I am informed that the Zehfuss reference (discussed below) is prior art to the claims of the '231 Patent if claim 1 of the '231 Patent is not entitled to priority to one or more applications to which it claims priority.

155. As discussed above in the Relevant Legal Standards section, I have been informed that, for a claim in a later-filed patent application to be entitled to the filing date of an earlier patent application, that earlier patent application must provide support for the claim. I have been further informed that, to provide support, the disclosure of the earlier-filed application must reasonably convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. I have been further informed that the words, structures, figures, diagrams, formulas, etc. of the disclosure of the earlier-filed application can be used to provide support. I have been further informed that the exact words of the claim do not need to be used in the disclosure in order to provide support for the claim limitation.

156. I have been asked whether any originally-filed application provides support for the following limitation of claim 1:

> wherein the front wheel support portion and the handle portion are substantially parallel when the frame is in the unfolded configuration

(EX1012, 17:23-25.) I conclude that this claim limitation is not supported in any application to which the ’231 Patent claims priority.

157. I have reviewed the textual descriptions and originally-filed claims in the applications to which the ’231 Patent claims priority. The specifications of the applications filed on or after March 21, 2016 added the following statement, which was not included in any application filed before 2016:

> 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.

(EX1012, 3:52-55.) This statement is only a definition for the term "substantially parallel" by itself, and it does not describe any arrangement between portions or components of a frame. This statement does not provide support for the claim limitation.

158. I have reviewed the other textual descriptions and originally-filed claims in the applications to which the '231 Patent claims priority, but I did not find any other language that could potentially provide support for "wherein the front wheel support portion and the handle portion are substantially parallel when the frame is in the unfolded configuration."

159. I also reviewed the drawings in the applications to which the '231 Patent claims priority. Figure 8A of the parent application of the '231 Patent (U.S. Application No. 16/903,292 ("the '292 Application")) is representative of a front wheel support portion and handle portion illustrated in the figures.

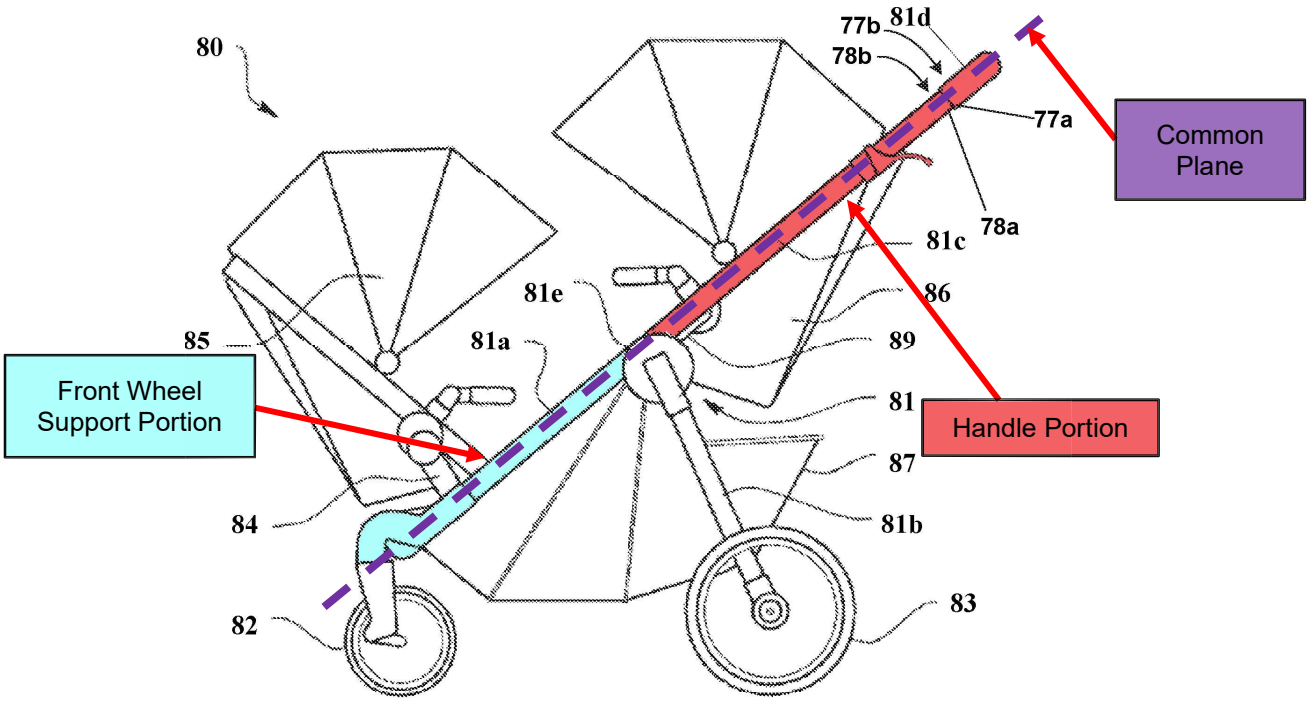


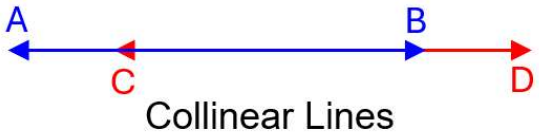
FIGURE 8A
EX1020, '292 Application, Fig. 8A

160. Figure 8A above shows a side view of a stroller. When viewing the stroller from the side, the front wheel support portion (blue) and handle portion (red) extend along a common plane (purple line), such that the front wheel support portion (blue) and handle portion (red) are perfectly in line relative to each other. As I explain below, the illustrated front wheel support portion (blue) and handle portion (red) are not "substantially parallel."

161. The illustrated front wheel support portion (blue) and handle portion (red) in Figure 8A of the '292 Application extend along a single, common plane (purple line). There is no amount of separation between the front wheel support

portion and the handle portion, and those components intersect at an infinite number of points when extended. The relationship between the front wheel support portion and handle portion in Figure 8A is directly contrary to the meaning of "substantially parallel." A POSITA would understand that the figures do not depict a front wheel support portion and a handle portion that are substantially parallel when the frame is in the unfolded configuration.

162. Instead, the illustrated front wheel support portion and handle portion could be described as collinear or coplanar (depending on perspective). Collinear lines are lines that lie on the same straight path and intersect at infinite points when extended, as illustrated below.



Collinear Lines

Similarly, coplanar planes are planes that lie on a common plane and intersect at infinite points when extended.



Coplanar Planes

163. Coplanar planes and colinear lines are not substantially parallel. They are the opposite of substantially parallel because there is no separation between the lines/planes and there is infinite intersection between the lines/planes.

164. Therefore, it is my opinion that the claim limitation "wherein the front wheel support portion and the handle portion are substantially parallel when the frame is in the unfolded configuration" is not supported by any application to which the '231 Patent claims priority.

IX. Overview of the prior art

A. U.S. Patent Application Publication No. 2009/0127810 ("Dotsey")

1. Status as Prior Art

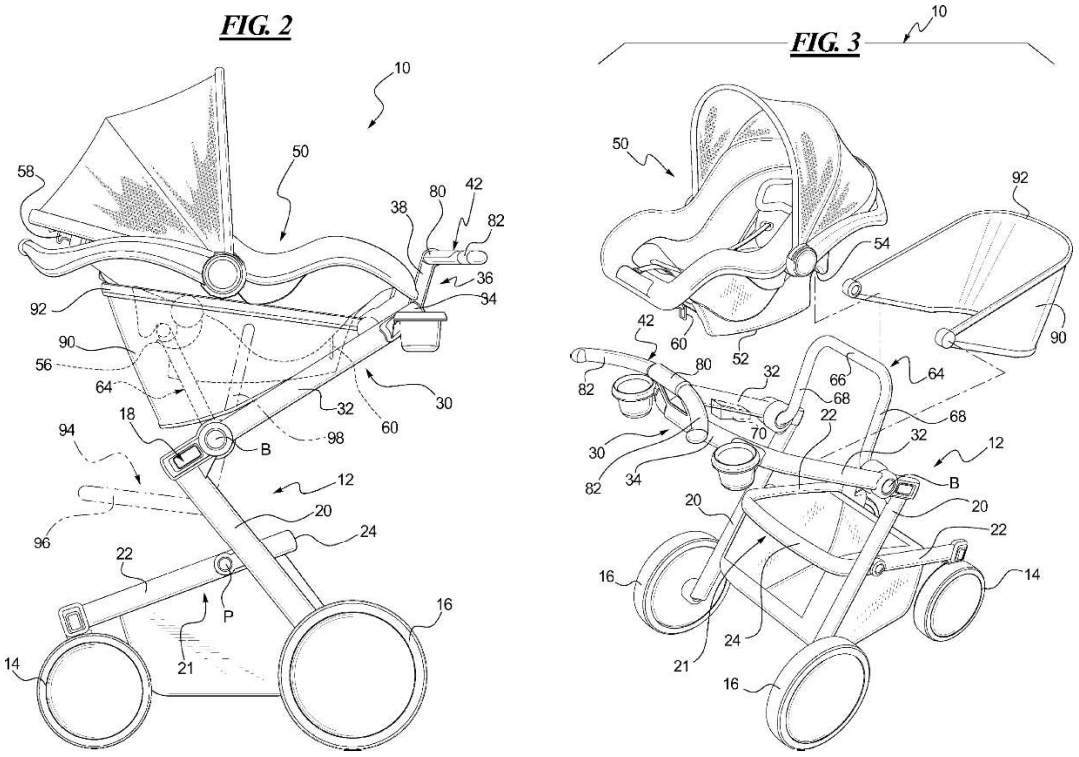
165. Dotsey was filed November 17, 2008 and published on May 21, 2009. (EX1048, Dotsey.) Counsel has informed me that Dotsey is prior art under at least 35 U.S.C. § 102(a)(2) (post-AIA) or 35 U.S.C. § 102(e)[16] (pre-AIA) regardless of whether the claims of the '231 Patent are entitled to the '231 Patent's priority claims.

2. Overview of Dotsey

166. Dotsey discloses a stroller assembly 10 having a collapsible frame assembly 12 that supports a rear facing infant carrier 50. (EX1048, Dotsey, Fig 2, [0020].) The frame assembly 12 includes a U-shaped front leg tube assembly 21 that has a cross bar 24 and a pair of front legs 22 that attaches to front wheels 14. (EX1048, Dotsey, [0020].) The front leg tube assembly 21 is connected to rear legs

[16] I understand there is a dispute regarding whether or not pre-AIA or post-AIA law applies. I have been informed that this dispute is irrelevant to my analysis.

20 by pivots P to permit folding of the frame assembly. (EX1048, Dotsey, [0021].)



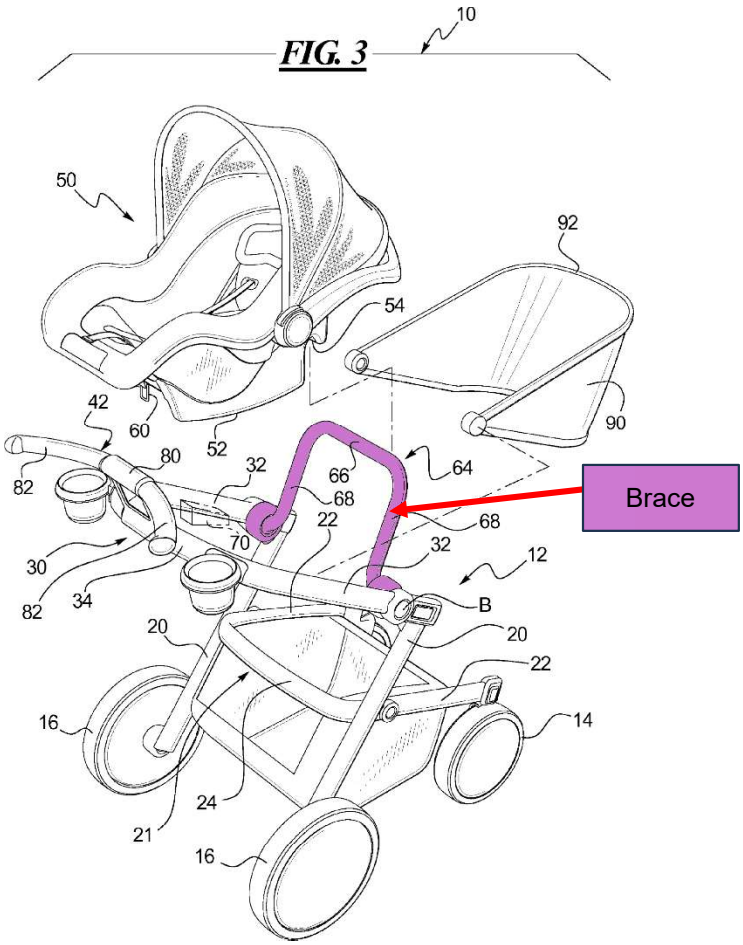
EX1048, Dotsey, Fig. 2 and EX1048, Dotsey, Fig. 3

167. The stroller assembly 10 also includes a U-shaped handle assembly 30 that is coupled to the upper ends of the rear legs 20 at fold joints 18. (EX1048, Dotsey, [0022].) The handle assembly 30 includes push bars 32 and a curved connecting section 34. (EX1048, Dotsey, [0022].) A stanchion assembly 36 extends from the connecting section 34, and a handle 42 is coupled to the stanchion assembly 36. (EX1048, Dotsey, [0022].)

168. The stroller assembly 10 includes an actuator 40 that allows the frame assembly 12 to be collapsed. (EX1048, Dotsey, [0023].) To collapse the frame assembly 12, the actuator 40 is pulled, which allows the handle assembly 30 to pivot

downward toward the rear legs 20, and the front legs 22 will pivot about the pivot points P as the rear legs 20 drop downward. (EX1048, Dotsey, [0023].)

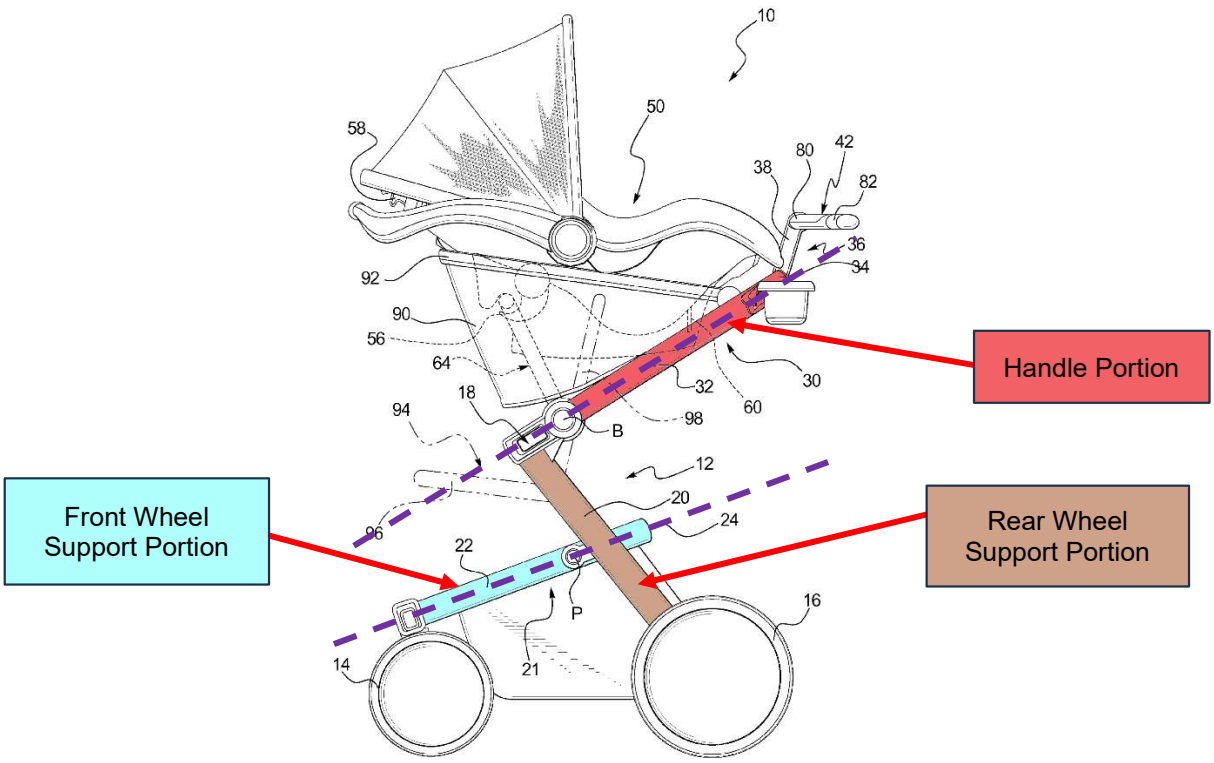
169. Dotsey discloses that the frame assembly 12 can be provided with mounting elements for connecting an infant carrier 50. (EX1048, Dotsey, [0024].) The stroller assembly 10 shown below includes a pivotable U-shaped brace 64 (purple) that connects to and supports an infant carrier. (EX1048, Dotsey, [0026].) Dotsey discloses other forms of mounting elements for infant carriers. (EX1048, Dotsey, [0027]-[0029], [0037].) The stroller assembly 10 can also have a forward-facing toddler seat 94, which is illustrated in Fig. 1. (EX1048, Dotsey, [0041].)



EX1048, Dotsey, Fig. 3.

170. Using terminology from the ’231 Patent, Dotsey discloses a front wheel support portion (blue), a rear wheel support portion (brown), and a handle portion (red), which are labeled below.

FIG. 2



EX1048, Dotsey, Fig. 2

When viewed from the side, the front wheel support portion (blue) and handle portion (red) lie in planes (represented by purple lines) that are substantially parallel.

B. U.S. Patent Application Publication No. 2010/140902 ("Zehfuss")

1. Status as Prior Art

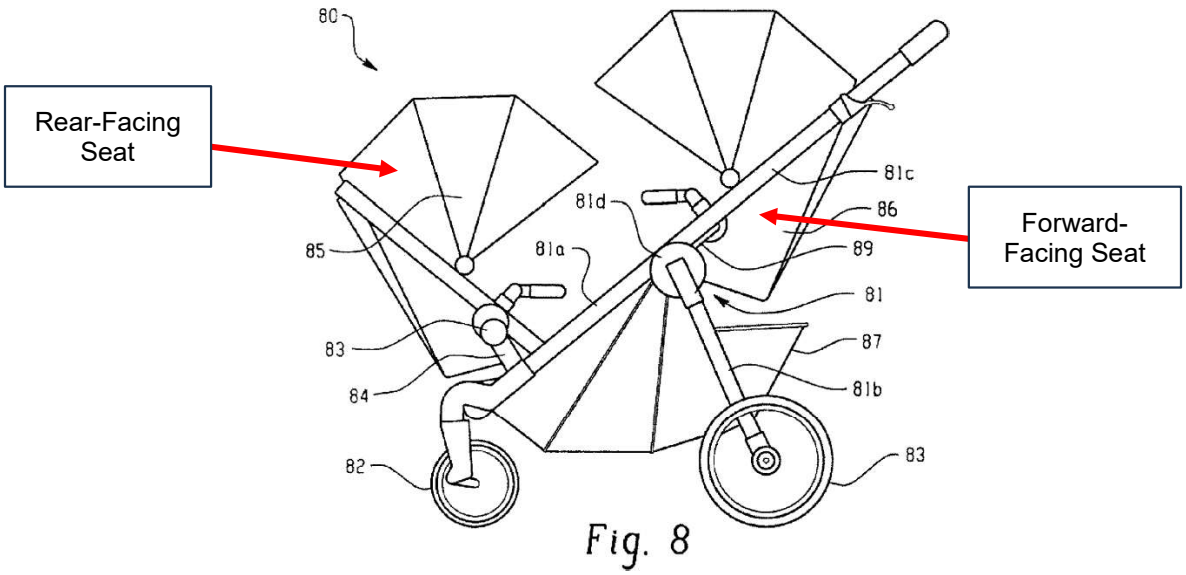
171. Zehfuss was filed on December 4, 2009 and published on June 10, 2010. (EX1003, Zehfuss.) Counsel has informed me that Zehfuss is prior art to the claims of the '231 Patent under at least 35 U.S.C. § 102(a)(1) (post-AIA) or 35 U.S.C. § 102(b) (pre-AIA) if they are not supported by one or more applications to which the '231 Patent claims priority. As discussed above, no application to which

the ’231 Patent claims priority provides support for at least the following claim limitation recited in claim 1: “wherein the front wheel support portion and the handle portion are substantially parallel when the frame is in the unfolded configuration.”

2. Overview of Zehfuss

172. Zehfuss is the published patent application of the First Non-Provisional (U.S. Application No. 12/631,375), which is one of the applications to which the ’231 Patent claims priority. (EX1012, ’231 Patent, 1:20.)

173. Zehfuss discloses a stroller frame that can support stroller seats in either a forward-facing or backward-facing position. (EX1003, [0008], [0036], [0044], [0048].)



EX1003, Zehfuss, Fig. 8

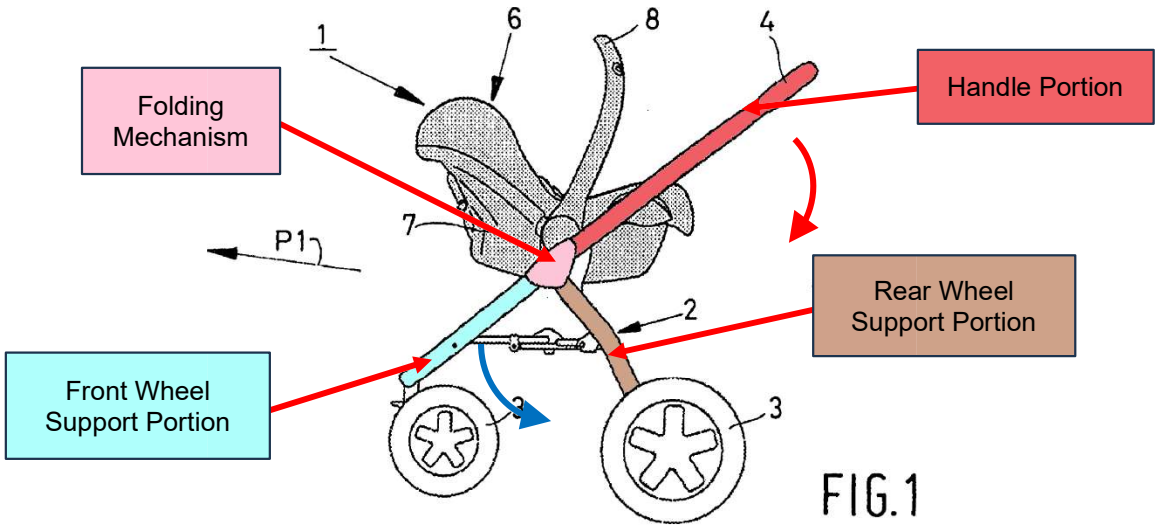
C. U.S. Patent Application Publication No. 2007/0194545 (“Van Dijk”)

1. Status as Prior Art

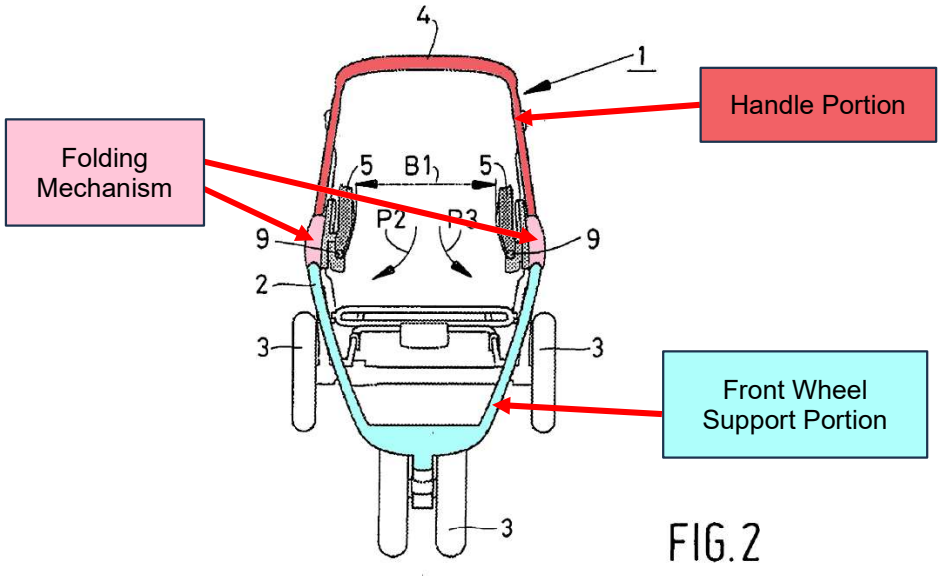
174. Van Dijk was filed February 21, 2007 and published on August 23, 2007. (EX1050, Van Dijk.) Counsel has informed me that Van Dijk is prior art under at least 35 U.S.C. § 102(a)(1) and 35 U.S.C. § 102(b) regardless of whether the claims of the '231 Patent are entitled to the '231 Patent's priority claims.

2. Overview of Van Dijk

175. Van Dijk discloses a stroller 1 that includes a collapsible frame 2 and wheels 3. (EX1050, Van Dijk, [0037].) The stroller in Van Dijk includes a front wheel support portion (blue), a rear wheel support portion (brown), and a handle portion (red). (EX1050, Van Dijk, Fig. 1). Van Dijk does not explicitly describe how the frame 2 collapses. However, a POSITA would understand that the illustrated frame 2 includes a folding mechanism (pink) that allows the stroller frame 2 to collapse by folding. A POSITA would understand that the component colored pink below is the folding mechanism because there are no other illustrated components that would allow the stroller to collapse. Additionally, it was common for strollers with similar frame designs to fold at the joint(s) between the handle portion and front wheel support portion such that the handle portion (red) and/or front wheel support portion (blue) rotate downward (*i.e.*, towards the wheels) about a pivot axis of the folding mechanism (as indicated by the arrows below).



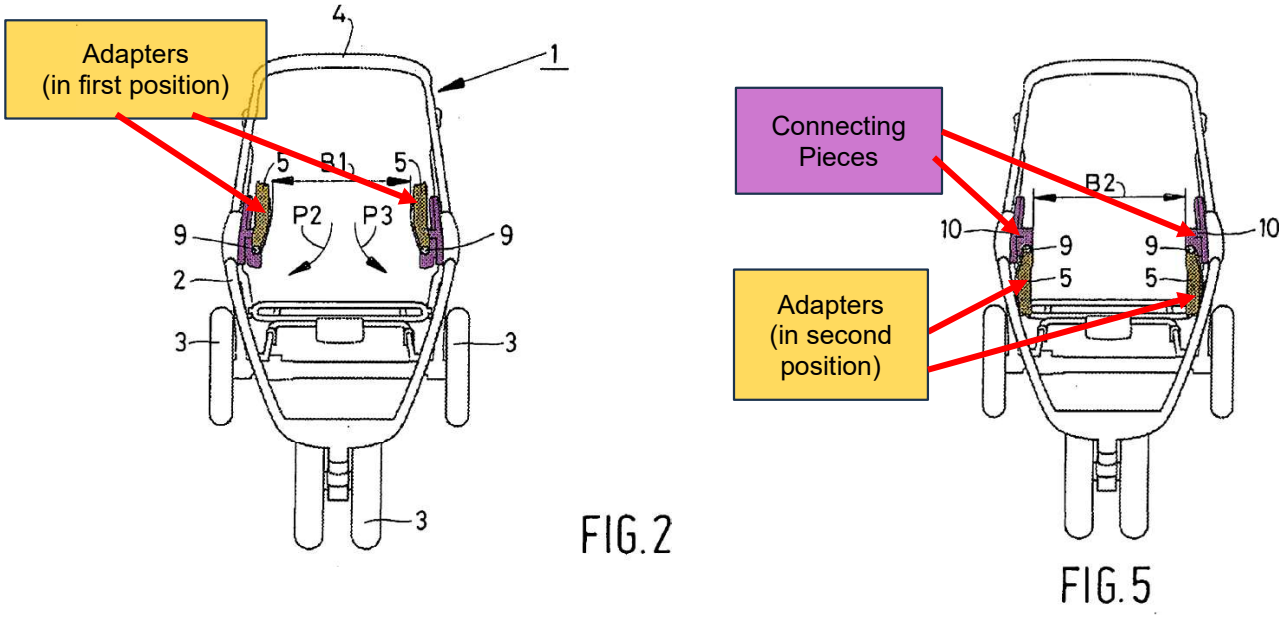
EX1050, Van Dijk, Fig. 1



EX1050, Van Dijk, Fig. 2

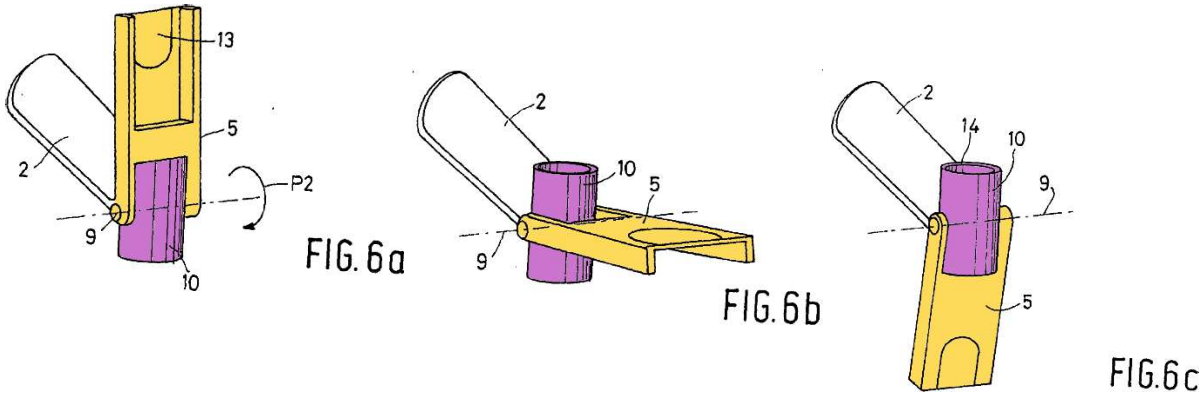
176. As shown below, Van Dijk's stroller uses mounting mechanisms that include connecting pieces 10 (purple) and adapters 5 (gold) to allow different types of seats to attach to the stroller frame 2. (EX1050, Van Dijk, [0038].) The adapters 5 (gold) can be pivoted upwards to a first position (Fig. 2) that allows a child seat 6 to be connected to the adapters 5 (gold) and supported by the frame 2. (EX1050, Van

Dijk, [0037].) The adapters 5 (gold) can also be pivoted downward to a second position (Fig. 5) that allows a child seat 11 or carry cot 12 to connect to the connecting pieces 10 (purple). (EX1050, Van Dijk, [0038], [0041].)



EX1050, Van Dijk, Fig. 2 and Fig. 5

177. Figures 6A, 6B, and 6C of Van Dijk show an embodiment of the adapters 5 (gold) being pivoted into different positions.



EX1050, Van Dijk, Figs. 6A-6C.

178. Van Dijk also discloses seats connecting in forward-facing or rear-

facing configurations. (EX1050, Van Dijk, [0052]).

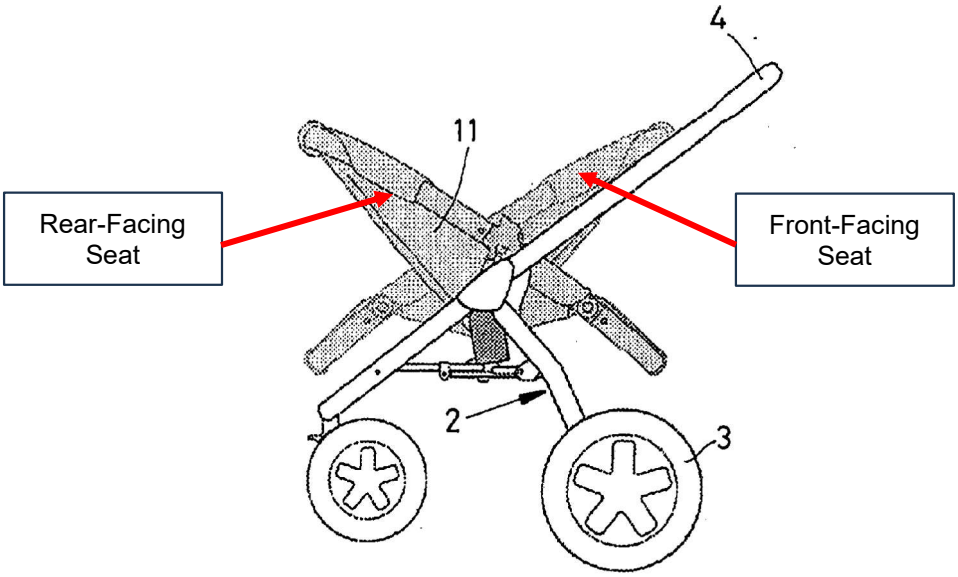


FIG. 3

EX1050, Van Dijk, Fig. 3.

D. U.S. Patent No. 6,209,892 ("Schaaf")

1. Status as Prior Art

179. Schaaf was filed December 14, 1999 and issued on April 3, 2001. (Ex. 1040, Schaaf.) Counsel has informed me that Schaaf is prior art under at least 35 U.S.C. § 102(a)(1) (post-AIA) or 35 U.S.C. § 102(b) (pre-AIA) regardless of whether the claims of the '231 Patent are entitled to the '231 Patent's priority claims.

2. Overview of Schaaf

180. Schaaf discloses a stadium-style stroller 10 designed to carry an upper seat S and a lower seat S2. (EX1040, Schaaf, 4:32-35, 9:24-25, 9:50-52, Fig. 10.) The frame has first and second parallel side sections 14, 16. (EX1040, Schaaf, 4:49-

50, Fig. 1.) Each side section includes a tubular upper segment 18 or 28. The side sections further include tubular lower segments 20, 30. (EX1040, Schaaf, 4:51-52, 4:57-58, Figs. 2, 3.) A rear subframe 84 supports the rear wheels. (EX1040, Schaaf, 6:20-22, 6:50-51, Fig. 3.)

181. Using terminology of the '231 Patent, Schaaf discloses a front wheel support portion (lower frame portion 82) (blue), a handle portion (upper frame portion 80) (red), a rear wheel support portion (subassembly 84) (brown), and a folding mechanism (pink).

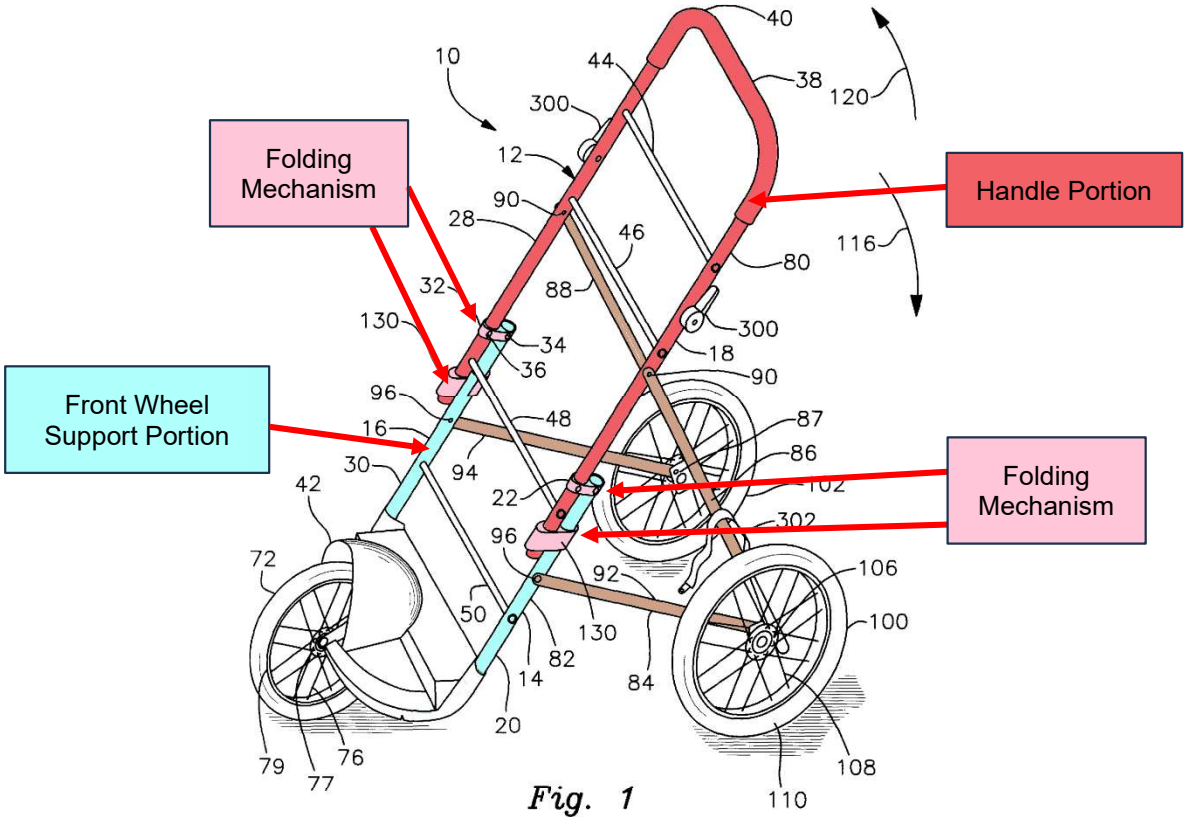


Fig. 1

EX1040, Schaaf, Fig. 1

The folding mechanism (pink) includes U-shaped brackets 22/32 clips 130, and pins 24/34 and 34/36 (not labeled). As shown below, the front seat is supported so that it

is close to the front wheel support portion (blue), and the rear seat is support so that it is close to the handle portion (red).

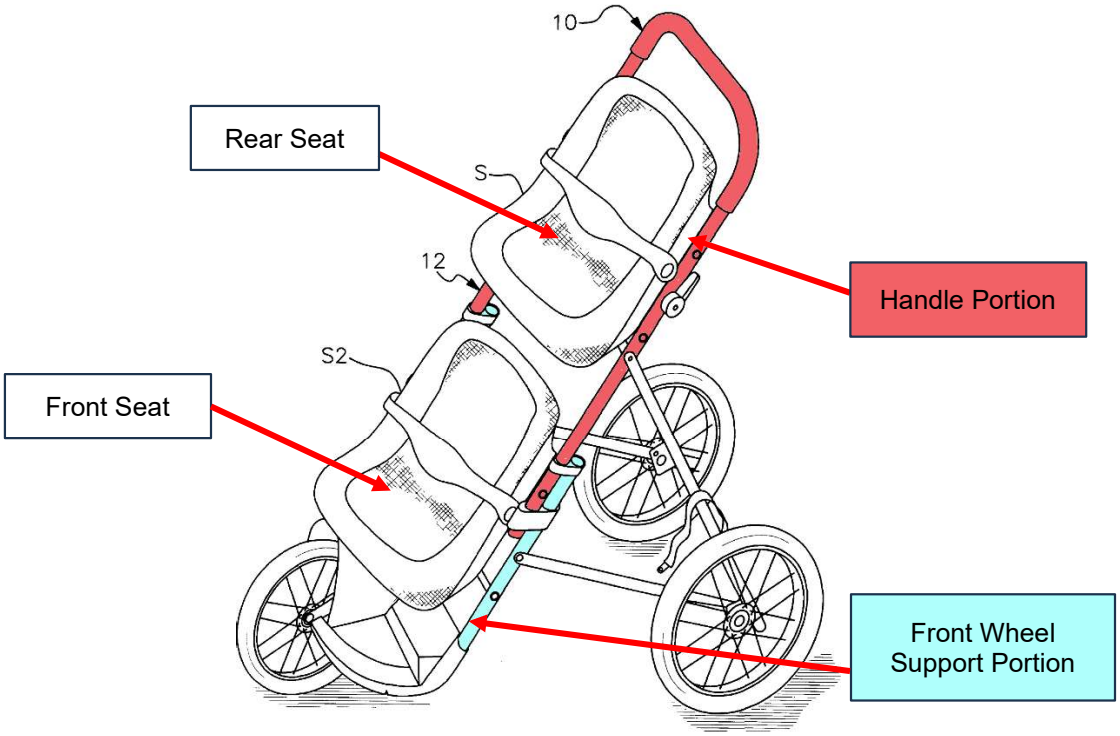


Fig. 10

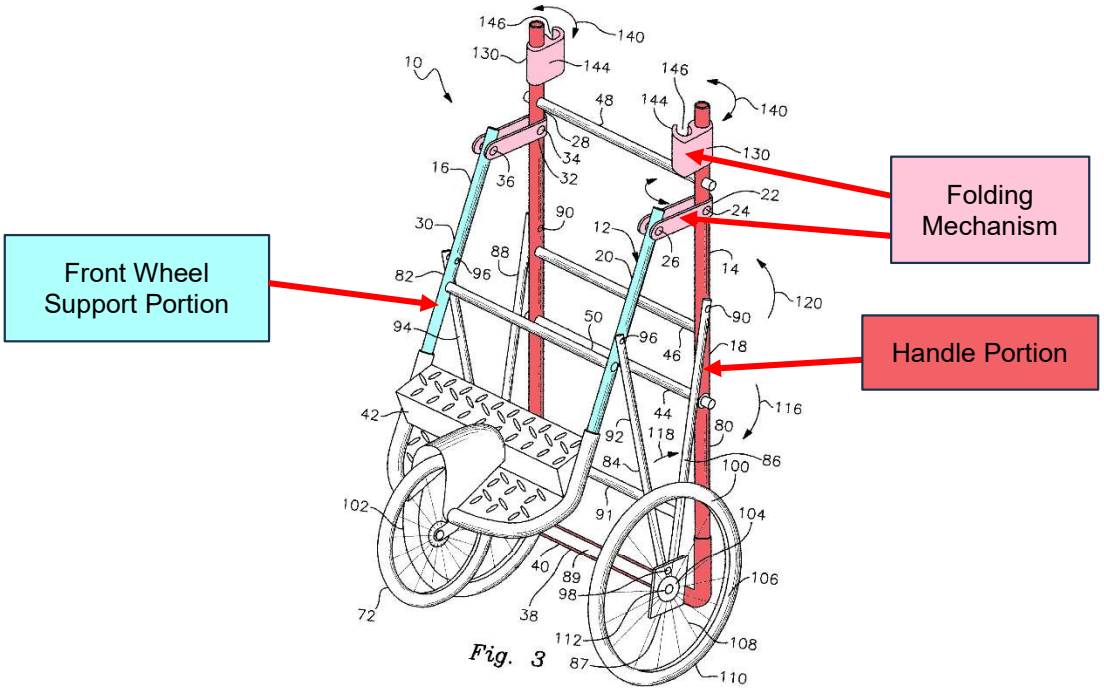
EX1040, Schaaf, Fig. 10

182. The frame 12 can fold by the handle portion (red) and/or front wheel support portion (blue) rotating about a pivot axis of the folding mechanism towards the rear wheels.

> **As with the side sections 14 and 16 of frame 12, the subassembly 84 is selectively folded and unfolded by alternately collapsing and opening the upper frame portion 80 relative to the lower frame portion 82.** In particular, as shown in FIGS. 1-3, **when upper portion 80 is pivoted downwardly relative to lower portion 82, in the direction of arrow 116, the support arms 92, 94 and depending**

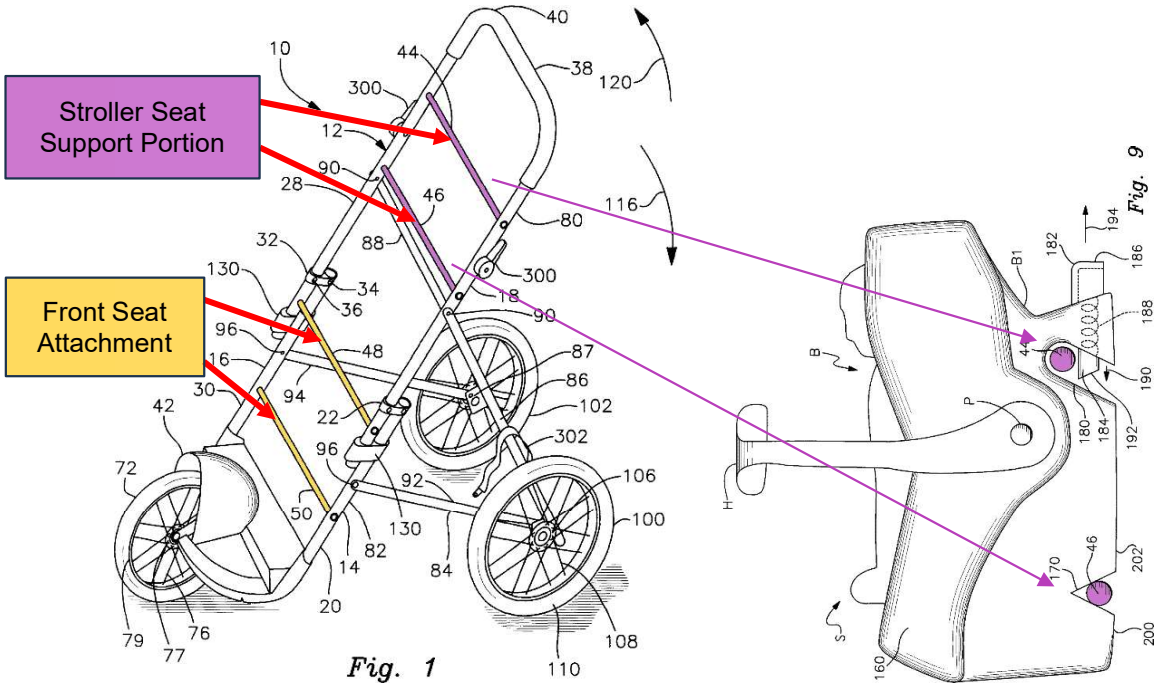
> **members 86, 88 pivot toward one another as indicated by arrow 118. In the collapsed condition shown in FIG. 3, the angle between the depending portions 86, 88 and the support arms 92, 94 is at its smallest. In this condition, the stroller features a relatively flattened configuration which is suitable for convenient transportation and storage. The lower frame portion 82 is drawn inwardly against the upper frame portion 80. Forward wheel 72 is raised above the ground or floor.** In the fully collapsed condition, handle 38 engages the ground or floor and the stroller can be balanced on the handle and rearward wheels 100 and 102. Alternately, when the stroller is opened, upper frame portion 80 and lower frame portion 82 are hingedly opened relative to one another, as depicted by arrow 120, from the condition shown in FIG. 3 through the state shown in FIG. 2 and into the fully open condition depicted in FIG. 1. In the latter condition, all three of the wheels 72, 100 and 102 engage the ground and frame 12 is supported such that side sections 14 and 16 tilt upwardly from the front wheel to the rear wheels.

(EX1040, Schaaf, 7:14-39.)



EX1040, Schaaf, Fig. 3

183. The seats S, S2 are connected to the frame using crossbars members that couple with slots provided on the back of the seats S, S2. (EX1040, Schaaf, 9:22-24, 9:50-54.) For example, the upper seat S is coupled to the upper members 18, 28 by a pair of crossbar members 44, 46. (EX1040, Schaaf, 9:24-25, 9:50-54, Figs. 1, 9.) The back side of the seat S has slots 170 and 180 that receive to the members 46, 44, respectively, to attach the seat. (EX1040, Schaaf, 9:25-32, Fig. 9.) A latch element 184 secures the seat in place. (EX1040, Schaaf, 9:43-43.) The second seat S2 is similarly coupled. (EX1040, Schaaf, 9:48-57, Figs. 9, 10.) The crossbar members 44, 46 correspond to the "stroller seat support portion" of claim 1 of the '231 Patent, and the cross bars 48, 50 correspond to the "front seat attachment" of the '231 Patent.



EX1040, Schaaf, Figs. 1 and 9

E. U.S. Design Patent No. D593,459 ("Liao")

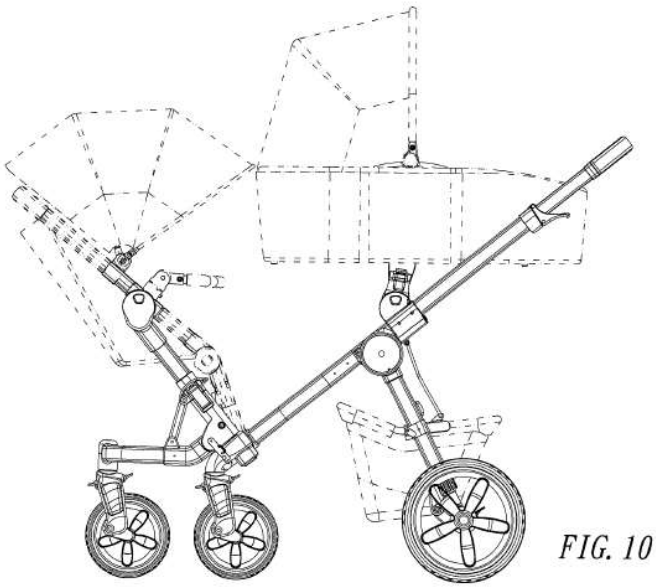
1. Status as Prior Art

184. On September 5, 2008, Unique Product & Design Co. Ltd. filed an application for U.S. Design Patent D593,459 (app. no. 29/324,044), Design application No. 29/324,044 issued as Liao on June 2, 2009 (EX1051, Liao.).

185. Counsel has informed me that Liao is prior art under at least 35 U.S.C. § 102(a)(2) (post-AIA) or 35 U.S.C. § 102(e) (pre-AIA) assuming the claims are entitled to the December 4, 2008 priority claim, and is prior art under at least 35 U.S.C. § 102(a)(1) (post-AIA) or 35 U.S.C. § 102(b) (pre-AIA) if not entitled to priority.

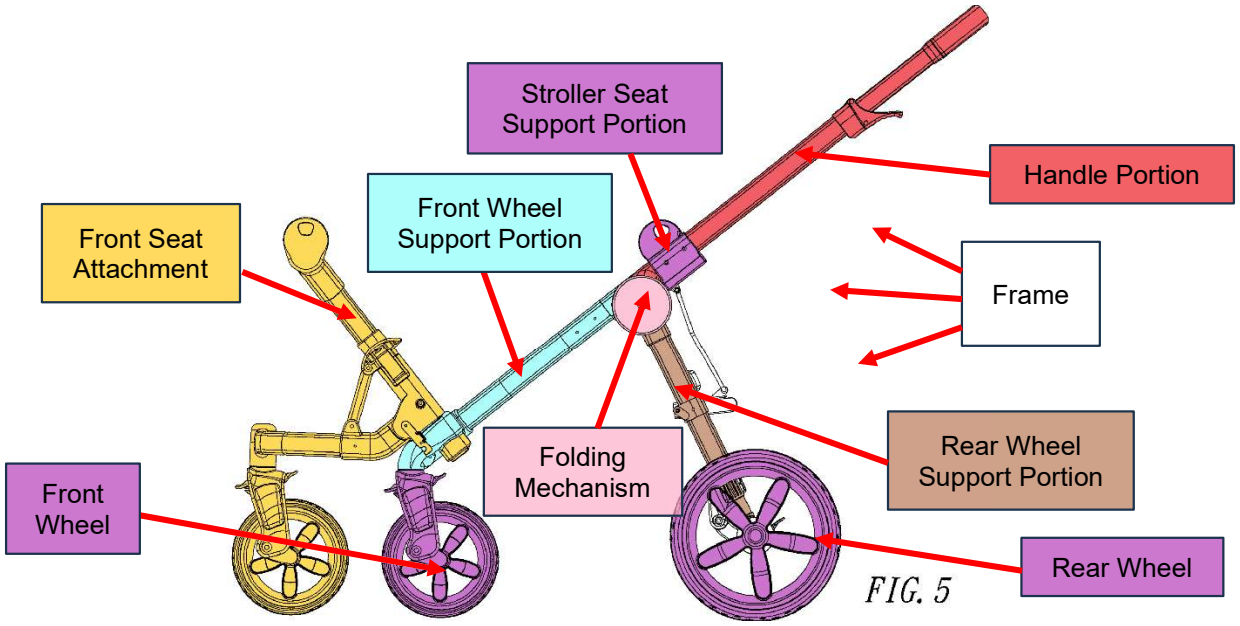
2. Overview of Liao

186. Liao discloses a pushchair (*i.e.*, a stroller) having a single configuration and dual configuration. Liao has a main frame structure that supports a first seat and has a detachable front seat attachment that allows the pushchair to have two seats.



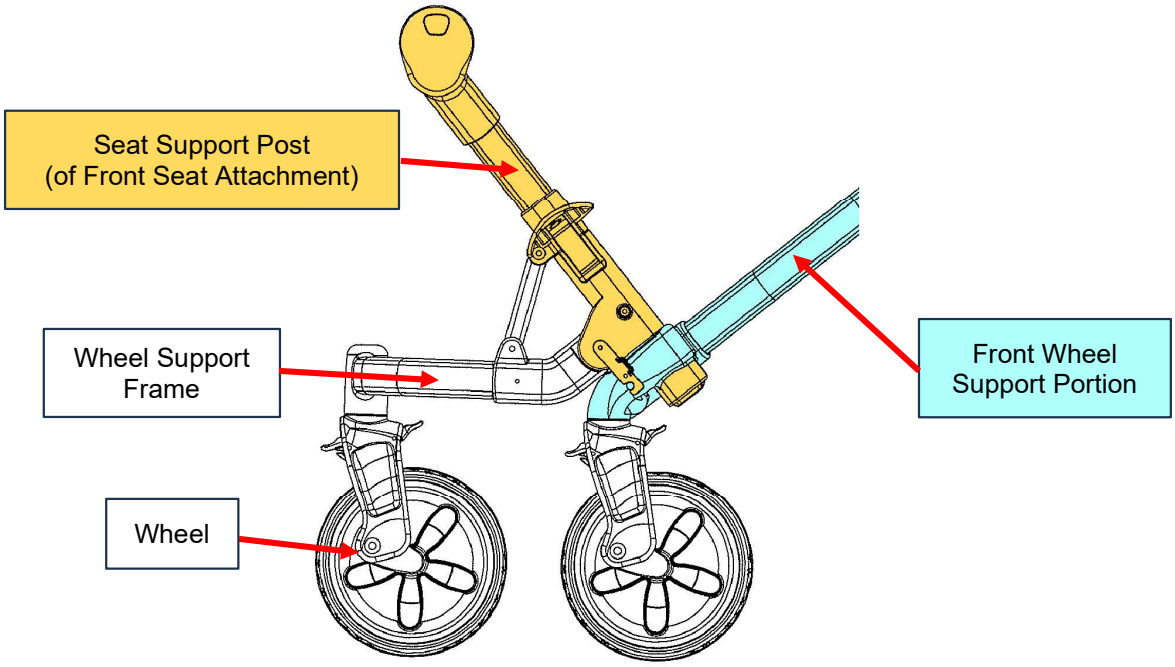
EX1051, Liao, Fig. 10

187. The main frame structure includes a frame and four wheels. The frame of Liao is just like the stroller frame 12 of the ’231 Patent. Liao’s frame includes a front wheel support portion (blue), a rear wheel support portion (brown), a handle portion (red), and a folding mechanism (pink). A stroller seat support portion (purple) is located adjacent to the handle portion (red).



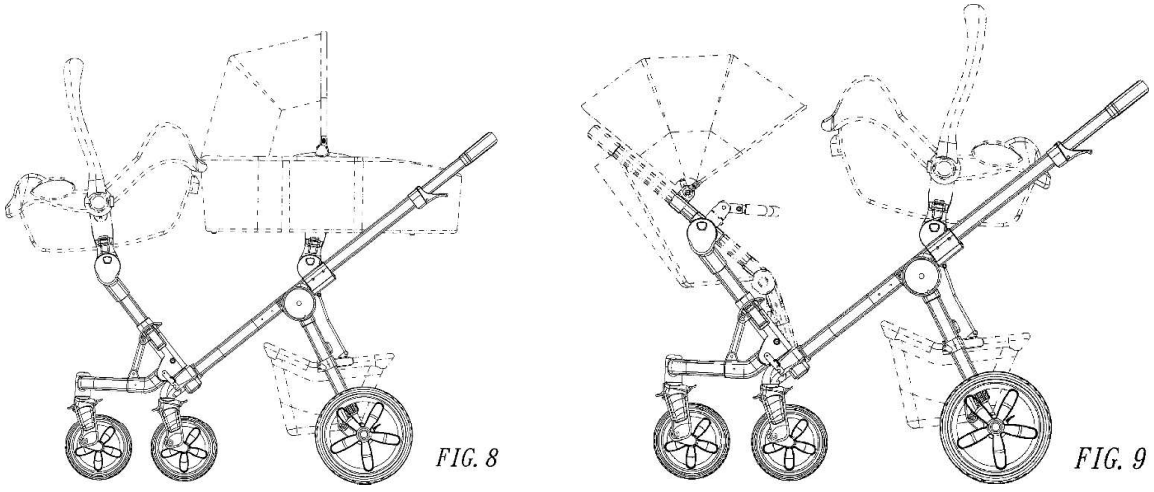
EX1051, Liao, Fig. 5

188. The front seat attachment (gold) is just like the seat attachment 20 of the '231 Patent and is removably attached to the front wheel support portion (blue) of the frame. Liao's front seat attachment includes a wheel, wheel support frame, and seat support posts (gold) that attach to the front wheel support portion (blue) of the stroller frame.

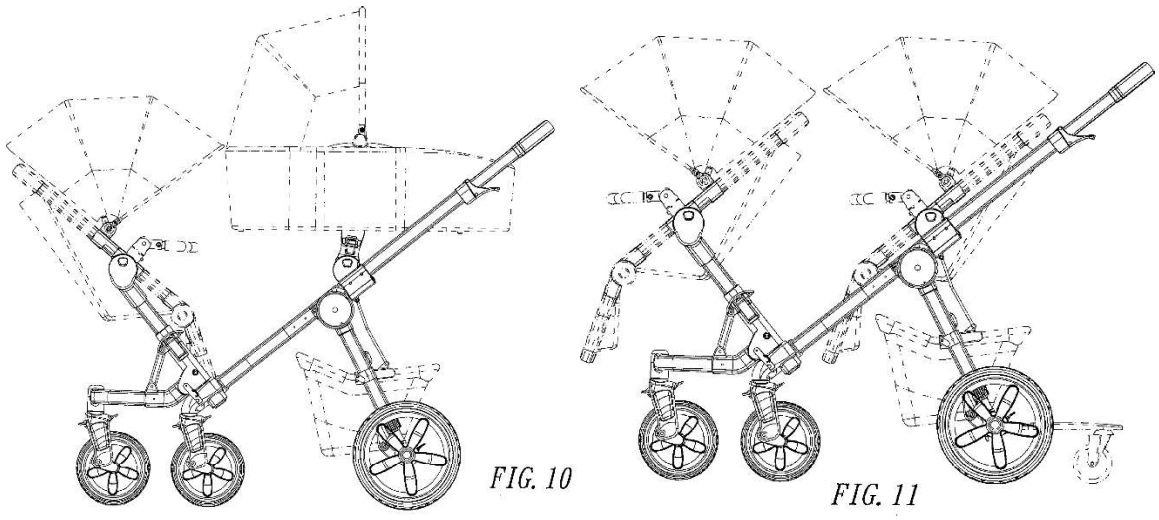


EX1051, Liao, Fig. 5

189. Liao illustrates multiple types of seats being supported in front-facing and rear-facing configurations.



EX1051, Liao, Figs. 8 and 9



EX1051, Liao, Figs. 10 and 11

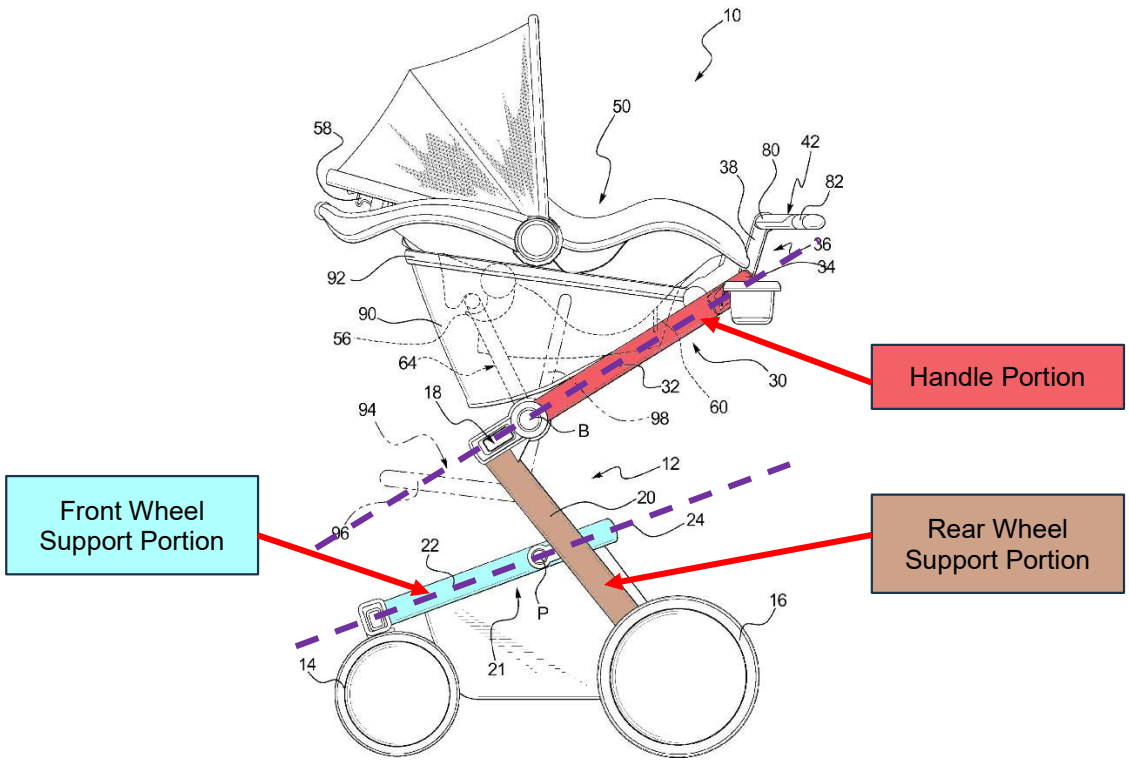
X. Invalidity Grounds

A. Ground 1 – Claims 1-17 and 19-22 are obvious over Dotsey and Zehfuss.

1. Overview of the Combination of Dotsey and Zehfuss

190. Dotsey discloses a seat mounted on a stroller frame having a front wheel support portion (blue) and handle portion (red) that are substantially parallel. Dotsey does not explicitly disclose mounting an additional seat on the frame's front wheel support portion (blue) or that a front seat should be supported substantially over the front wheels so that the stroller's center of gravity is between the front wheels and rear wheels.

FIG. 2



EX1048, Dotsey, Fig. 2.

191. However, Zehfuss discloses converting a single-stroller into a double-stroller by mounting an additional seat on the frame's front wheel support portion using a seat support element.

> A further embodiment of the stroller 80 is shown in FIG. 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.

(EX1003, Zehfuss, [0043].)

> 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.

(EX1003, Zehfuss, [0046].)

192. A POSITA would have been motivated to attach an additional seat to Dotsey's front wheel support portion using Zehfuss' seat support element because there was a demand in the market for double-strollers and it allows multiple children to be transported on a single stroller. Purchasers of strollers (*e.g.*, caregivers) have long sought strollers that make their lives more convenient. When caregivers have two young children, they often want one stroller that supports both children because it is often easier to transport, store, and maneuver one stroller supporting two children than two separate single-strollers. It also would have been desirable to be able to convert a single-stroller into a double-stroller and vice-versa, as disclosed in Zehfuss, because it allows a caregiver to use the stroller as a single-stroller (without the added weight and bulk of a second seat) when the caregiver has only one child of stroller age (*e.g.*, before the second child is born, after the first child is old enough to not use a stroller).

193. Zehfuss also discloses mounting the front stroller seat substantially over the front wheels so that the center of gravity of the stroller system is located

between the front wheels and rear wheels of the stroller.

> **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.

(EX1003, Zehfuss, [0046].) Zehfuss is describing a principle that has long been well known in the design of strollers (and generally for all vehicles). Zehfuss is describing that it is desirable to have a stroller's center of gravity be located between the stroller's wheels because it reduces the risk of the stroller tipping over and injuring a child. *See, e.g.*, EX1052, Nash, [0023], [0028] (discussing desirability of a stroller system's center of gravity being between the wheels). If the stroller's center of gravity was in front of the front wheels, it could easily tip forward. If the stroller's center of gravity was behind the rear wheels, it would easily tip backwards. A POSITA would have also known that having the center of gravity located between the front and rear wheels makes the stroller easier to steer and control.

194. A POSITA would have been motivated to make front seat of the Dotsey/Zehfuss stroller supported substantially over the front wheels so that the center of gravity is between the front wheels and rear wheels, as disclosed in Zehfuss. As discussed above, having the center of gravity located between the front wheels and rear wheels reduces risk of tipping and make the stroller easier to steer

and control, which are desirable for stroller design.

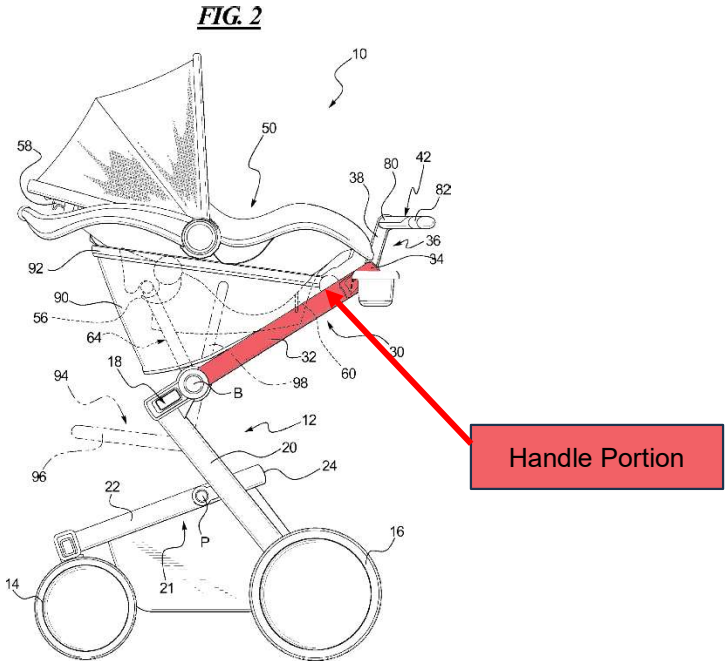
195. A POSITA would have reasonably expected success when combining Dotsey and Zehfuss. The strollers disclosed in Dotsey and Zehfuss use conventional design components that were well-known in the industry. Combining the teachings of Dotsey with Zehfuss would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

196. Below, I address each limitation of the challenged claims. In my discussion, "Dotsey/Zehfuss" refers to the combination of Dotsey and Zehfuss.

2. Analysis of Claims 1-17 and 19-22

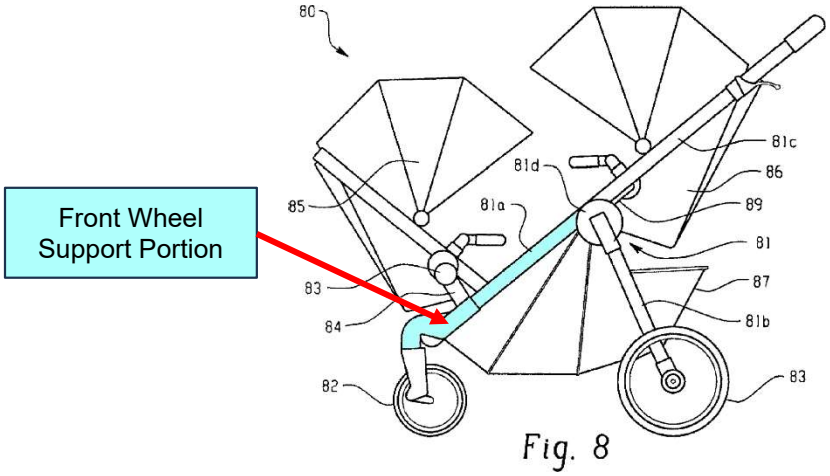
… ***[1.pre] A stroller system for supporting a front stroller seat and a rear stroller seat, the system comprising:***

197. Dotsey discloses a stroller seat mounted at the handle portion (red) of the frame.



EX1048, Dotsey, Fig. 2

198. Zehfuss discloses mounting an additional seat at the front wheel support portion (blue) of the frame.



EX1003, Zehfuss, Fig. 8

199. When the disclosures of Dotsey and Zehfuss are combined, the resulting combination is a stroller system for supporting a front stroller seat and a rear stroller seat.

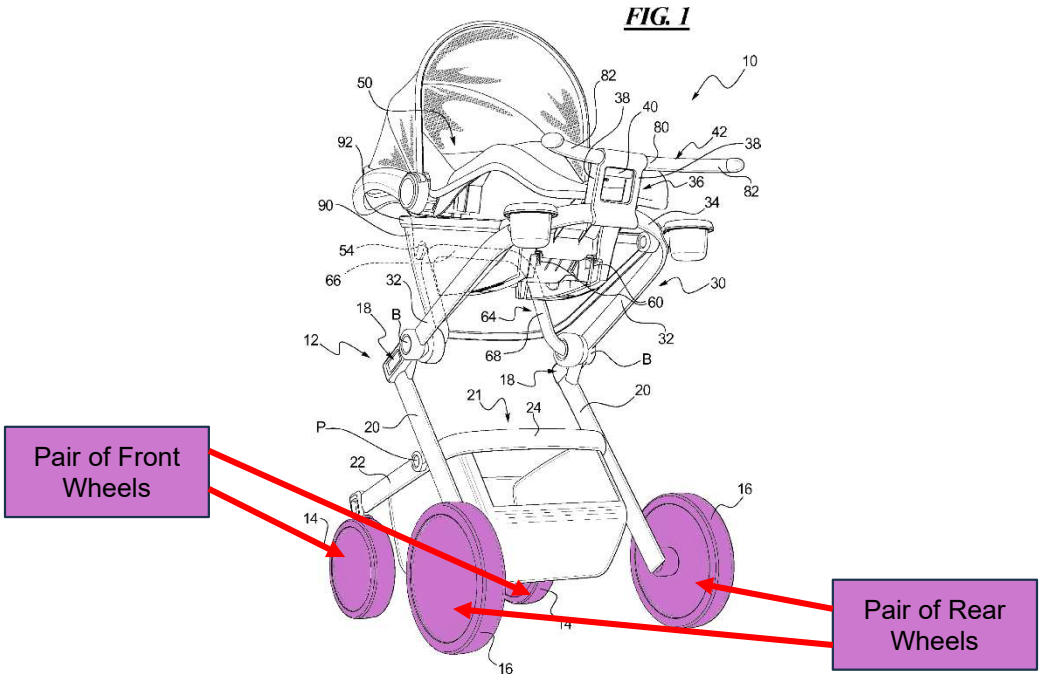
200. Therefore, it is my opinion that Dotsey and Zehfuss render obvious limitation [1.pre].

… ***[1.a]-[1.b] a pair of rear wheels; a pair of front wheels;***

201. Dotsey discloses a stroller having a pair of rear wheels 16 (purple) and a pair of front wheels 14 (purple).

> In the disclosed example, the stroller assembly 10 has a frame assembly 12 supported by **a pair of front wheels 14** and **a pair of rear wheels 16** as is generally known in the art.

(Dotsey, [0020].)



EX1048, Dotsey, Fig. 1

202. Therefore, it is my opinion that Dotsey discloses limitations [1.a]-[1.b].

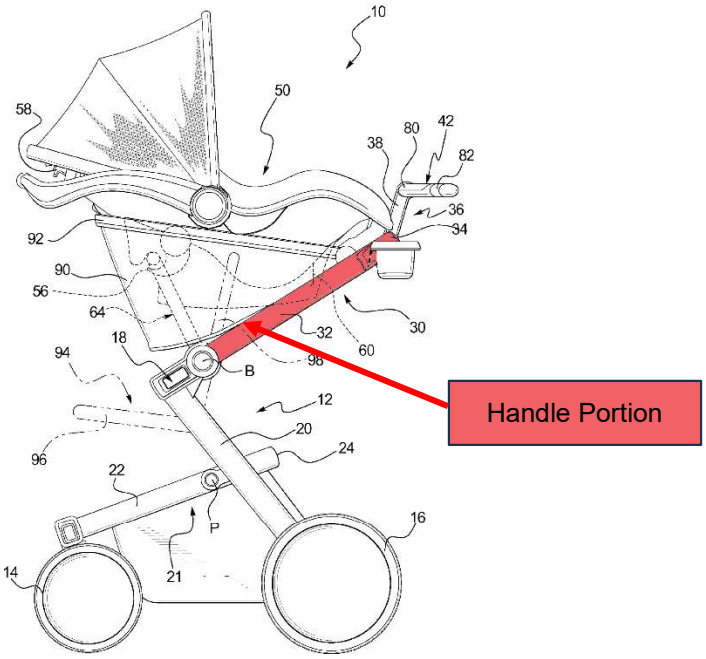
… ***[1.c.i] a frame including a handle portion, a rear wheel support portion, a front wheel support portion and a folding mechanism connecting the front wheel support portion and the handle portion in both an unfolded configuration and in a folded configuration,***

203. Dotsey discloses a frame having a handle assembly 30 (red) that corresponds to the "handle portion" recited in the claim.

> In the disclosed example, **the stroller assembly 10 also includes a handle assembly 30,** which in this example is pivotally coupled to the upper ends of the rear legs 20 at the respective fold joints 18**. The handle assembly 30 in the disclosed example generally includes a pair of laterally spaced apart push bars 32 extending upward and rearward from the respective fold joints 18. The handle assembly 30 is formed having a continuous U-shaped tube structure that includes the two push bars 32 a curved connecting section 34, which extends between the upper ends of the push bars 32. In the disclosed example, a stanchion assembly 36 extends upward and rearward from the connecting section 34 of the handle assembly 30.** In the disclosed example the stanchion assembly 36 has a pair of connectors 38, which are laterally spaced apart from one another and project way from the connecting section 34. A latch actuator 40 is positioned between the connectors 38. **A handle bar 42 or handle is coupled to the distal ends of the connectors 38 coincident with the actuator 40.**

(EX1048, Dotsey, [0022].)

FIG. 2



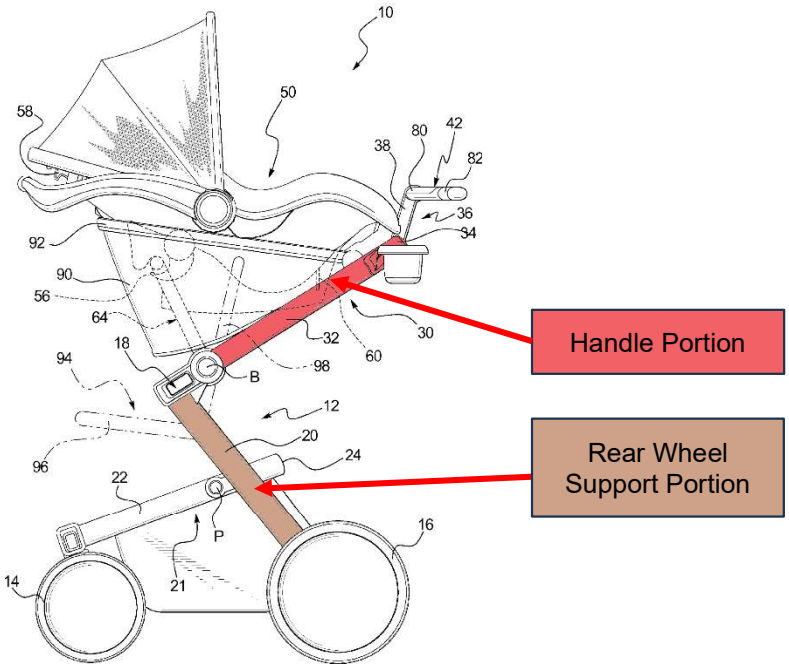
EX1048, Dotsey, Fig. 2

204. Dotsey's frame also includes rear legs 20 (brown) that correspond to the "rear wheel support portion" recited in the claim.

> **Each frame side in this example has a rear leg 20** extending down from the corresponding fold joint 18 on the respective side. A lower end of **each rear leg 20 is coupled to one of the rear wheels 16** in a conventional manner.

(EX1048, Dotsey, [0020].)

FIG. 2

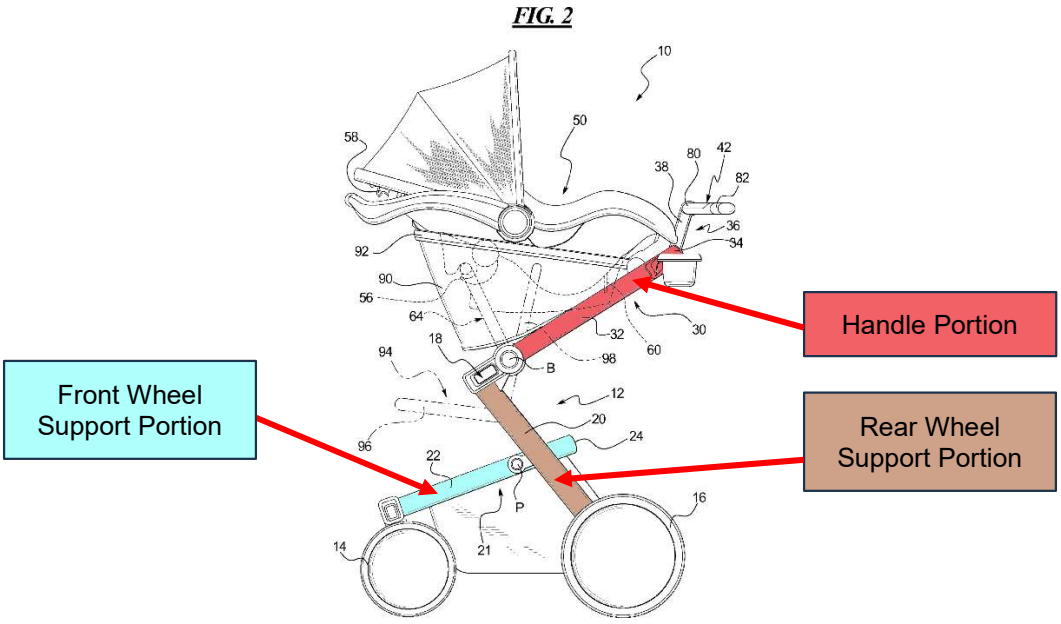


EX1048, Dotsey, Fig. 2

205. Dotsey's frame also includes a front leg tube assembly 21 (blue) that corresponds to the "front wheel support portion" recited in the claim.

> In this example, **a U-shaped front leg tube assembly 21 has a pair of front legs 22. Each front leg 22 extends forward and terminates at a lower end attached to one of the front wheels 14** in a conventional manner. **The U-shaped front leg tube 21 also includes a cross bar 24 interconnecting the opposite upper ends of the two front legs 22.**

(EX1048, Dotsey, [0020].)



EX1048, Dotsey, Fig. 2

206. Dotsey's frame also includes fold joints 18 and pivots P (pink) that correspond to the "folding mechanism" recited in the claim. The fold joints 18 and pivots P allow the frame to fold and unfold.

> In this example, **the frame assembly 12 has a pair of opposed sides, each with a pivotable fold joint 18 connecting components of the frame assembly.** Each frame side in this example has a rear leg 20 extending down from the corresponding fold joint 18 on the respective side.

(EX1048, Dotsey, [0020].)

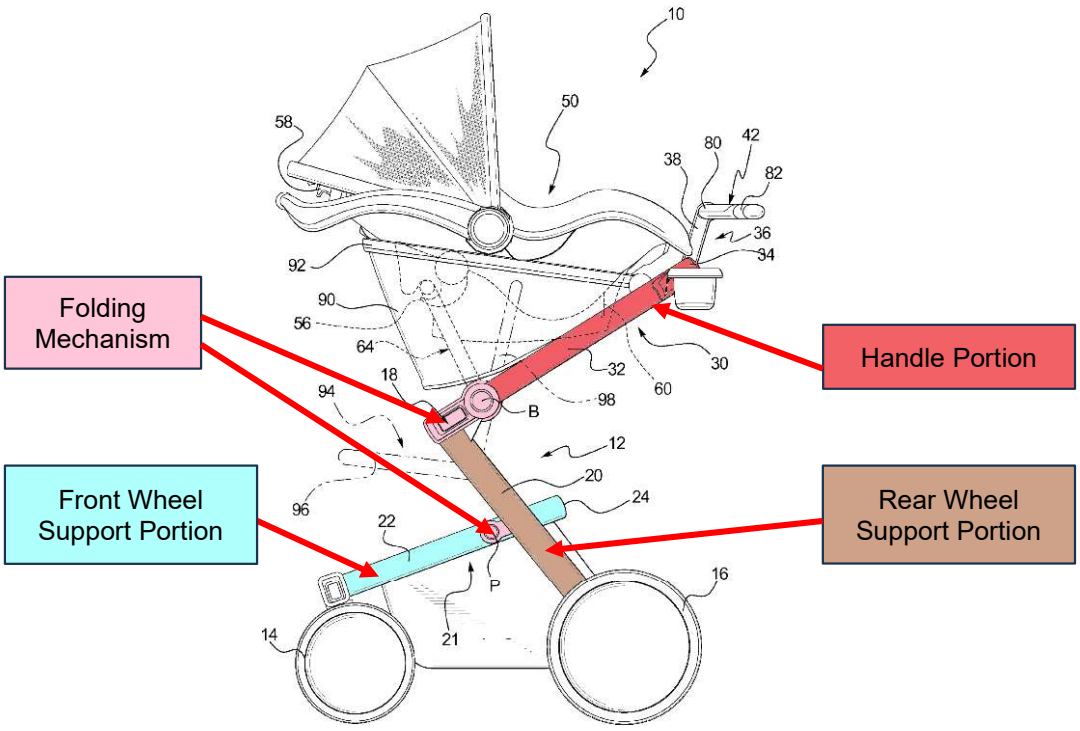
> **The leg tube 21 is pivotally coupled to the frame assembly with one front leg 22 pivotally connected at a pivot P to a respective one of the rear legs 20 so as to permit folding** of the frame assembly 12 as is also known in the art.

(EX1048, Dotsey, [0021].)

> In general, the actuator 40 can be pulled by a user inward toward the handle bar or handle 42. **This movement of the actuator 40 will in turn release latches (see FIG. 4) at the respective fold joints 18 as is known in the art.** In one example, cables (not shown) can extend internally through the tubes of the connectors 38, connecting section 34, and push bars 32 in order to interconnect the actuator 40 with the latches 44 at each fold joint 18. Though not shown herein, **when the actuator 40 is actuated and the fold joint latches 44 are released, the handle assembly 30 can be pivoted downward toward the rear legs 20. The front legs 22 will pivot about the pivot points P relative to the rear legs 20 as the rear legs drop downward. Thus, the frame assembly 12 can be folded to a folded configuration as is known in the art.**

(EX1048, Dotsey, [0023].)

FIG. 2



EX1048, Dotsey, Fig. 2

207. The claim language does not limit how the folding mechanism connects the front wheel support portion and the handle portion. The claim language also does not specify that the folding mechanism must directly connect the front wheel support portion and the handle portion. Thus, a POSITA would understand that the claim language permits the folding mechanism to directly or indirectly connect the front wheel support portion and the handle portion.

208. In Dotsey, the pivots P (pink) pivotally connect the front leg tube assembly 21 (front wheel support portion) (blue) to the rear legs 20 (rear wheel support portion) (brown). The folding joints 18 (pink) pivotally couple the rear legs 20 (rear wheel support portion) (brown) to the handle assembly 30 (handle portion).

The pivots P and folding joints 18 (pink) connect the front wheel support portion (blue) and the handle portion (red) through a segment of the rear wheel support portion (brown). The pivots P and folding joints 18 (folding mechanism) (pink) connect these respective frame components when the frame is folded and unfolded. Thus, Dotsey's folding mechanism connects the front wheel support portion and the handle portion in both an unfolded and in a folded configuration.

209. Therefore, it is my opinion that Dotsey discloses limitation [1.c.i].

… ***[1.c.ii] wherein the folding mechanism connects the rear wheel support portion to the front wheel support portion and the handle portion,***

210. The pivots P in Dotsey connect the rear legs 20 (rear wheel support portion) (brown) to the leg tube assembly 21 (front wheel support portion) (blue).

> **The leg tube 21 is pivotally coupled to the frame assembly with one front leg 22 pivotally connected at a pivot P to a respective one of the rear legs 20** so as to permit folding of the frame assembly 12 as is also known in the art.

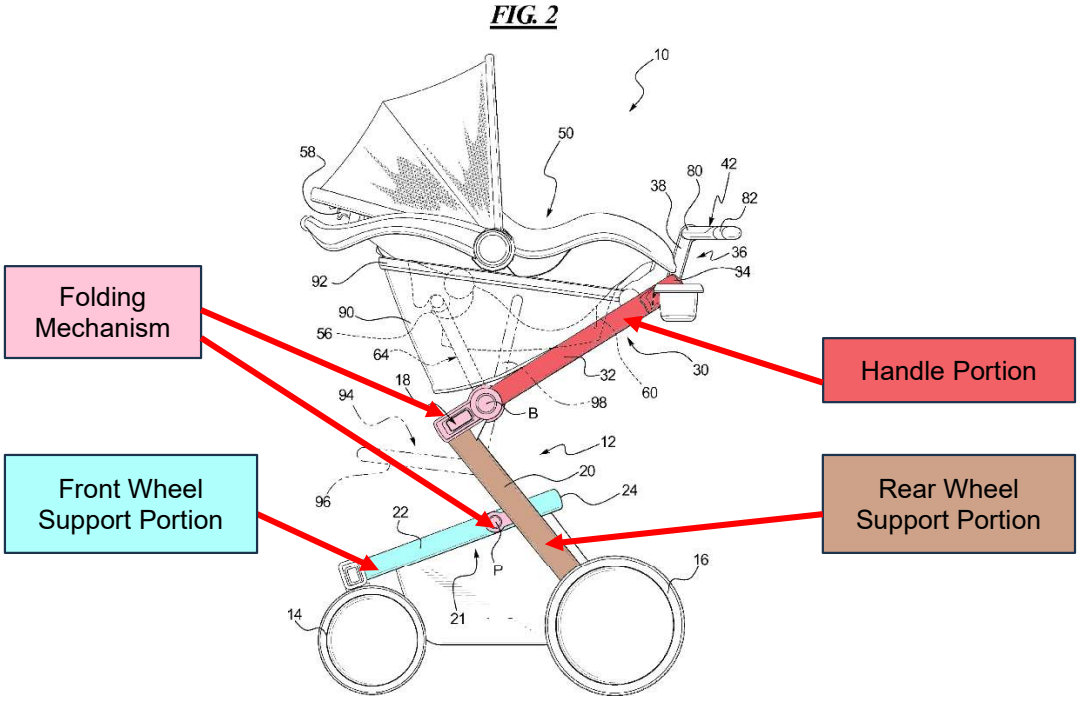
(EX1048, Dotsey, [0021].)

211. The fold joints 18 in Dotsey connect the rear legs 20 (rear wheel support portion) (brown) to the handle assembly 30 (handle portion) (red).

> In the disclosed example, the stroller assembly 10 also includes **a handle assembly 30, which in this example is pivotally coupled to the upper ends of the rear legs 20 at the respective fold joints 18.**

(EX1048, Dotsey, [0022].)

212. Therefore, the folding mechanism (the pivots P and fold joints 18) (pink) in Dotsey connects the rear wheel support portion (brown) to the front wheel support portion (blue) and the handle portion (red).



EX1048, Dotsey, Fig. 2

213. Therefore, it is my opinion that Dotsey discloses [1.c.ii].

… ***[1.c.iii] wherein the frame includes a stroller seat support portion positioned at a first vertical position adjacent the handle portion, and***

214. Dotsey discloses that the frame may include a pivotable brace 64 (purple) that supports an infant carrier 50. The brace 64 corresponds to the "stroller seat support portion" recited in the claim. The brace 64 supports a carrier 50, which

is a type of stroller seat.

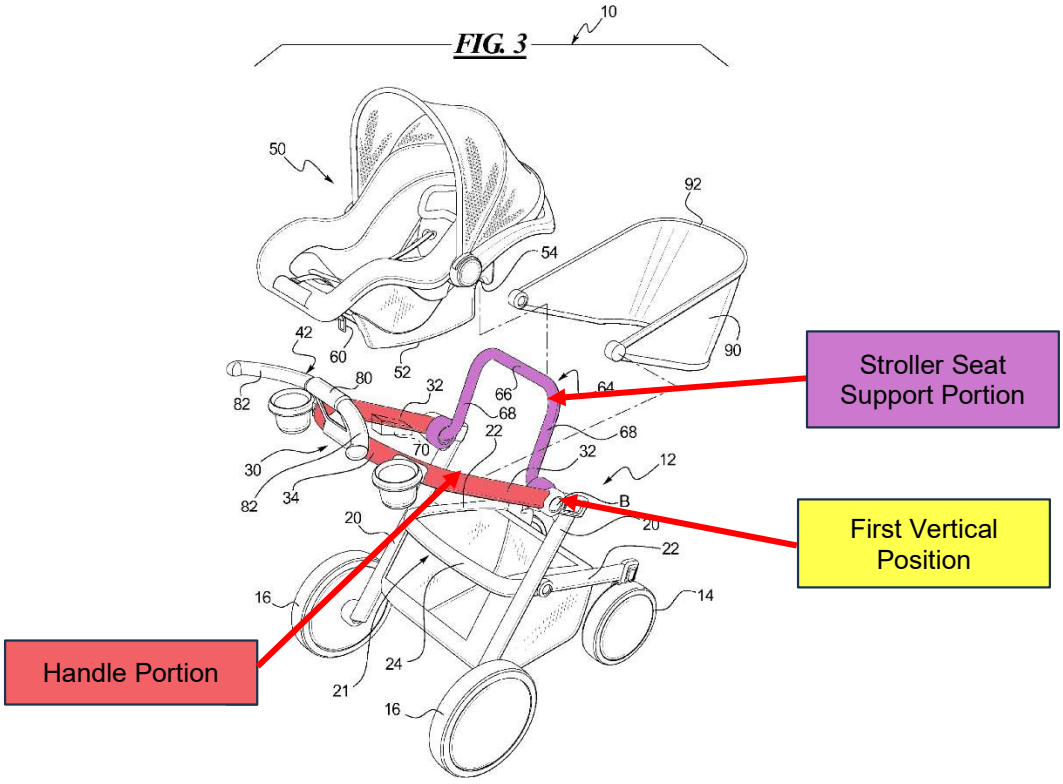
> In the disclosed example**, the frame assembly 12 employs a pivotable brace 64 or support that can be pivoted between a stowed position (not shown) and a support position as shown for attaching the infant carrier 50 to the frame assembly 12.** The brace 64 can be suitably secured or retained in each of the stowed and support positions using common mechanisms or other suitable devices, though also not shown or described herein. In this example, the brace 64 is generally U-shaped and has a cross member 66 extending between the upper free ends of a pair of laterally spaced arms 68. The lower ends of the arms 68 are pivotally connected to a portion of the frame assembly. In this example, the arms 68 are connected at pivot points B to the inside surfaces of the push arms 32 on the handle assembly 30. As shown in FIG. 2, the cross member 66 of the brace nests up into the recesses 54 of the conventional infant carrier 50 and the latch hook 56 underlies and catches the cross member. The actuator 58 can be utilized to release the latch hook 56 and thus the infant carrier 50 from the frame assembly 12 as is known in the art.

(EX1048, Dotsey, [0026].)

> The forward or foot end of the carrier 50 typically employs the mounting elements 60. In one example, one or more mounting brackets 70 can be mounted on an interior side of each of the handle assembly push bars 32. The mounting brackets 70 are shown herein in only a generic fashion for simplicity. A single mounting bracket could alternatively be mounted to the connecting section 34 of the handle assembly 30 in this example. In another example, the mounting

brackets 70 could alternatively be incorporated as part of a structure defining the pivot points B where the brace 64 attaches to the push arms in this example. In any event, the mounting brackets 70 can be configured to cooperate with the mounting elements 60 on the underside of the carrier 50 so as to rest on or be supported by the mounting brackets.

(EX1048, Dotsey, [0028].)



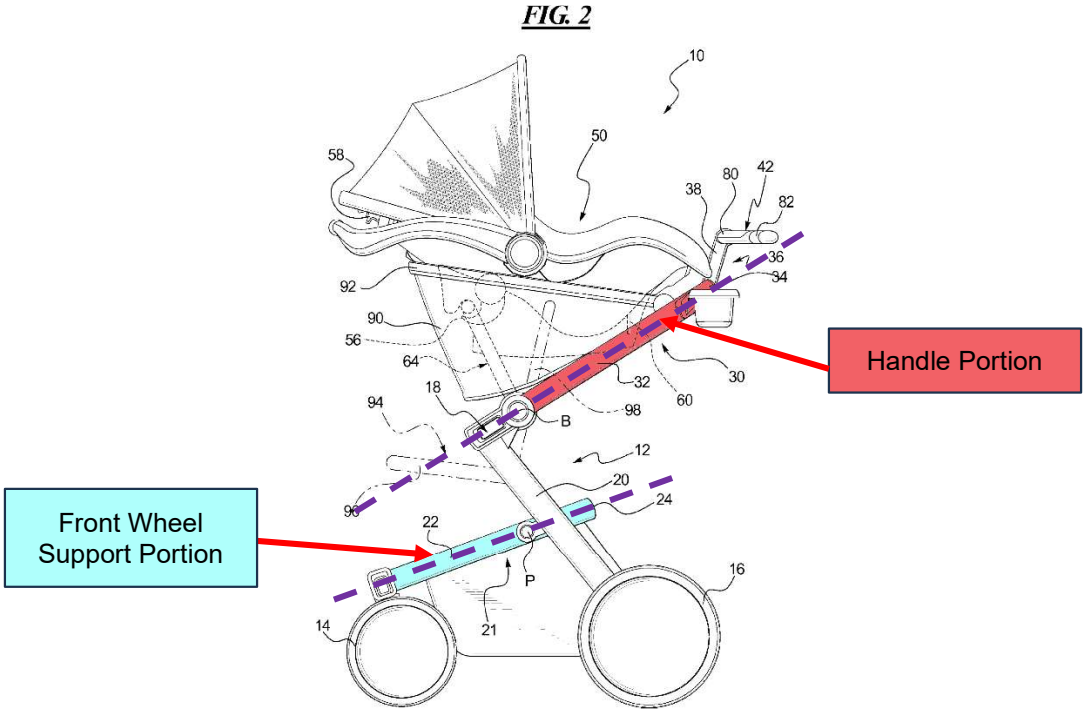
EX1048, Dotsey. Fig. 3

215. As shown in Fig. 3 of Dotsey above, the brace 64 (stroller seat support portion) (purple) is positioned at a first vertical position adjacent the handle portion (red) of the frame.

216. Therefore, it is my opinion that Dotsey discloses limitation [1.c.iii].

… ***[1.c.iv] wherein the front wheel support portion and the handle portion are substantially parallel when the frame is in the unfolded configuration; and***

217. Fig. 2 of Dotsey below shows the left view of Dotsey's stroller in an unfolded configuration.



EX1048, Dotsey, Fig. 2

218. As illustrated in the side view above, the handle portion (red) and front wheel support portion (blue) lie in two separate planes (shown as purple lines in this side view). The two planes are offset from each other (*i.e.*, separated by a distance). Although the two planes are not perfectly parallel, the relative angle between the two planes is small. This orientation results in the planes not intersecting until they are expanded by a large amount. Therefore, Dotsey's handle portion (red) and front

wheel support portion (blue) are "substantially parallel" when the frame is in the unfolded configuration.

219. Therefore, it is my opinion that Dotsey discloses limitation [1.c.iv].

… ***[1.d] a front seat attachment configured for attachment to the front wheel support portion at a second vertical position substantially lower than the first vertical position,***

220. Zehfuss describes a front seat support element 84[17] that is configured to attach to the front wheel support portion and support a front stroller seat. The front seat support element 84 corresponds to the "front seat attachment" recited in the claim.

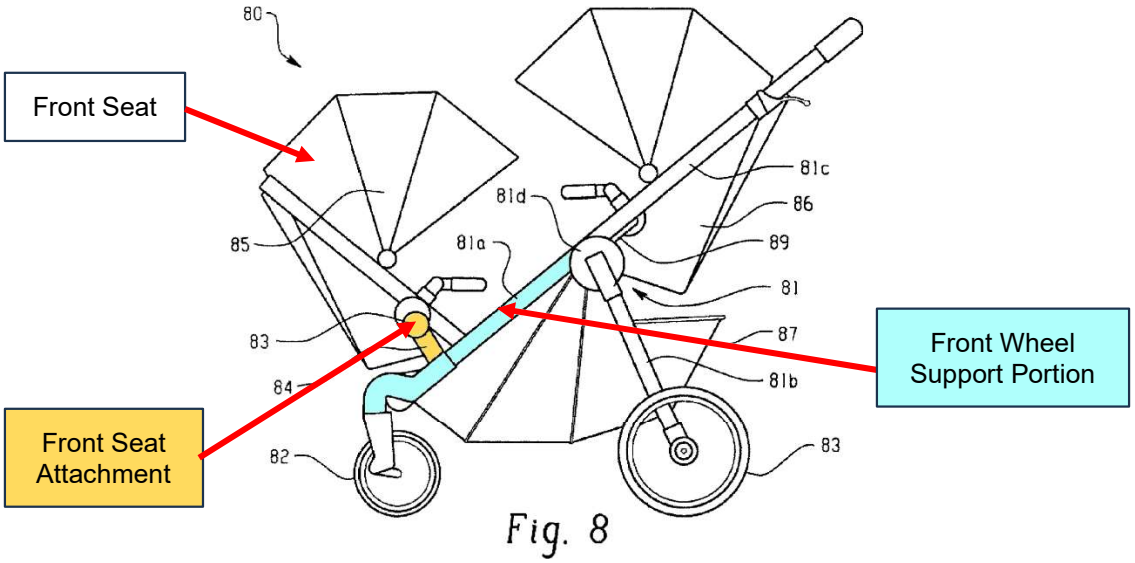
> Embodiment of the stroller 80 comprises **a first seat support element 84. The seat support element 84 is connected to the stroller 80 front wheel support frame 81a. The seat support element 84 is adjacent to the front wheel support portion 81a of frame 81. The seat support element is capable of supporting 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

[17] Zehfuss also refers to the "seat support element 84" as the "seat support portion 84." (EX1003, Zehfuss, [0044].)

> 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.

(EX1003, Zehfuss, [0046].)

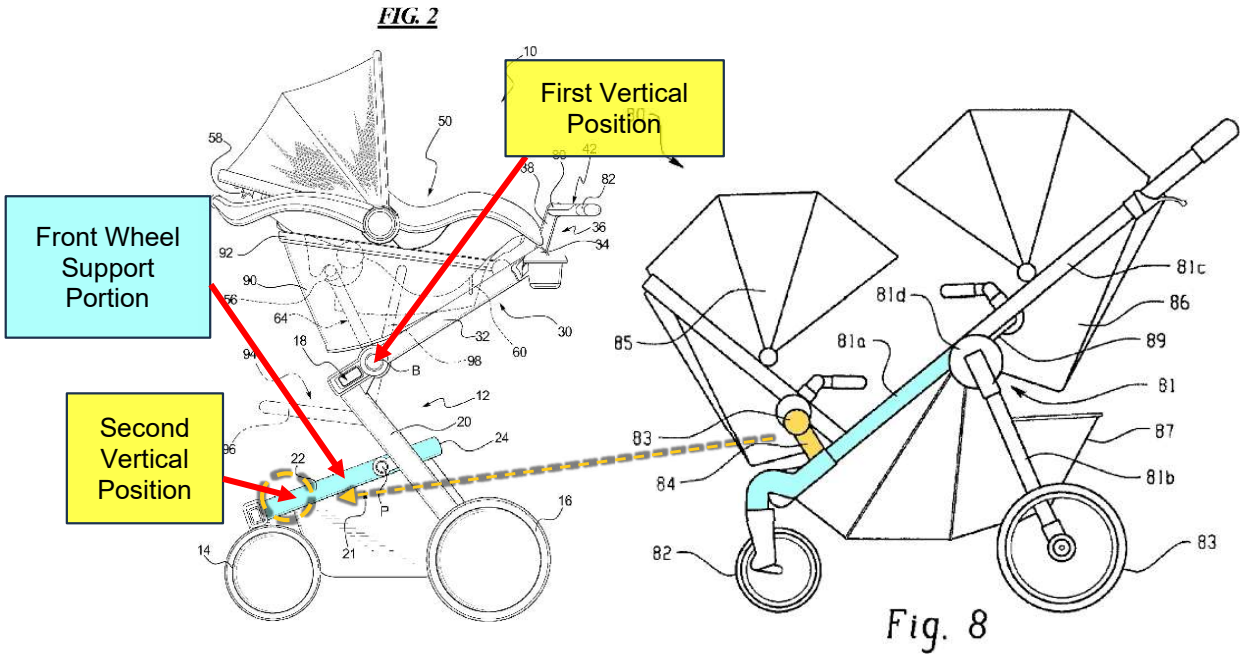
221. As shown in Fig. 8 below, the seat support element 84 (front seat attachment) (gold) is located towards the lower end of the front wheel support portion (blue).



EX1003, Zehfuss, Fig. 8

222. When the front seat attachment (seat support element 84) (gold) of Zehfuss is combined with the stroller of Dotsey, it is located at a second vertical

position substantially lower than the first vertical position (as labeled below).



EX1048, Dotsey, Fig. 2 and EX1003, Zehfuss, Fig. 8

223. Therefore, it is my opinion that Dotsey and Zehfuss renders obvious limitation [1.d].

> … ***[1.e] wherein the front seat attachment is configured to releasably connect to and support the front stroller seat in either a forward-facing configuration or a backward -facing configuration,***

224. Zehfuss describes the seat support element 84 (front seat attachment) as being "similar" to the seat support portion 20 in Fig. 2 "without the wheel, 23, the strut 28, pivotal connection 27, and/or the wheel support frame 26." (EX1003, Zehfuss, [0044].) Zehfuss also describes that the seat support portion 20 has a seat support element that is capable of supporting the front stroller seat in either a forward or a backward position.

> 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.**

(EX1003, Zehfuss, [0036].)

225. Figs. 9A-9F of Zehfuss also illustrate different types of seats being supported by the seat support element 84 (front seat attachment) in either a forward-facing or backward-facing configuration.

226. Zehfuss also describes that stroller seats can be "releasably connected" to the stroller without the use of special tools or skills.

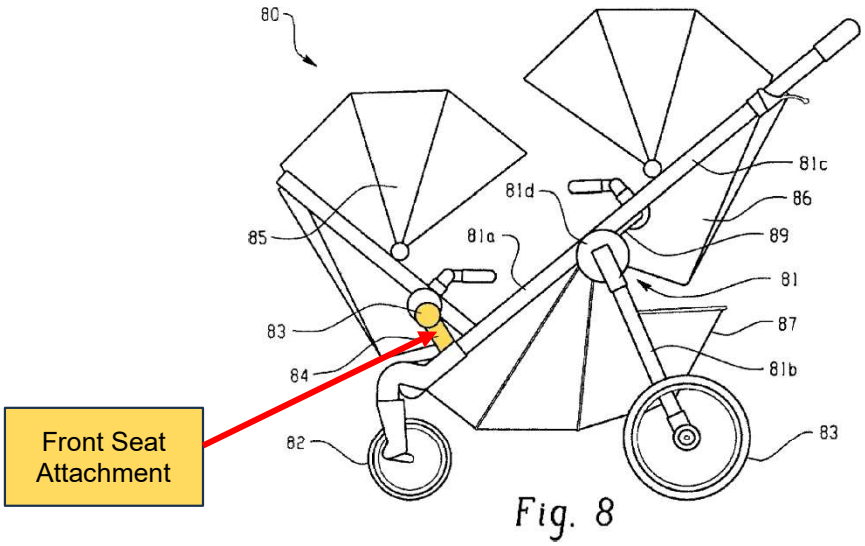
> The seat 13 may be permanently affixed to the frame 12 **or releasably connected such that it is capable of being removed and substituted with a different seat.** As used herein, **"releasably connected" or "releasably attached" means the connection is not a permanent connection and that the connection 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.

(EX1003, Zehfuss, [0009].)

227. Therefore, it is my opinion that Zehfuss discloses limitation [1.e].

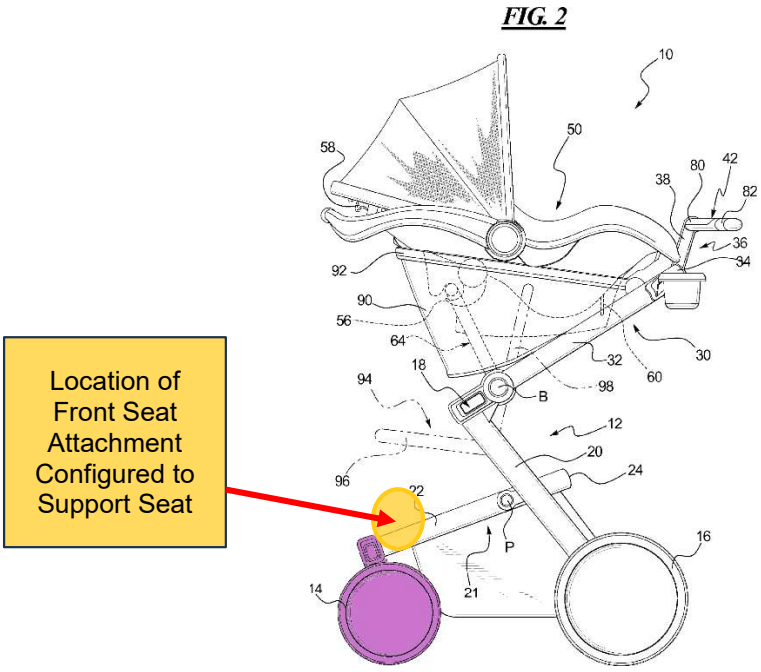
… ***[1.f] wherein the front seat attachment is configured to support the front stroller seat substantially over the front wheels so that a center of gravity of the stroller system is between the front wheels and the rear wheels;***

228. Figs. 8 and 9A-9F of Zehfuss illustrate the seat support element 84 (front seat attachment) supporting the front stroller seat substantially over the front wheels. Fig. 8 below shows the front seat attachment (gold) supporting the front stroller seat 85 substantially over the front wheels 82.



EX1003, Zehfuss, Fig. 8

229. The annotated figure below shows where the front seat attachment would be located when Dotsey and Zehfuss are combined. As shown below, the front seat attachment (gold) is configured to support the front seat substantially over the front wheels (purple).



EX1048, Dotsey, Fig. 2

230. Additionally, Zehfuss describes positioning the front seat substantially over the front wheels so that the stroller is "stable." Zehfuss also states that it is preferable to position the seats so that the stroller's center of gravity is between the front and rear wheels.

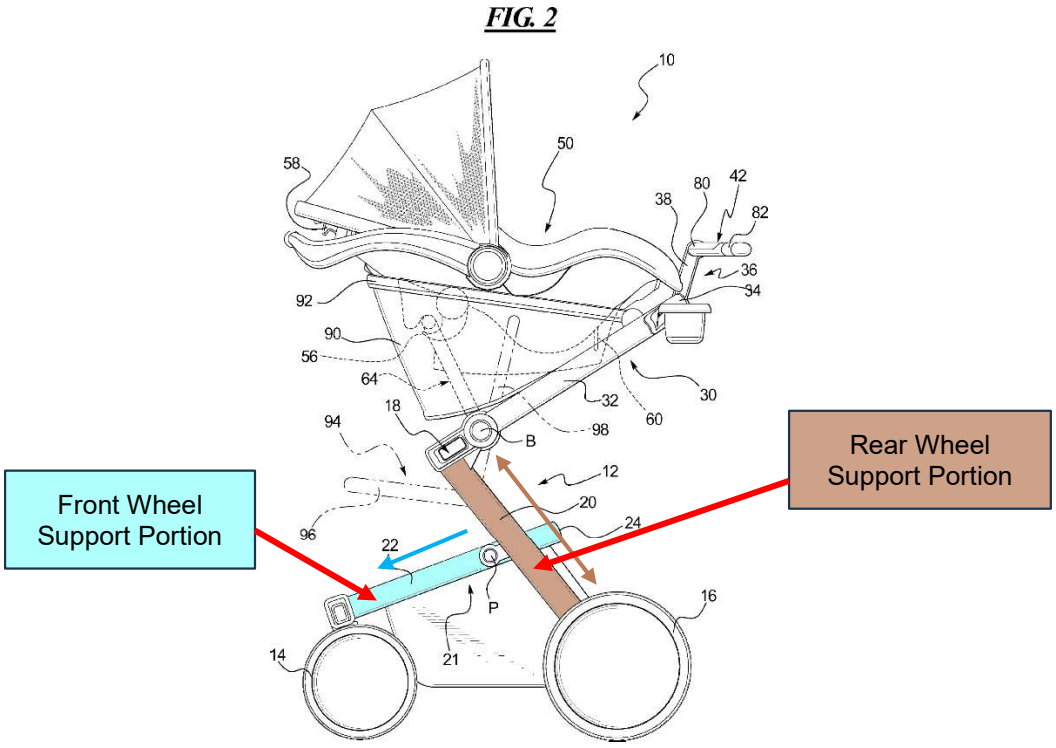
> **The front seat 85 may be positioned substantially over the front wheels so the stroller remains stable. Preferably, the seats should be positioned such that the center of gravity of the stroller is between the front and rear wheels.** If not an additional wheel may be placed on the attachment as 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.

(EX1003, Zehfuss, [0046].)

231. Therefore, it is my opinion that Zehfuss discloses limitation [1.f].

… ***[1.g] wherein the rear wheel support portion extends diagonally from the front wheel support portion when the frame is in the unfolded configuration, and the rear wheel support portion is disposed adjacent to both the front wheel support portion and the handle portion when the frame is in the folded configuration; and***

232. Fig. 2 of Dotsey below shows a side view of Dotsey's stroller in the unfolded configuration. As indicated by the arrows below, the rear wheel support portion (brown) extends diagonally from the front wheel support portion (blue) when the frame is in the unfolded configuration.



EX1048, Dotsey, Fig. 2.

233. Dotsey describes that its frame is collapsible. To make the frame collapse, the user pulls an actuator, which releases latches in the fold joints 18. This

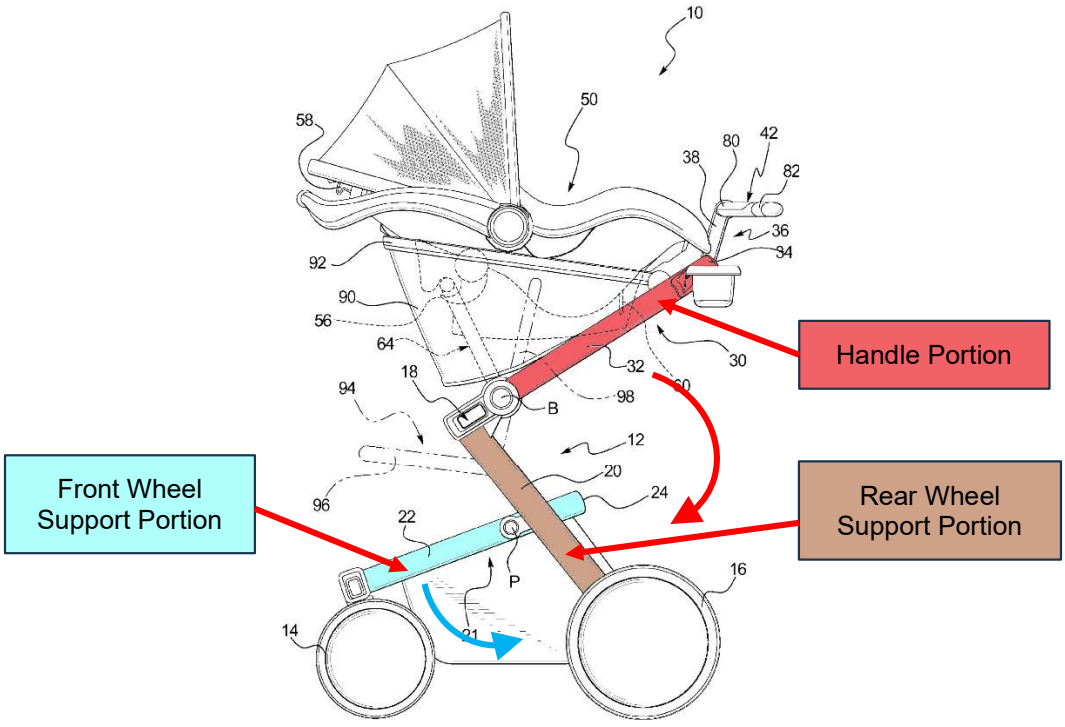
permits the handle portion (red) to pivot downward toward the rear wheel support portion (brown). Dotsey further describes that the rear wheel support portion (brown) will drop downward, and the front wheel support portion (blue) will pivot about the pivot points P.

> In general, the actuator 40 can be pulled by a user inward toward the handle bar or handle 42. This movement of the actuator 40 will in turn release latches (see FIG. 4) at the respective fold joints 18 as is known in the art. In one example, cables (not shown) can extend internally through the tubes of the connectors 38, connecting section 34, and push bars 32 in order to interconnect the actuator 40 with the latches 44 at each fold joint 18. Though not shown herein, when the actuator 40 is actuated and the fold joint latches 44 are released, **the handle assembly 30 can be pivoted downward toward the rear legs 20. The front legs 22 will pivot about the pivot points P relative to the rear legs 20 as the rear legs drop downward. Thus, the frame assembly 12 can be folded to a folded configuration as is known in the art.**

(EX1048, Dotsey, [0023].)

234. The arrows below illustrate how the rear handle portion (red), front wheel support portion (blue) and rear wheel support portion (brown) pivot to put the frame in the folded configuration.

FIG. 2



EX1048, Dotsey, Fig. 2

235. As can be seen above, when the frame is in the folded configuration, the rear wheel support portion (brown) would be disposed adjacent to both the front wheel support portion (blue) and the handle portion (red).

236. Therefore, it is my opinion that Dotsey discloses limitation [1.g].

… ***[1.h] wherein the stroller seat support portion positioned at the first vertical position and the front seat attachment at the second vertical position create an inline descending configuration of the rear stroller seat and the front stroller seat.***

237. Zehfuss discloses a stroller in which the seats are supported in a way that creates an inline descending configuration of the rear stroller seat 86 and the front stroller seat 85. In other words, the front seat is in front of and lower than the

rear seat.

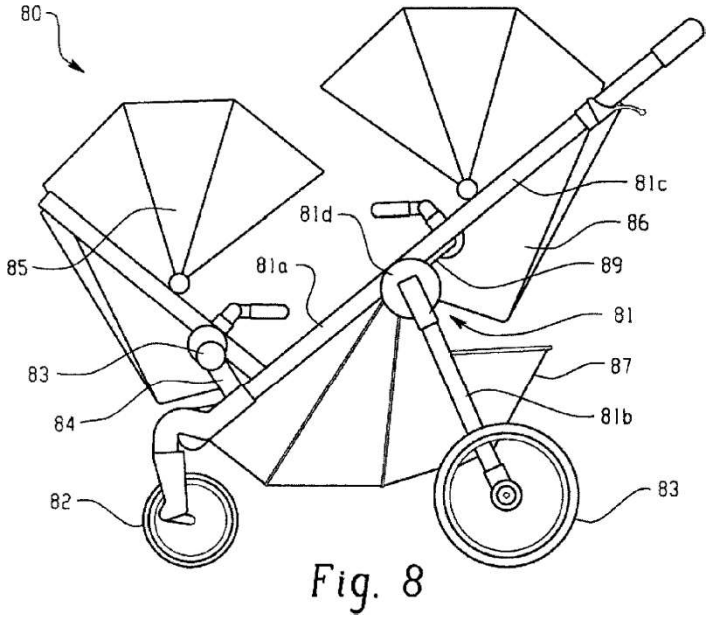
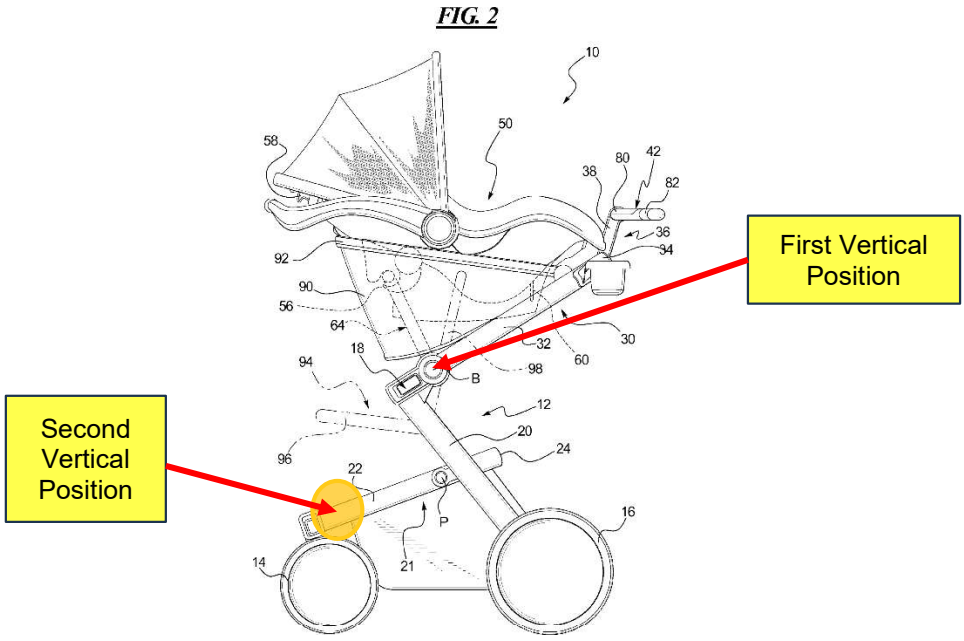


Fig. 8

EX1003, Zehfuss, Fig. 8

238. The first vertical position (where the stroller seat support portion is positioned) and the second vertical position (where the front seat attachment is positioned) in the resulting stroller of Dotsey/Zehfuss, are shown below. As shown below, the rear stroller seat of Dotsey/Zehfuss would be higher than the front stroller seat (not shown). This results in an inline descending configuration of the rear stroller seat and the front stroller seat.



EX1048, Dotsey, Fig. 2

239. Therefore, it is my opinion that Dotsey and Zehfuss render obvious limitation [1.h] and that claim 1 is obvious.

… ***[2] The stroller system of claim 1, wherein the folding mechanism includes at least one pivot point.***

240. Dotsey's folding mechanism (pink) includes the fold joints 18 and pivots P. The fold joints 18 include pivot points B. To fold and unfold, Dotsey's front wheel support portion (front let tube assembly 21) pivots about the pivots P, and the handle portion (handle assembly 30) pivots about the pivot points B.

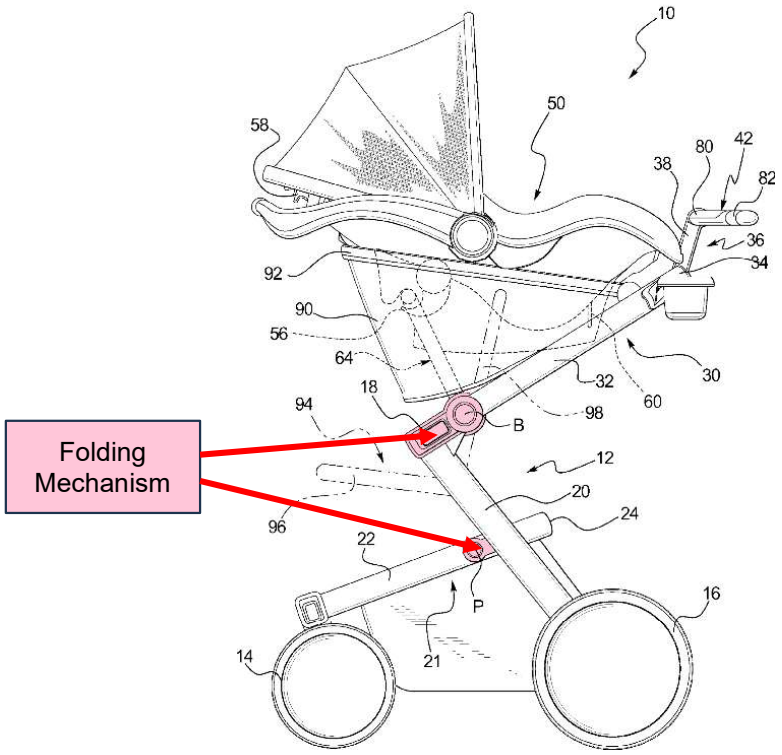
> In general, the actuator 40 can be pulled by a user inward toward the handle bar or handle 42. This movement of the actuator 40 will in turn release latches (see FIG. 4) at the respective fold joints 18 as is known in the art. In one example, cables (not shown) can extend internally through the tubes of the connectors 38, connecting section 34, and push

bars 32 in order to interconnect the actuator 40 with the latches 44 at each fold joint 18. **Though not shown herein, when the actuator 40 is actuated and the fold joint latches 44 are released, the handle assembly 30 can be pivoted downward toward the rear legs 20. The front legs 22 will pivot about the pivot points P** relative to the rear legs 20 as the rear legs drop downward. Thus, the frame assembly 12 can be folded to a folded configuration as is known in the art.

(EX1048, Dotsey, [0023].)

241. The pivot points B and the pivot P are each "at least one pivot point" as recited in the claim.

FIG. 2



EX1048, Dotsey, Fig. 2

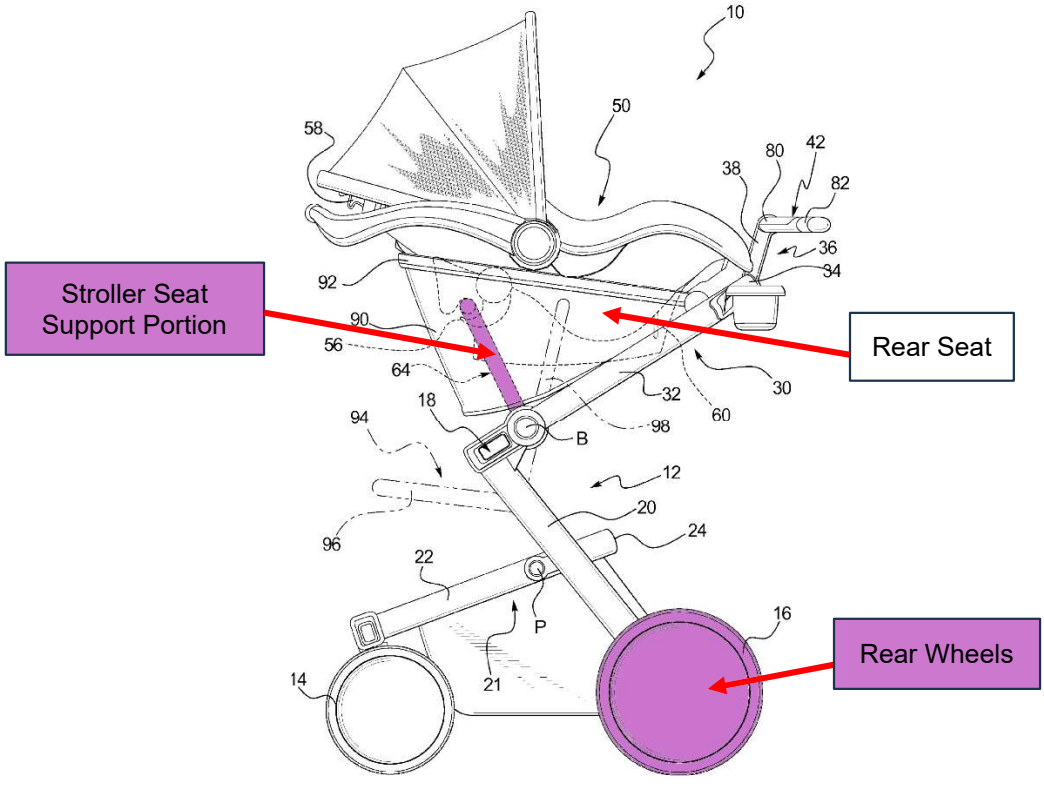
242. Therefore, it is my opinion that Dotsey discloses the limitation of claim

2 and that this claim is obvious.

> … ***[3] The stroller system of claim 1, wherein the stroller seat support portion is configured to support the rear stroller seat substantially over the rear wheels.***

243. Fig. 2 of Dotsey below is a side view of Dotsey's stroller. It shows the brace 64 (stroller seat support portion) (purple) supports the rear stroller seat (carrier 50) substantially over the rear wheels (purple).

FIG. 2



EX1048, Dotsey, Fig. 2

244. Therefore, it is my opinion that Dotsey discloses the additional limitations of claim 3 and that this claim is obvious.

> … ***[4] The stroller system of claim 1, wherein the front seat attachment includes a first connector portion and a second connector portion, the first connector portion configured to removably attach to a left side of the front wheel support portion, and the second connector portion configured to removably attach to a right side of the front wheel support portion.***

245. Zehfuss discloses that a seat attachment may include two connector portions that releasably support a stroller seat on respective sides of the stroller frame.

> 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.**

(EX1003, Zehfuss, [0013].)

> **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.**

(EX1003, Zehfuss, [0047].)

246. Zehfuss also discloses that a connector portion can be releasably connected to the frame.

> 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

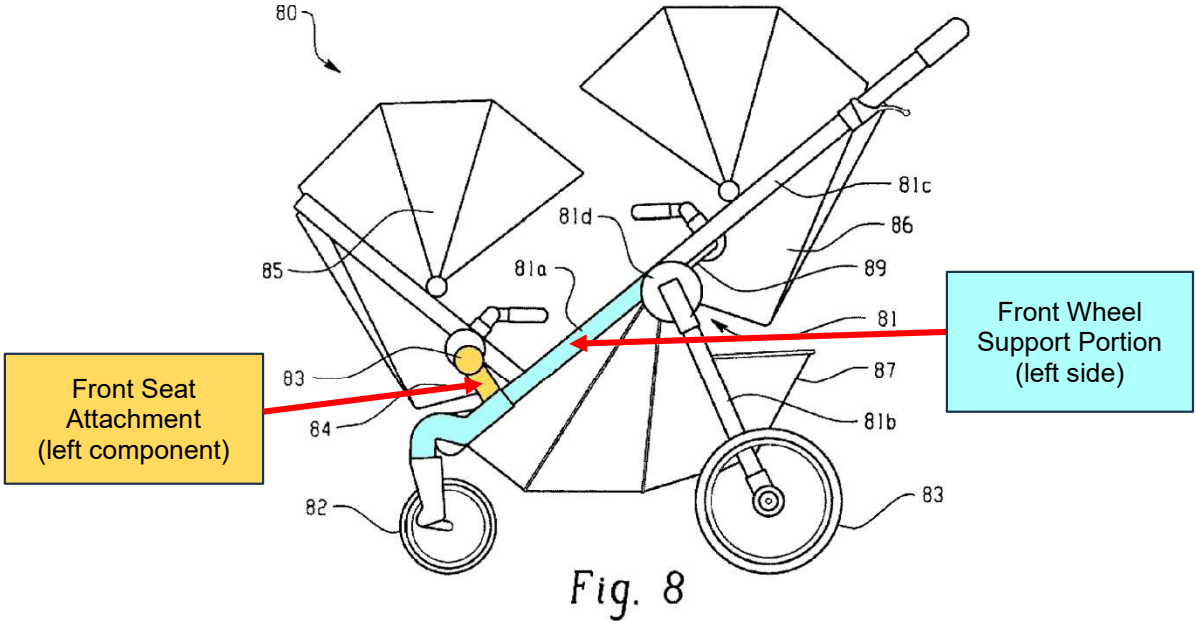
> stroller comprises a connector portion. The attachment frame member and the connector portion comprise components that are capable of being securely connected together. **In certain embodiments, the attachment frame member and the connector portion comprise components that are capable of being securely 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.**

(EX1003, Zehfuss, [0009].)

247. Additionally, Fig. 8 below of Zehfuss illustrates a left side view of the stroller. A POSITA would understand that the left component of the front seat attachment (seat support portion) (gold) is visible and attached to the left side of the front wheel support portion (blue), and that there is a corresponding left component that is not visible in this view. A POSITA would understand that the right component of the front seat attachment would attach to the right side of the front wheel support portion (blue) the same manner as shown for the left component.

> Though it can not be seen in the side view of FIG. 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.

(EX1003, Zehfuss, [0049].)



EX1003, Zehfuss, Fig. 8

248. Therefore, it is my opinion that Zehfuss discloses the additional limitations of claim 4 and that this claim is obvious.

> … ***[5] The stroller system of claim 4, wherein the front seat attachment includes a pair of seat attachment elements configured to releasably support the front stroller seat in either the forward-facing configuration or in the backward-facing configuration.***

249. Zehfuss discloses seat attachments capable of releasably supporting stroller seats.

> 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.

(EX1003, Zehfuss, [0013].)

250. Zehfuss also describes the seat support element 84 (front seat attachment) as being "similar" to the seat support portion 20 in Fig. 2 "without the wheel, 23, the strut 28, pivotal connection 27, and/or the wheel support frame 26." (EX1003, Zehfuss, [0044].) Zehfuss also describes that the seat attachment 20 includes two (i.e, a pair of) seat attachment elements capable of supporting a seat.

> An embodiment of a seat attachment 20 of the invention is shown in FIG. 2. The seat attachment of FIG. 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 FIG. 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.

(EX1003, Zehfuss, [0031].)

251. Zehfuss also discloses that the seat support elements may be capable of supporting the front stroller seat in either a forward or backward position.

> In FIG. 3, the seat attachment 20 of FIG. 2 is shown connected to the single stroller 10 of FIG. 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.**

(EX1003, Zehfuss, [0036].)

252. Therefore, it is my opinion that Zehfuss discloses the additional limitations of claim 5 and that this claim is obvious.

> … ***[6] The stroller system of claim 5, wherein the front wheel support portion includes a first attachment portion and a second attachment portion, the first attachment portion on the left side and configured to support the first connector portion, and the second attachment portion on the right side and configured to support the second connector portion.***

253. In the ’231 Patent, the portions of the stroller frame where a seat attachment is attached are called “attachment portions.”

> 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 FIG. 3, to be connected to the stroller.

(EX1012, '231 Patent, 4:49-60.)

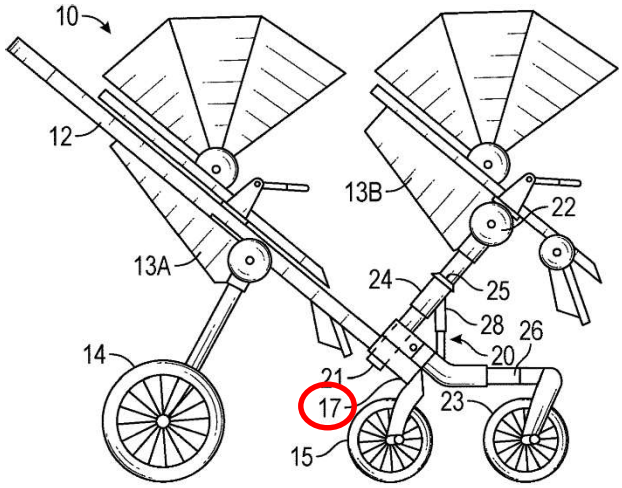


FIG. 3

EX1012, '231 Patent, Fig. 3

254. Zehfuss discloses two attachment frame members 17, which are the portions of the frame where a seat attachment attaches. The attachment frame members 17 support the connector portions of the front seat attachment and correspond to the "attachment portions" recited in the claim. One attachment frame member 17 is on the left side, and one is on the right side.

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 FIG. 3, to be**

connected to the stroller. Only one seat attachment is shown in FIG. 3, the stroller 10 would use two seat attachments as shown in FIG. 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.

(EX1003, Zehfuss, [0030].)

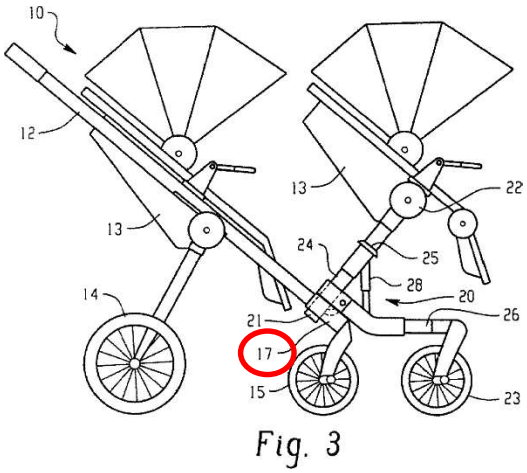
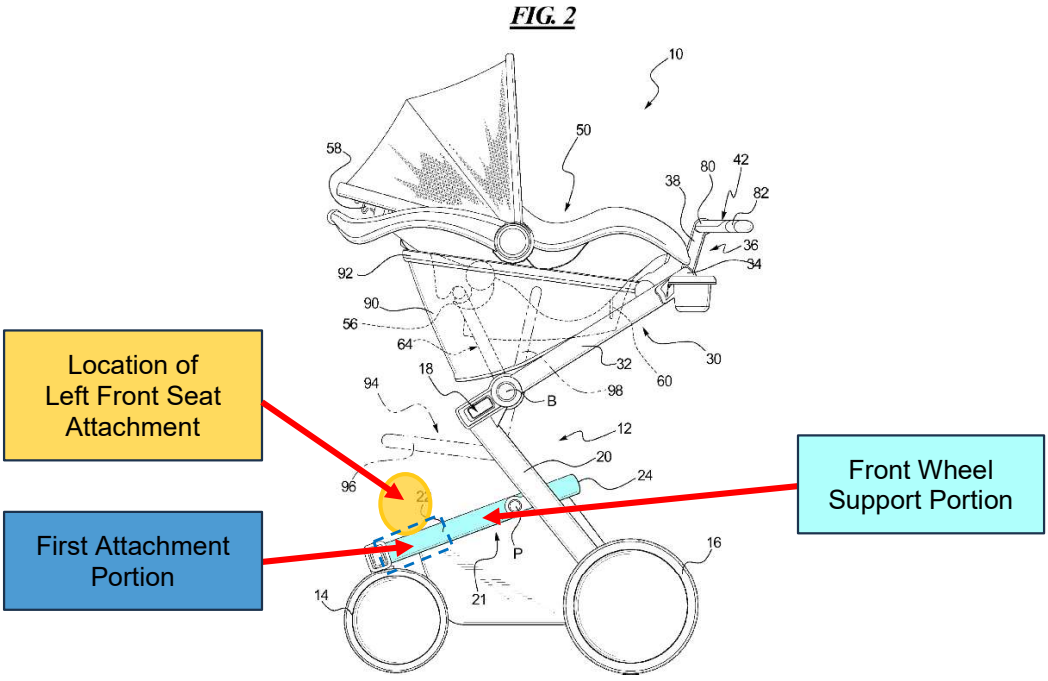


Fig. 3

EX1003, Zehfuss, Fig. 3

255. In the resulting stroller of Dotsey/Zehfuss, the location of the first (left) attachment portion of the left side of the front wheel support portion is identified below (blue dashed box). The first attachment portion is configured to support the

first connector portion. A second (right) attachment portion would be located on the right side of the front wheel support portion (not visible below). The second attachment portion is configured to support the second connector portion.



EX1048, Dotsey, Fig. 2

256. Therefore, it is my opinion that Zehfuss discloses the additional limitations of claim 6 and that this claim is obvious.

… ***[7] The stroller system of claim 6, wherein the front seat attachment includes at least one attachment frame member.***

257. The ’231 Patent describes that the seat attachment 20 in Fig. 3 includes attachment frame members 24.

> 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 FIG. 2, the seat attachment 20 can include a wheel support frame 26 that is pivotally connected to two attachment frame members 24.**

(EX1012, '231 Patent, 5:25-49)

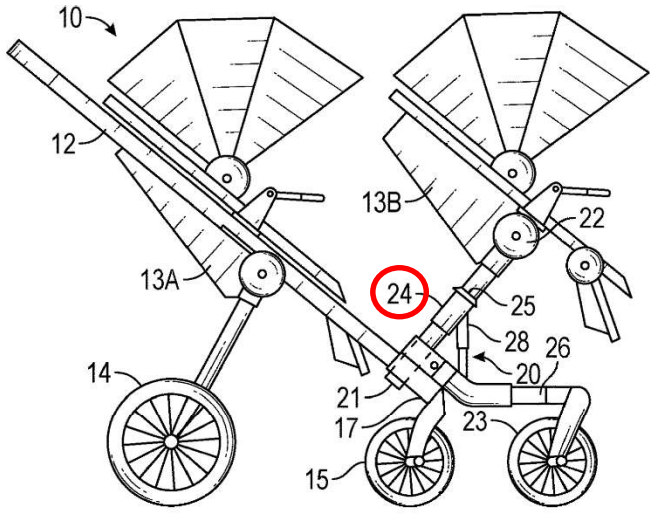


FIG. 3

EX1003, Zehfuss, Fig. 3

258. Zehfuss discloses the same attachment frame members 24. Zehfuss describes the seat support element 84 (front seat attachment) as being "similar" to the seat support portion 20 in Fig. 2 "without the wheel, 23, the strut 28, pivotal connection 27, and/or the wheel support frame 26." (Zehfuss, [0044].) Therefore, Zehfuss discloses that the seat support element 84 (front seat attachment) includes at least one "attachment frame member" as recited in the claim.

> 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 attachment20 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.

(EX1003, Zehfuss, [0032].)

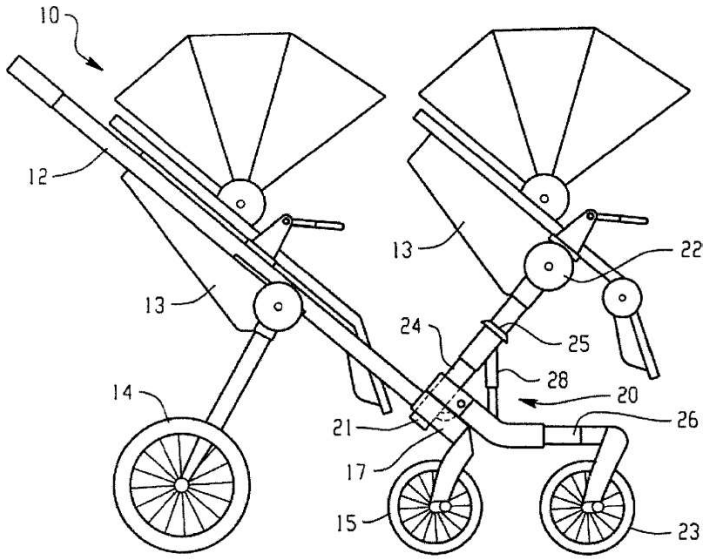


Fig. 3

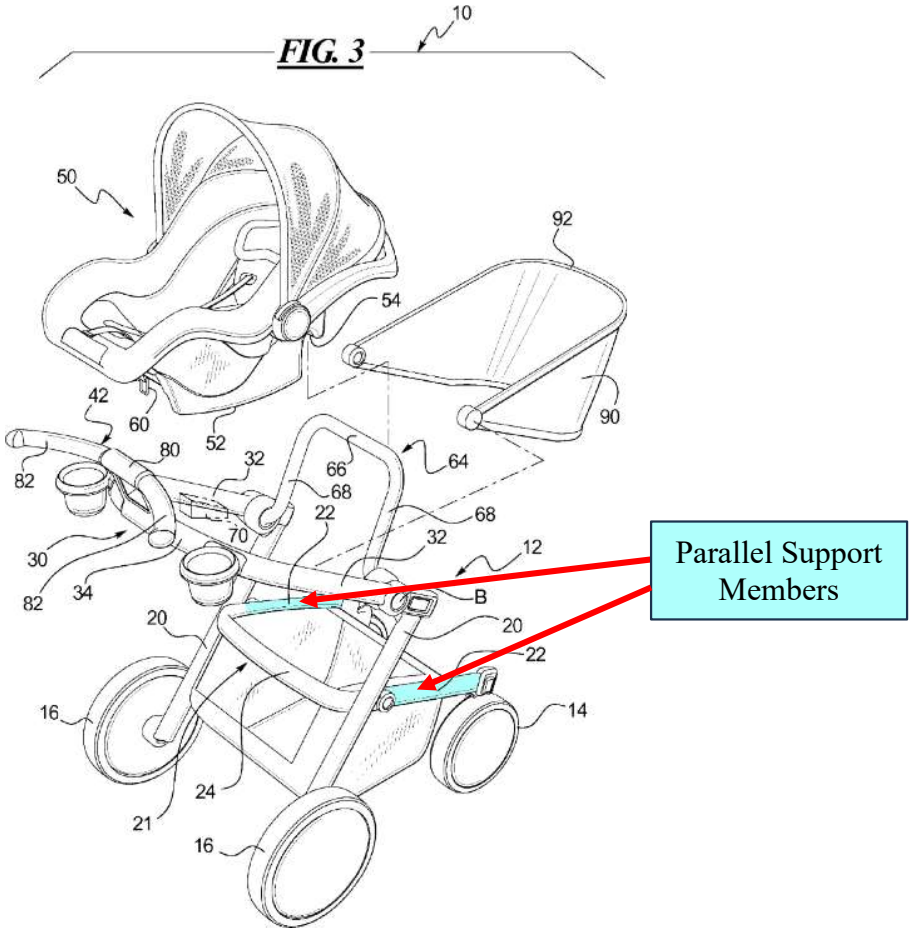
EX1003, Zehfuss, Fig. 3

259. Therefore, it is my opinion that Zehfuss discloses the additional limitations of claim 7 and that this claim is obvious.

… ***[8] The stroller system of claim 4, wherein the front wheel support portion includes a pair of parallel support members.***

260. Dotsey discloses that the front wheel support portion (U-shaped front

leg tube assembly 21) includes a pair of front legs 22. As shown below, the two front legs 22 (blue) are parallel and attached to the front wheels. The legs, as part of the frame, provide support for the stroller. Dotsey's front legs 22 correspond to the claimed pair of parallel support members.



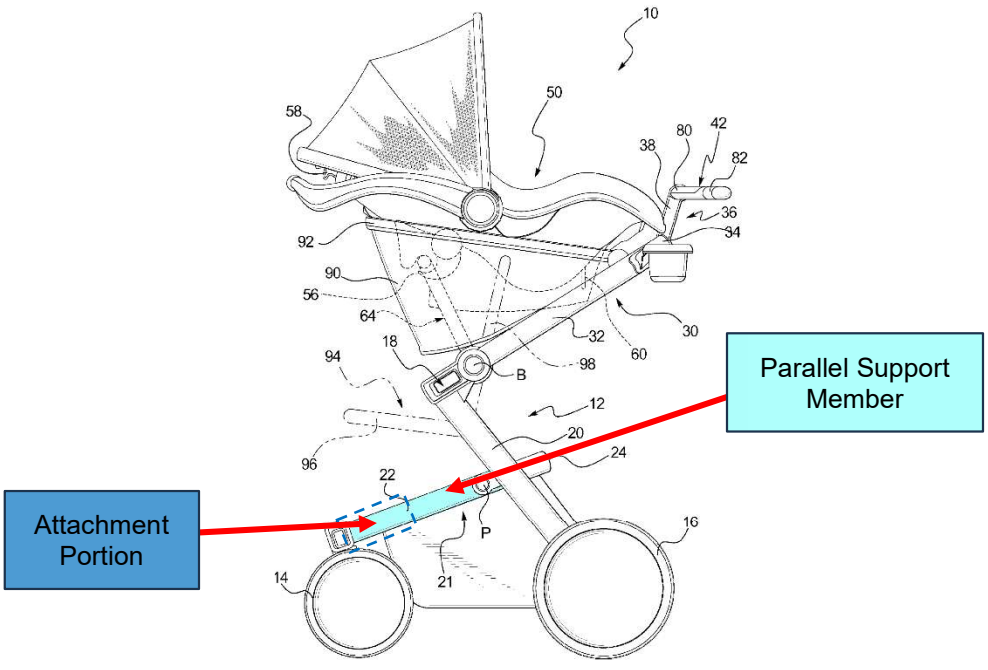
EX1048, Dotsey, Fig. 3

261. Therefore, it is my opinion that Zehfuss discloses the additional limitations of claim 8 and that this claim is obvious.

… ***[9] The stroller system of claim 8, wherein the parallel support members include a pair of attachment portions configured to support the first connector portion and the second connector portion.***

262. As discussed above for claim 6, the front wheel support portion of Dotsey/Zehfuss includes a pair of attachment portions. The attachment portions are part of the front legs 22. As I discussed above for claim 8, the front legs 22 are parallel support members. Therefore, the parallel support members of Dotsey/Zehfuss include a pair of attachment portions configured to support the connector portions.

FIG. 2



EX1048, Dotsey, Fig. 2

263. Therefore, it is my opinion that Dotsey and Zehfuss render obvious the additional limitations of claim 9 and that this claim is obvious.

… ***[10] The stroller system of claim 9, wherein the attachment portions include left and right slots in the parallel support members configured to receive the first connector portion and the second connector portion.***

264. Zehfuss discloses attachment portions that include slots for receiving connector portions of a front seat attachment. (EX1003, Zehfuss, [0034].) A POSITA would have been motivated to incorporate a slot into each parallel support member (one slot in the left parallel support member, and one slot in the right parallel support member) because it would allow the front seat attachment to be secured to the frame using a locking mechanism, as disclosed in Zehfuss. (EX1003, Zehfuss, [0034].)

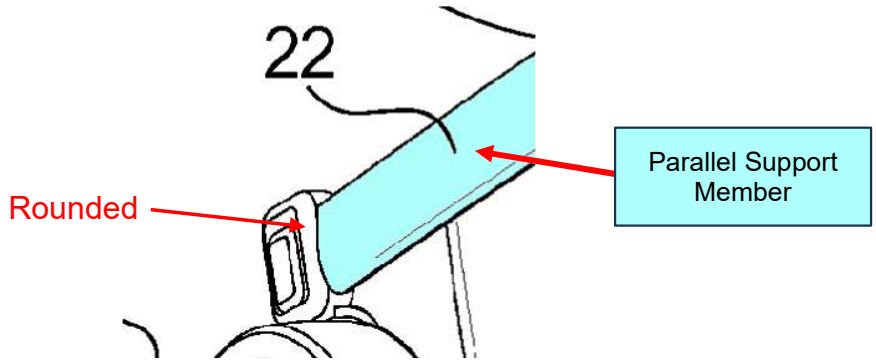
265. A POSITA would have reasonably expected success when combining Zehfuss' slots with the attachment portions of Dotsey/Zehfuss. The strollers disclosed in Dotsey and Zehfuss use conventional design components that were well-known in the industry. Combining the teachings of Dotsey with Zehfuss would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

266. Therefore, it is my opinion that Zehfuss renders obvious the additional limitations of claim 10 and that this claim is obvious.

… ***[11] The stroller system of claim 8, wherein the parallel support members include a pair of tubular structures, each of the tubular structures having a rounded cross-section.***

267. The front legs 22 (parallel support members) of Dotsey are part of the leg tube assembly 21. A POSITA would understand that the word "tube" in "leg tube assembly" means the assembly is composed of tubular structures. Frame components made out of tubular structures were commonly used for strollers because tubular structures can provide strength while being relatively light weight. (*See* EX1040, Schaaf, 4:42-54).

268. Below is an enlargement of a portion of Fig. 1 of Dotsey. As shown, the illustrated front leg 22 (parallel support member) (blue) is rounded. A POSITA would understand that the illustrated front legs 22 (parallel support members) are tubular and have a rounded cross-section.

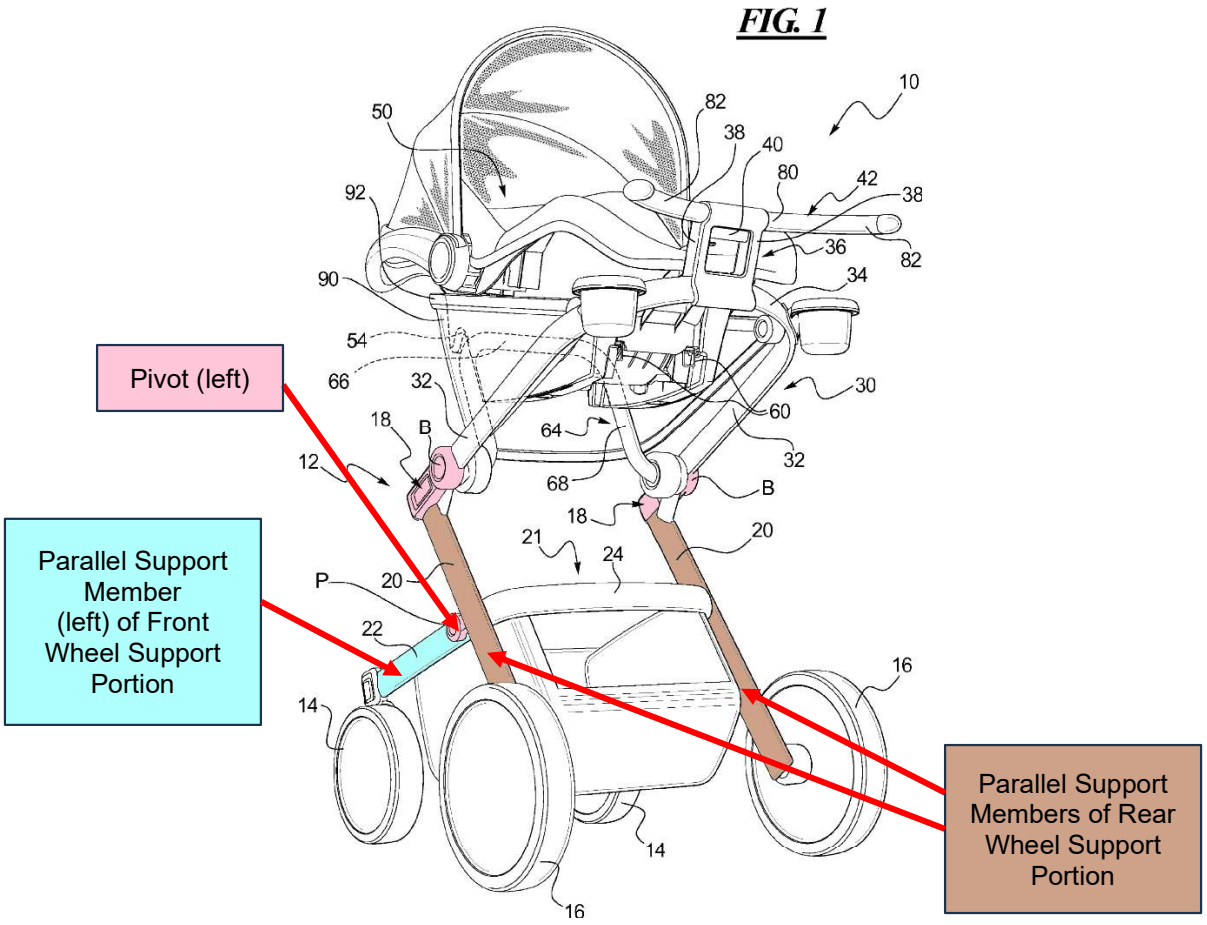


EX1048, Dotsey, Fig. 1

269. Therefore, it is my opinion that Dotsey discloses the additional limitations of claim 11 and that this claim is obvious.

… ***[12] The stroller system of claim 8, wherein the rear wheel support portion includes a pair of parallel support members connected by the folding mechanism to the parallel support members of the front wheel support portion.***

270. The rear wheel support portion of Dotsey's frame includes the rear legs 20. As shown below, the rear legs 20 (brown) are parallel, and they provide support for the stroller. Therefore, the rear legs 20 (brown) are "parallel support members."



EX1048, Dotsey, Fig. 1

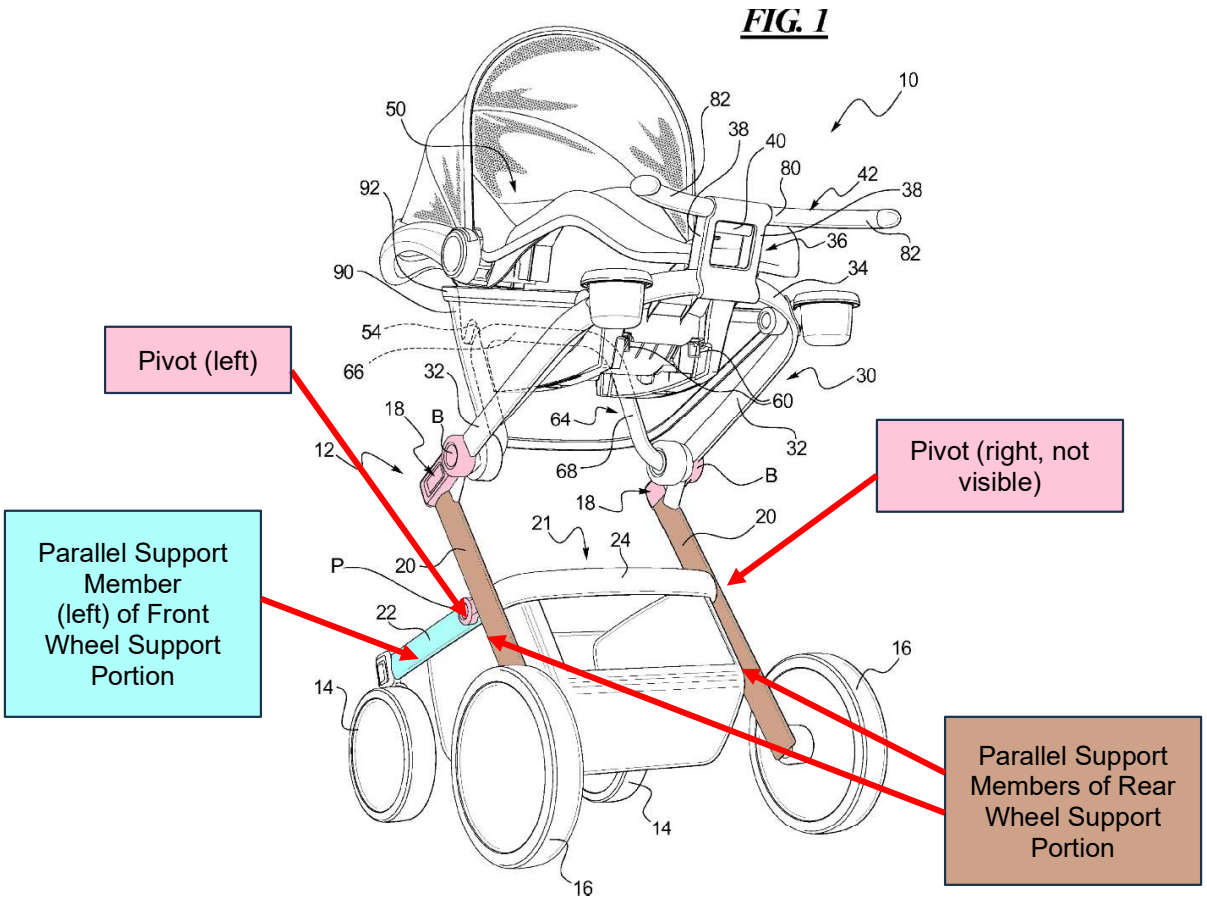
271. As shown above, Dotsey's parallel support members (rear legs 20) (brown) are connected to the pivots P (pink), which are components of the folding

mechanism, to the parallel support members of the front wheel support portion (front legs 22) (blue). Therefore, Dotsey's rear wheel support portion includes a pair of parallel support members (brown) connected by the folding mechanism (pink) to the parallel support members (blue) of the front wheel support portion.

272. Therefore, it is my opinion that Dotsey discloses the additional limitations of claim 12 and that this claim is obvious.

> … ***[13] The stroller system of claim 12, wherein the folding mechanism includes a pair of pivots spaced apart and configured to connect corresponding ones of the parallel support members of the rear and front wheel support portions.***

273. As discussed above for claim 1, Dotsey's folding mechanism (pink) includes pivots P and fold joints 18. As shown below, the pivots P of the folding mechanism (pink) are spaced apart. Additionally, the left pivot P (pink) connects the left parallel support member of the rear wheel support portion (brown) to the left parallel support member of the front wheel support portion (blue). Because the stroller is generally symmetrical, a POSITA would understand that the right pivot P (not visible) similarly connects the right parallel support member of the rear wheel support portion (brown) to the right parallel support member of the front wheel support portion (not visible).



EX1048, Dotsey, Fig. 1

274. Therefore, it is my opinion that Dotsey discloses the additional limitations of claim 13 and that this claim is obvious.

> … ***[14] The stroller system of claim 13, wherein the handle portion includes a pair of parallel support members and a crossbar, wherein the parallel support members of the handle portion connect to the parallel support members of the front wheel support portion via the folding mechanism, and wherein the parallel support members of the handle portion and of the front wheel support portion extend diagonally downwards from the crossbar of the handle portion.***

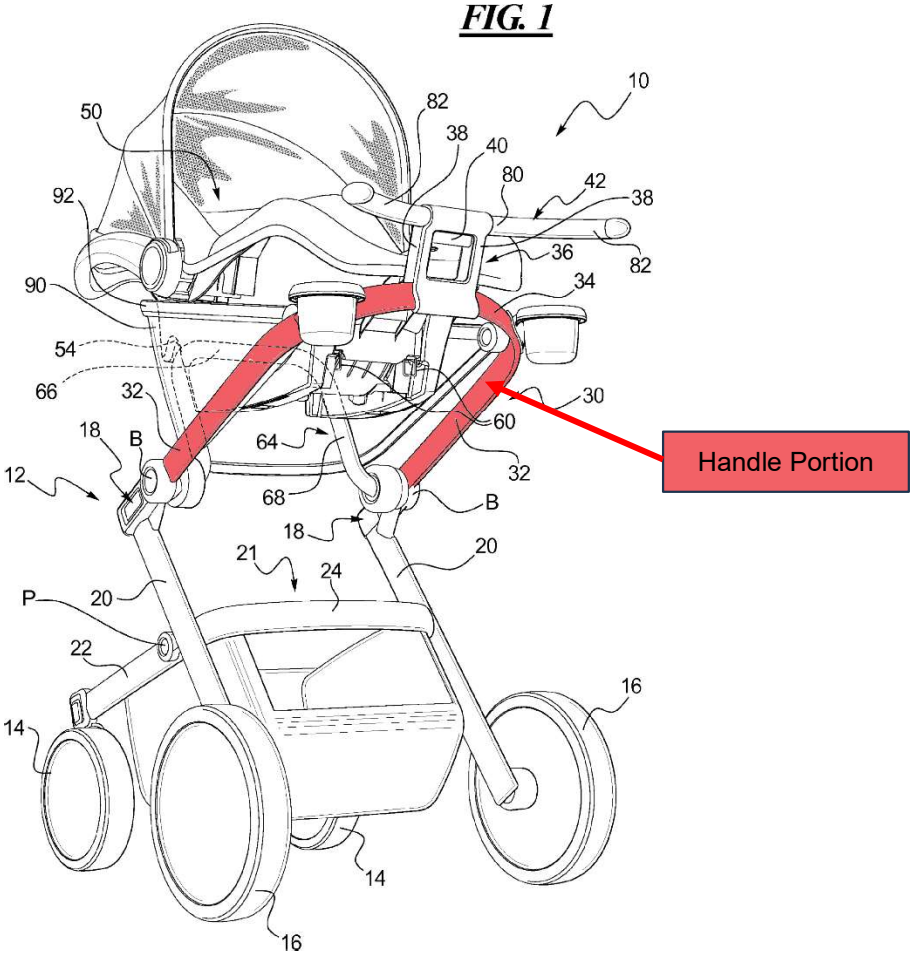
275. The handle portion (handle assembly 10) (red) of Dotsey includes a pair

of parallel support members (push bars 32) and a cross bar (connecting section 34).

> The handle assembly 30 is formed having a continuous U-shaped tube structure that includes **the two push bars 32 a curved connecting section 34, which extends between the upper ends of the push bars 32.**

(EX1048, Dotsey, [0022].)

FIG. 1

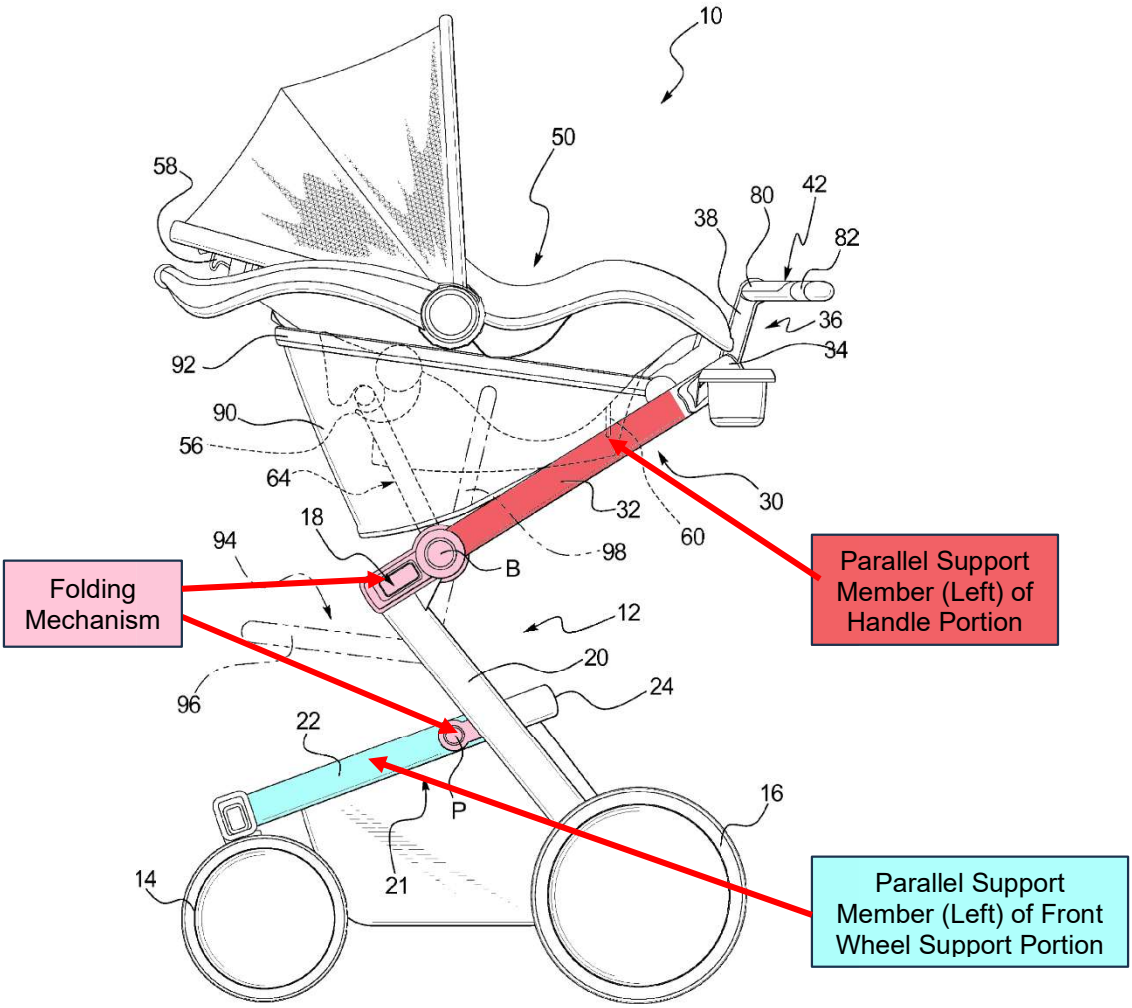


EX1048, Dotsey, Fig. 1

276. As shown in the figure below, the parallel support members (push bars 32) (red) of the handle portion connect to the parallel support members (front legs

22) (blue) of the front wheel support portion via the folding mechanism (folding joints 18 and pivots P) (pink).

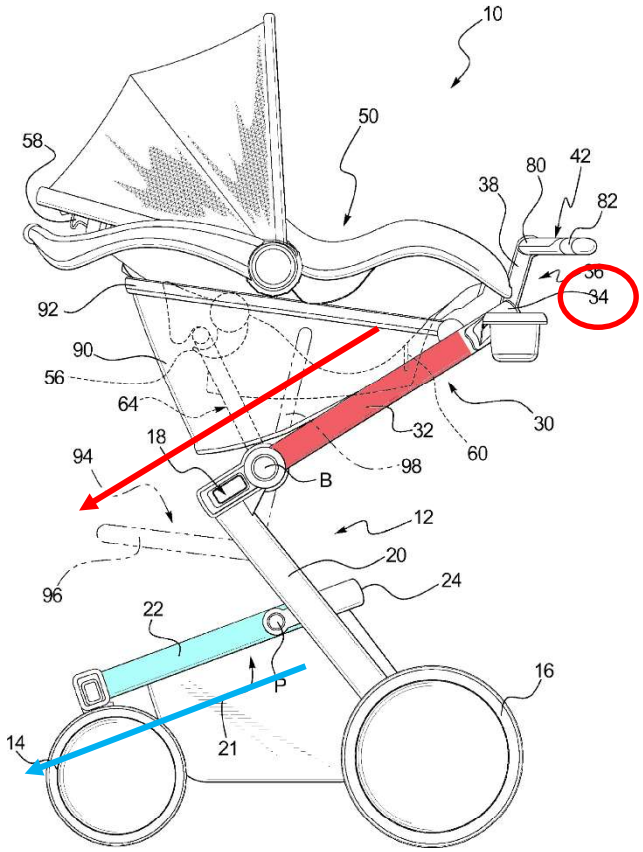
FIG. 2



EX1048, Dotsey, Fig. 2

277. As shown below, the parallel support members (push bars 32) (red) of the handle portion and the parallel support members (front legs 22) (blue) of the front wheel support portion extend diagonally downwards from the crossbar (connecting section 34) of the handle portion.

FIG. 2



EX1048, Dotsey, Fig. 2

278. Therefore, it is my opinion that Dotsey discloses the additional limitations of claim 14 and that this claim is obvious.

> … ***[15] The stroller system of claim 1, wherein the stroller seat support portion is configured to releasably support the rear stroller seat.***

279. The brace 64 (stroller seat support portion) in Dotsey is described as being a "support" for the carrier 50 (stroller seat). The stroller seat can also be "released" from the brace 64. Therefore, Dotsey's stroller seat support portion is configured to releasably support the rear stroller seat.

> In the disclosed example, **the frame assembly 12 employs a pivotable brace 64 or support** that can be pivoted between a stowed position (not shown) and a support position as shown for attaching the infant carrier 50 to the frame assembly 12. The brace 64 can be suitably secured or retained in each of the stowed and support positions using common mechanisms or other suitable devices, though also not shown or described herein. In this example, the brace 64 is generally U-shaped and has a cross member 66 extending between the upper free ends of a pair of laterally spaced arms 68. The lower ends of the arms 68 are pivotally connected to a portion of the frame assembly. In this example, the arms 68 are connected at pivot points B to the inside surfaces of the push arms 32 on the handle assembly 30. As shown in FIG. 2, the cross member 66 of the brace nests up into the recesses 54 of the conventional infant carrier 50 and the latch hook 56 underlies and catches the cross member. **The actuator 58 can be utilized to release the latch hook 56 and thus the infant carrier 50 from the frame assembly 12 as is known in the art.**

(EX1048, Dotsey, [0026].)

280. Therefore, it is my opinion that Dotsey discloses the additional limitations of claim 15 and that this claim is obvious.

> … ***[16] The stroller system of claim 1, wherein the stroller seat support portion is configured to support the rear stroller seat in either a forward-facing configuration or a backward-facing configuration.***

281. Dotsey discloses that, instead of using the brace 64 to attach a seat, an

"adapter" or "other like structure" can be used. (EX1048, Dotsey, [0027]). Dotsey also describes that a forward-facing seat can be used with the stroller (EX1048, Dotsey, [0041]).

282. Zehfuss discloses a seat support element 89 that allows a rear seat to be supported in either a forward-facing or a backward facing configuration.

> 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 FIG. 9A, be replaced by a infant carrier 91 or car seat on seat support element 84, see FIG. 9C, or replaced with a pram 92 on seat support element 84, see FIG. 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.

(EX1003, Zehfuss, [0045].)

283. A POSITA would have been motivated to modify Dotsey's brace 64, adapter, or "other like structure" to be able to support the rear stroller seat in either a forward-facing configuration or a backward-facing configuration as disclosed in Zehfuss. A POSITA would know that it would be beneficial to allow a seat to be either forward facing (with the child observing in front of the stroller) or backward-

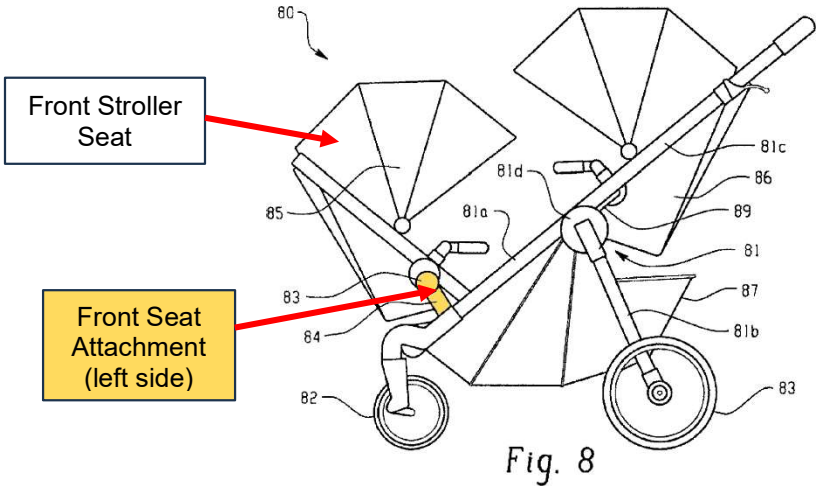
facing (so the child could observe the caregiver pushing the stroller). For example, it is generally believed to be beneficial for young infants to face the caregiver (*e.g.* mother), and toddlers often prefer to have a forward-facing view.

284. A POSITA would have reasonably expected success when combining Dotsey and Zehfuss. The strollers disclosed in Dotsey and Zehfuss use conventional design components that were well-known in the industry. Combining the teachings of Dotsey with Zehfuss would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

285. Therefore, it is my opinion that Dotsey and Zehfuss render obvious the additional limitations of claim 16 and that this claim is obvious.

… ***[17] The stroller system of claim 1, wherein the front seat attachment is further configured to connect to one or more sides of the front stroller seat.***

286. The front seat attachment (seat support elements 84) (gold) in Zehfuss is configured to connect to the sides of the front stroller seat. In Fig. 8 below, only the left seat support element 84 is shown. A POSITA would understand that there would be another seat support element 84 on the right side that also connects to the other side of the front stroller seat.

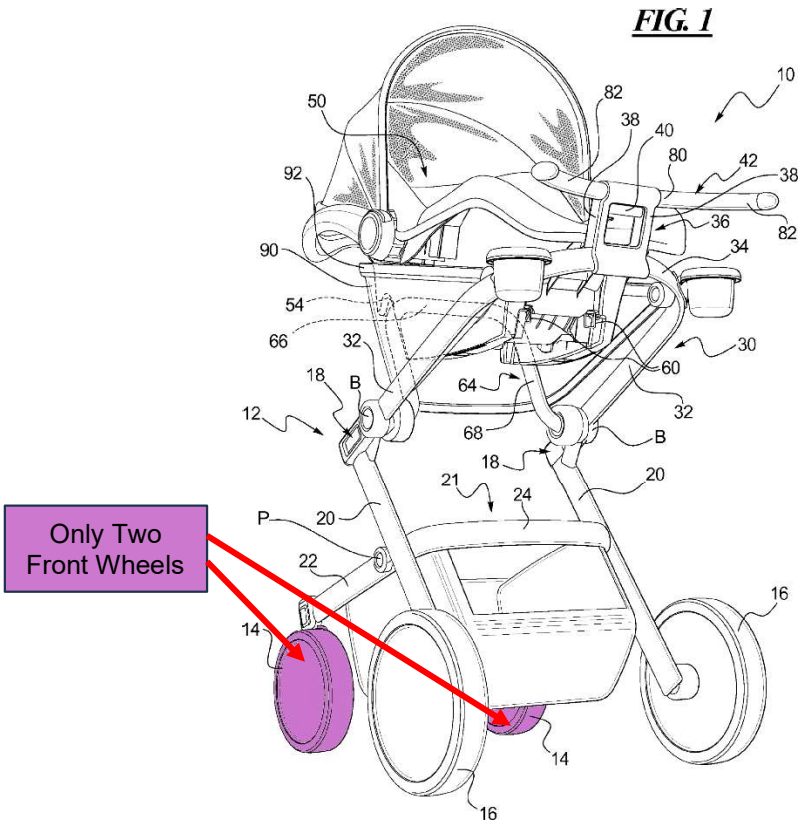


EX1003, Zehfuss, Fig. 8

287. Therefore, it is my opinion that Zehfuss discloses the additional limitations of claim 17 and that this claim is obvious.

… ***[19] The stroller system of claim 1, wherein the pair of front wheels includes only two front wheels.***

288. Dotsey's stroller includes only two front wheels (wheels 14) (purple).

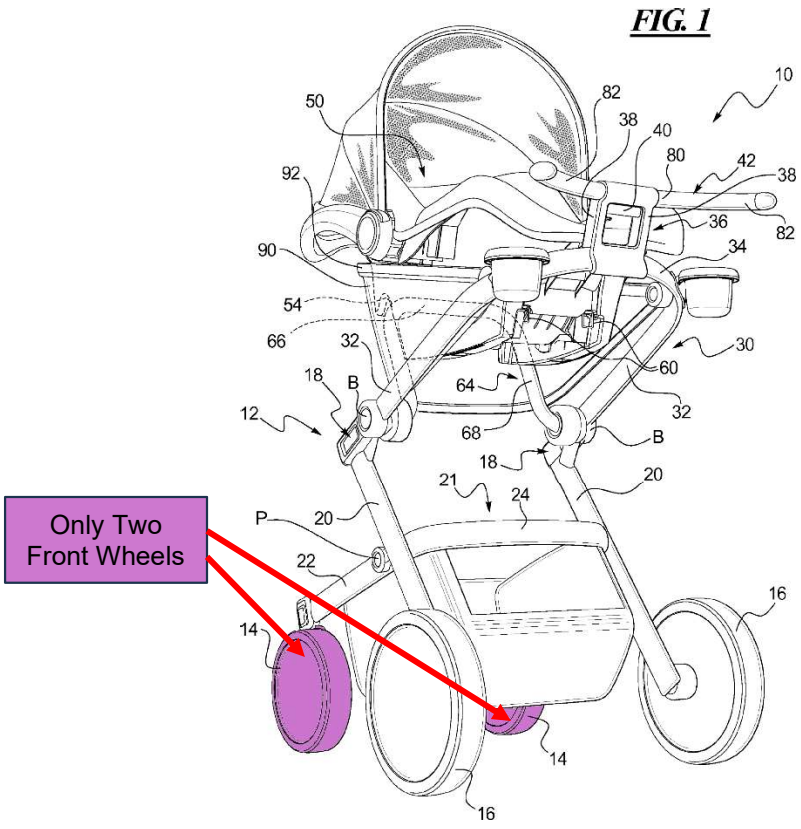


EX1048, Dotsey, Fig. 1

289. Therefore, it is my opinion that Dotsey discloses the additional limitation of claim 19 and that this claim is obvious.

> … ***[20] The stroller system of claim 19, wherein the only two front wheels are laterally spaced apart from each other on a left side and a right side of the front wheel support portion.***

290. The two front wheels (wheels 14) (purple) of Dotsey's stroller are laterally spaced apart from each other, as shown below.



EX1048, Dotsey, Fig. 1

291. Additionally, Dotsey describes that that the two front wheels (wheels 14) (purple) are on the left side and the right side of the front wheel support portion. Specifically, one wheel is on the left front leg 22, and the other wheel is on the right front leg 22.

> In the disclosed example, the stroller assembly 10 has a frame assembly 12 supported by a pair of front wheels 14 and a pair of rear wheels 16 as is generally known in the art. In this example, the frame assembly 12 has a pair of opposed sides, each with a pivotable fold joint 18 connecting components of the frame assembly. Each frame side in this example has a rear leg 20 extending down from the corresponding fold joint 18 on the respective side. A lower end of each rear leg 20 is

> coupled to one of the rear wheels 16 in a conventional manner. In this example, a U-shaped front leg tube assembly 21 has a pair of front legs 22. **Each front leg 22 extends forward and terminates at a lower end attached to one of the front wheels 14 in a conventional manner.** The U-shaped front leg tube 21 also includes a cross bar 24 interconnecting the opposite upper ends of the two front legs 22.

(EX1048, Dotsey, [0020].)

292. Therefore, it is my opinion that Dotsey discloses the additional limitations of claim 20 and that this claim is obvious.

> … ***[21] The stroller system of claim 1, wherein the folded configuration includes at [l]east partially overlapping the front wheel support portion and the handle portion.***

293. The specification of the ’231 Patent does not provide any explicit description of a folded configuration including at least partially overlapping the front wheel support portion and the handle portion.

294. Regarding the frame of the ’231 Patent being in a folded configuration, the ’231 Patent describes that the stroller 80 can be folded into a more compact size for storing or transportation.

> **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.** FIG. 8B shows the stroller 10 in a folded configuration.

(EX1012,’231 Patent, 9:34-38.)

295. Fig. 8B below shows the stroller 80 in a folded configuration.

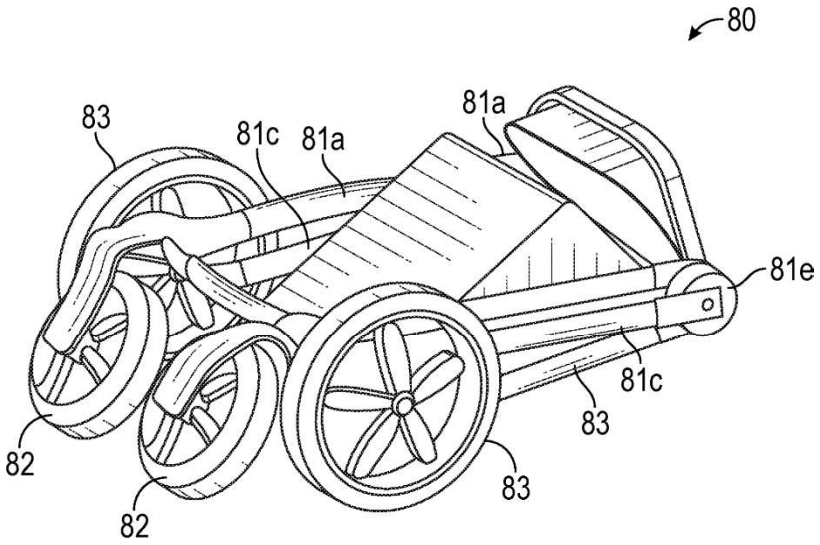


FIG. 8B

EX1012, '231 Patent, Fig. 8b

296. Dotsey discloses that its frame can be folded into a more compact size for storing or transportation.

> In general, the actuator 40 can be pulled by a user inward toward the handle bar or handle 42. This movement of the actuator 40 will in turn release latches (see FIG. 4) at the respective fold joints 18 as is known in the art. In one example, cables (not shown) can extend internally through the tubes of the connectors 38, connecting section 34, and push bars 32 in order to interconnect the actuator 40 with the latches 44 at each fold joint 18. Though not shown herein, when the actuator 40 is actuated and the fold joint latches 44 are released, the handle assembly 30 can be pivoted downward toward the rear legs 20. The front legs 22 will pivot about the pivot points P relative to the rear legs 20 as the rear legs drop downward. Thus, **the frame assembly 12 can be folded to a folded configuration as is known in the art.**

(EX1048, Dotsey, [0023].)

297. Thus, it is my opinion that Dotsey discloses this claim limitation to the same extent that it is disclosed in the '231 Patent and that this claim is obvious.

> … ***[22] The stroller system of claim 1 wherein the front seat attachment is configured to releasable attach to the front wheel support portion.***

298. Zehfuss discloses that the seat support element 84 may be removably attached to the front wheel support portion. Zehfuss does not state that special tools or skills are necessary to remove the seat support element. Therefore, a POSITA would understand that Zehfuss discloses that the front seat attachment may be releasably attached to the front wheel support portion.

> 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.

(EX1003, Zehfuss, [0046].)

299. Therefore, it is my opinion that Zehfuss discloses the additional limitations of claim 22 and that this claim is obvious.

B. Ground 2 – Claims 1-17 and 19-22 are obvious over Van Dijk and Schaaf.

1. Overview of the Combination of Van Dijk and Schaaf

300. As I discussed above, Van Dijk discloses the use of mounting mechanisms that include adapters and connecting pieces to attach seats to a stroller frame in forward-facing and rear-facing orientations. Van Dijk does not explicitly disclose attaching two seats to a stroller frame. Additionally, although Van Dijk discloses a collapsing frame with a folding mechanism, it does not explicitly describe that its frame folds by its front wheel support portion and/or handle portion rotating about a pivot axis of the folding mechanism towards the rear wheels.

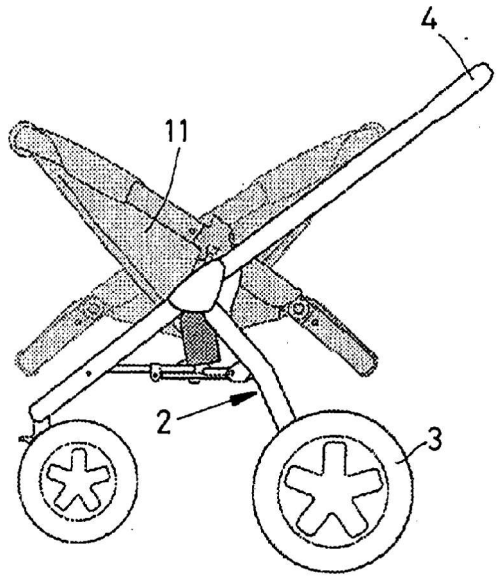
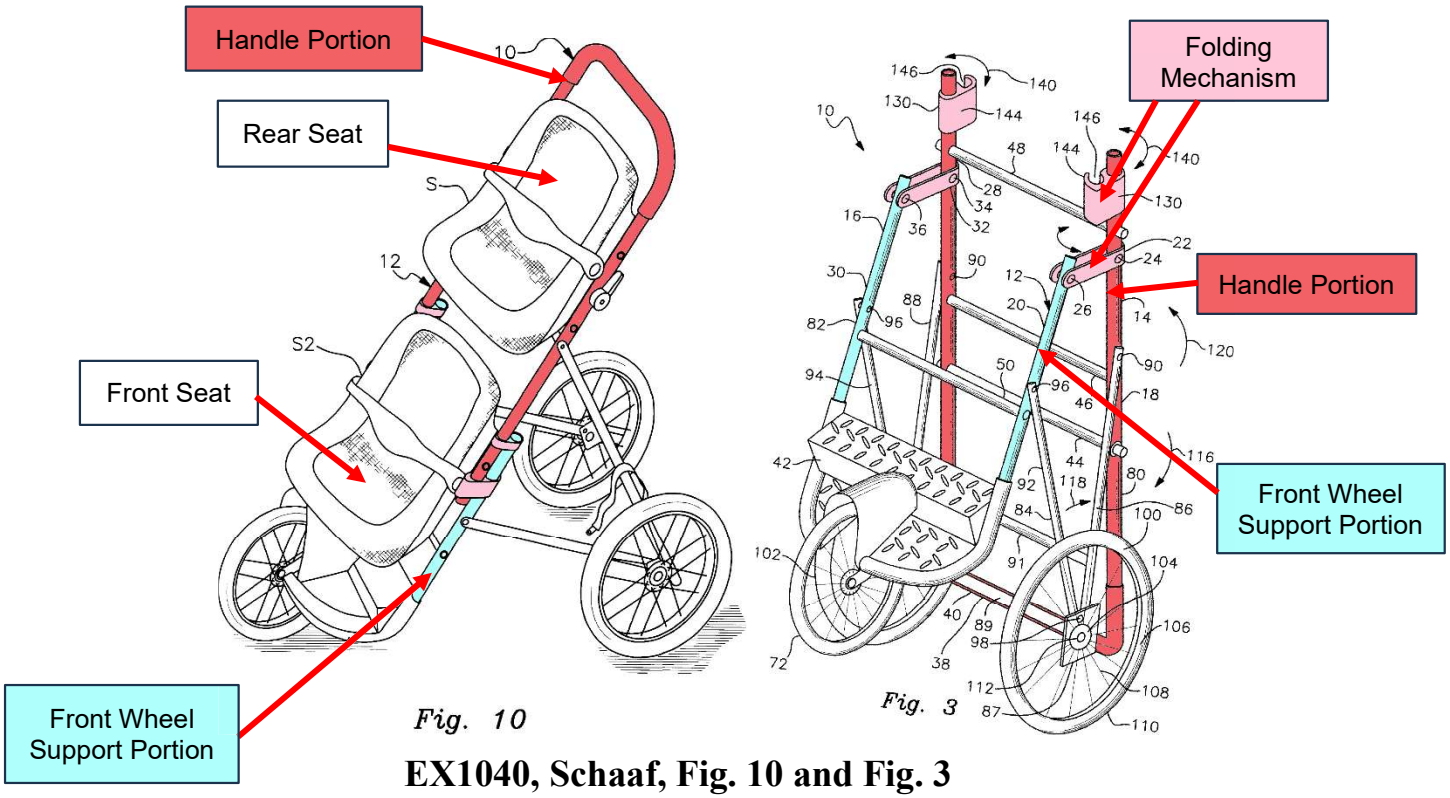


FIG. 3

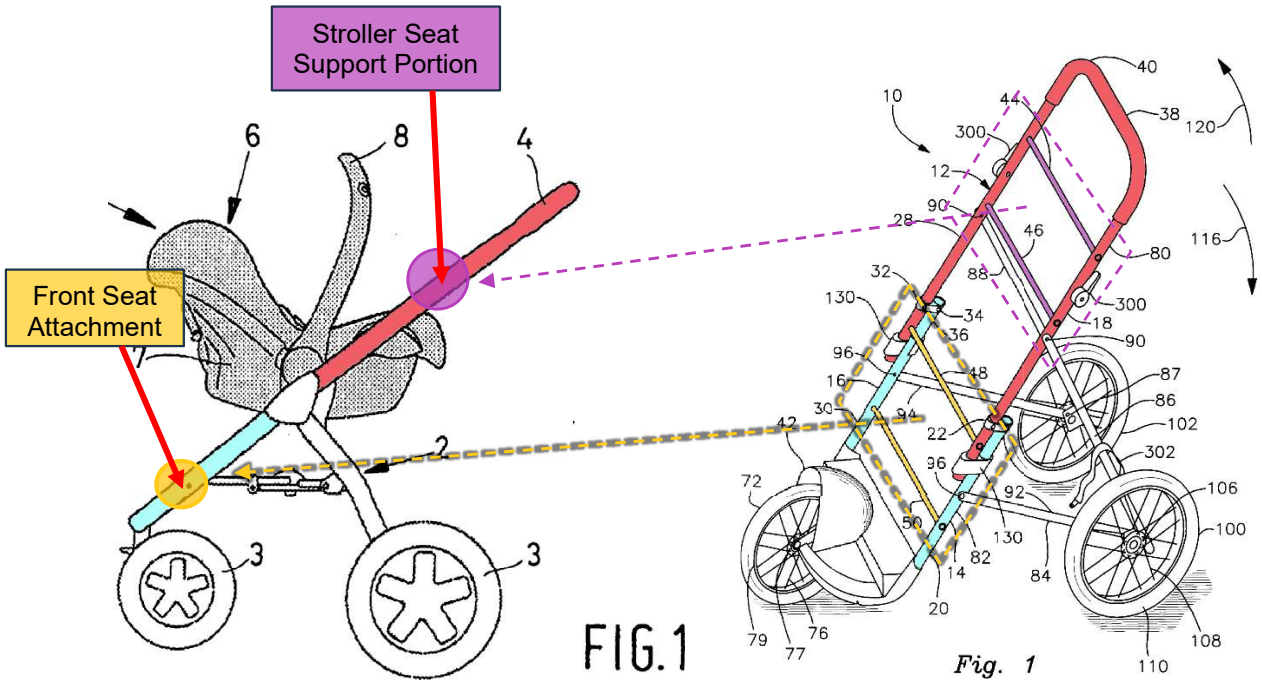
EX1050, Van Dijk, Fig. 3

301. However, as discussed above, Schaaf explicitly discloses mounting two seats to a frame in an inline descending configuration. Schaaf also explicitly discloses a frame that folds by its front wheel support portion (blue) and handle portion (red) rotating about a pivot axis of the folding mechanism (pink) towards the rear wheels.



EX1040, Schaaf, Fig. 10 and Fig. 3

302. A POSITA would have been motivated to modify Van Dijk's stroller so that two seats can mount to the frame at the locations taught in Schaaf. This modification would involve using one set of Van Dijk's seat mounting mechanism on the handle portion (red) and one set of Van Dijk's seat mounting mechanism on the front wheel support portion (blue). This modification is depicted below.

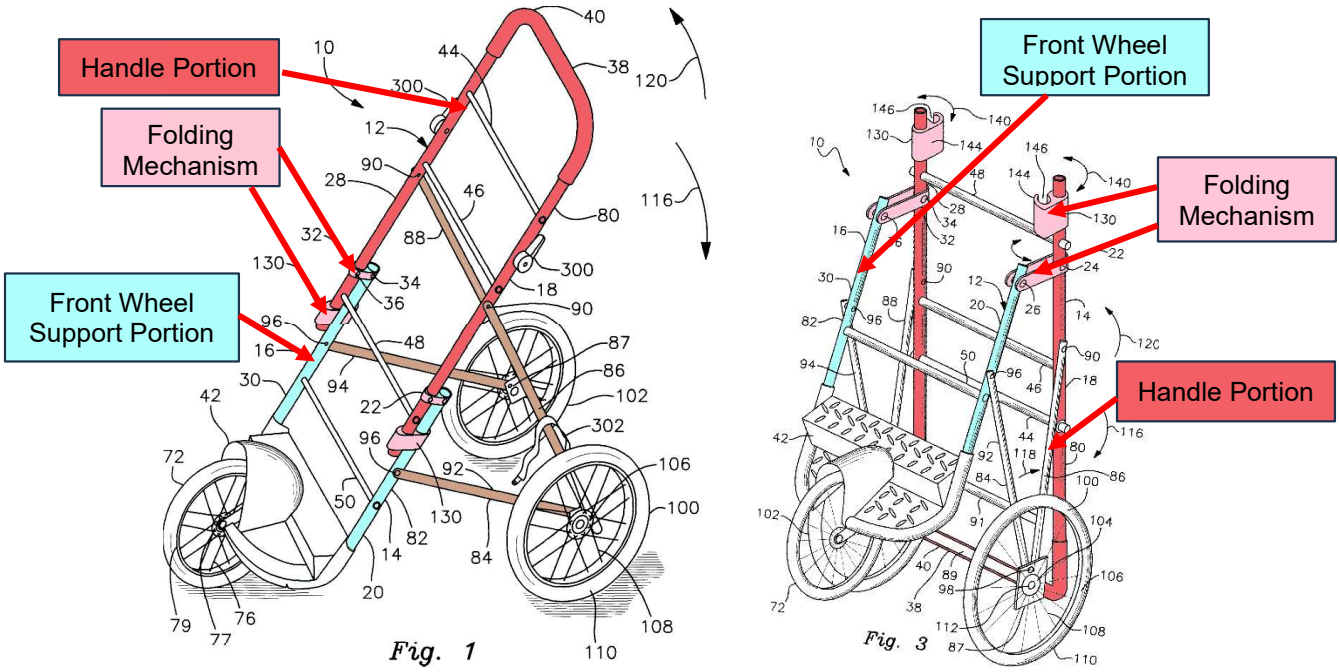


EX1050, Van Dijk, Fig. 1 and EX1040, Schaaf, Fig. 1

303. A POSITA would have been motivated to make this modification because there was a known demand for stroller systems that could transport multiple children. Purchasers of strollers (*e.g.*, caregivers) have long sought strollers that make their lives more convenient. When caregivers have two young children, they often want one stroller that carries both children because it is often easier to transport, store, and maneuver one stroller supporting two children than two separate single-strollers.

304. Additionally, to the extent not already disclosed or suggested in Van Dijk, a POSITA would have been motivated to make Van Dijk's folding mechanism

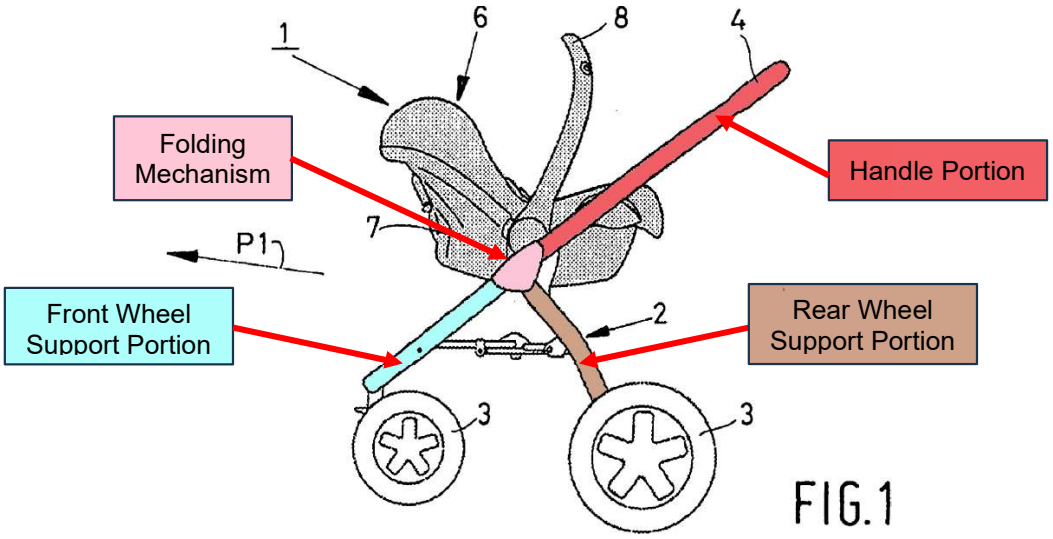
allow the frame to fold by the front wheel portion and handle portion simply rotating about a pivot axis of the folding mechanism towards the rear wheels, as disclosed in Schaaf. Van Dijk discloses that its stroller frame is collapsible and includes a folding mechanism, but Van Dijk does not explicitly explain how the frame collapses. Schaaf discloses a frame that collapses by the front wheel support portion (blue) and/or handle portion (red) simply rotating about a pivot axis of the folding mechanism (pink) towards the rear wheels.



EX1040, Schaaf, Fig. 1 and Fig. 3

305. If Patent Owner argues that Van Dijk does not already disclose a folding mechanism that allows the frame 2 to fold by the handle portion (red) and front wheel support portion (blue) rotating downward about a pivot axis of the folding mechanism (pink), then a POSITA would have been motivated make Van

Dijk's folding mechanism (pink) fold in this manner, as taught in Schaaf. A POSITA would have desired making the frame 2 collapsible in this way because it was a simple, common way to make the frame 2 collapsible and it would have involved using simple, reliable pivot joints (similar to the pivots 26/36 in Schaaf) to allow the folding. Also, a POSITA would expect such a simple folding mechanism to be less expensive to design and manufacture than other more complex types of folding mechanisms that would allow the frame 2 to fold in a different manner.



EX1050, Van Dijk, Fig. 1

306. A POSITA would have reasonably expected success when combining Van Dijk and Schaaf. The strollers disclosed in Van Dijk and Schaaf use conventional design components that were well-known in the industry. Combining the teachings of Van Dijk with Schaaf would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a

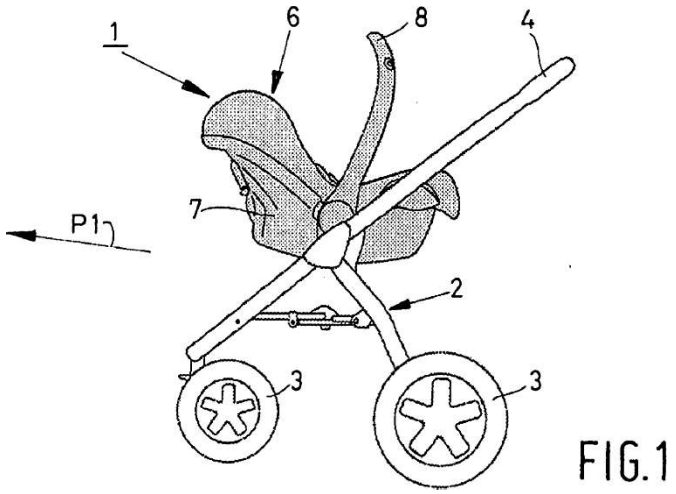
POSITA would have known how to make such adjustments.

307. Below, I address each limitation of the challenged claims. In my discussion, "Van Dijk/Schaaf" refers to the combination of Van Dijk and Schaaf.

2. Analysis of claims 1-17 and 19-22

… ***[1.pre] A stroller system for supporting a front stroller seat and a rear stroller seat, the system comprising:***

308. Van Dijk discloses a stroller system for supporting a stroller seat.



EX1050, Van Dijk, Fig. 1

309. Schaaf discloses a stroller system for supporting a front and rear stroller seat.

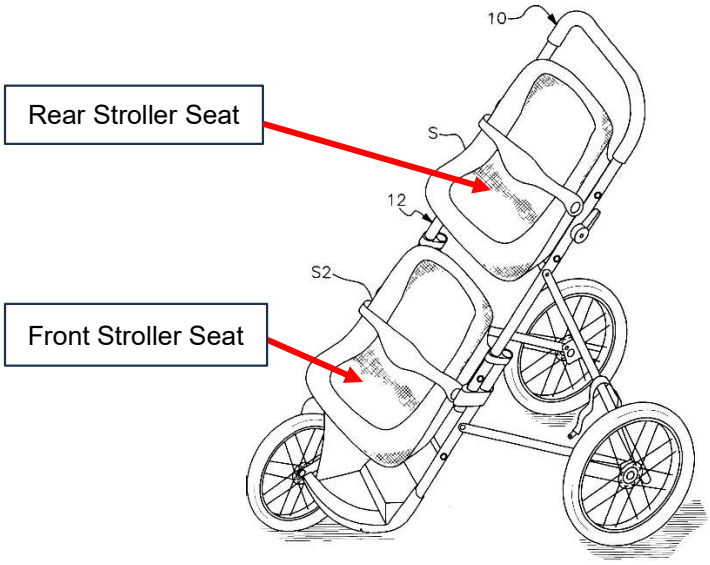


Fig. 10

EX1040, Schaaf, Fig. 10

310. The stroller of Van Dijk/Schaaf discussed herein is a stroller system that supports a front stroller seat and a rear stroller seat.

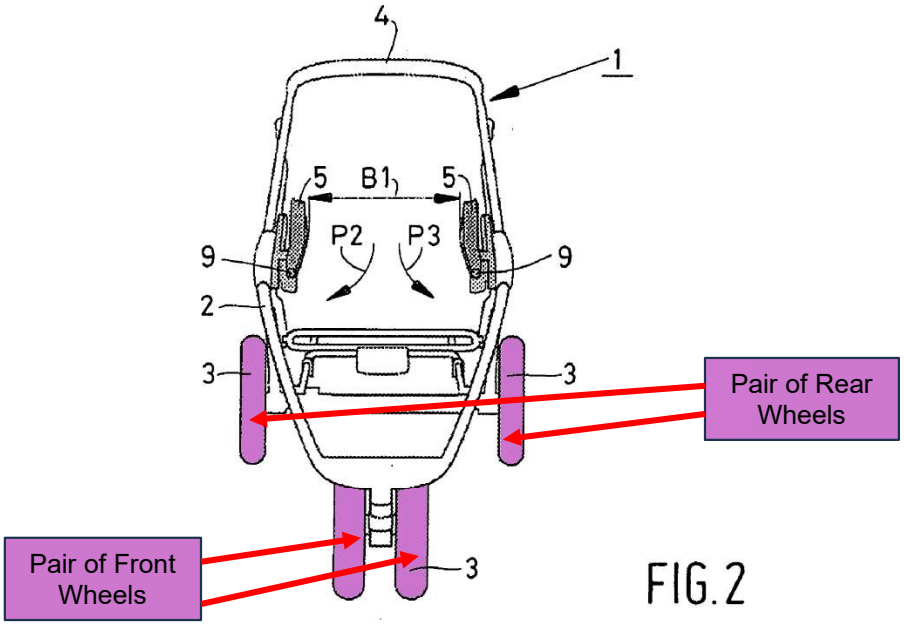
311. Therefore, it is my opinion that Van Dijk and Schaaf render obvious limitation [1.pre].

… ***[1.a]-[1.b] a pair of rear wheels; a pair of front wheels;***

312. Van Dijk discloses a stroller with a pair of rear wheels and a pair of front wheels. In Fig. 2 of Van Dijk below, the front of the stroller is at the bottom of the drawing, and the rear of the stroller is at the top.

> FIG. 1 shows a stroller 1, according to the present disclosure, which is provided with **a collapsible frame 2 comprising a number of wheels 3** as well as a push bar 4 by which the stroller is configured to be moved in a direction of transport as indicated by the arrow P1.

(EX1050, Van Dijk, [0037].)



EX1050, Van Dijk, Fig. 2

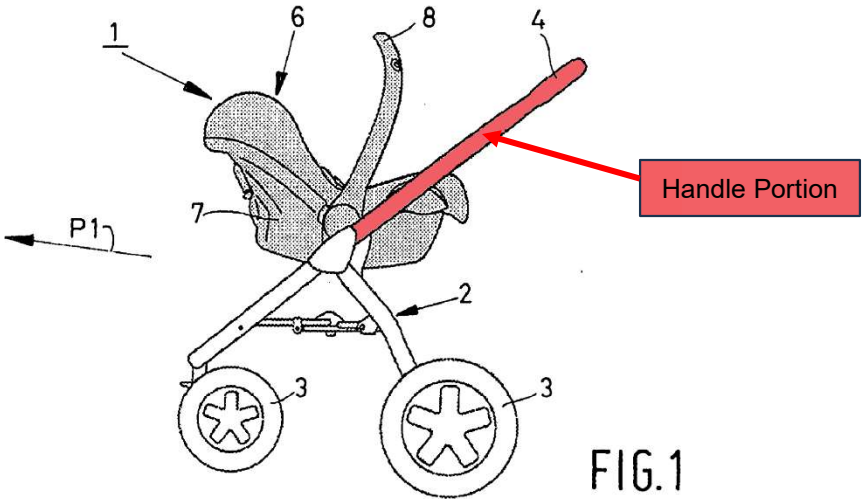
313. Therefore, it is my opinion that Van Dijk discloses limitations [1.a]-[1.b].

> … ***[1.c.i] a frame including a handle portion, a rear wheel support portion, a front wheel support portion and a folding mechanism connecting the front wheel support portion and the handle portion in both an unfolded configuration and in a folded configuration,***

314. Van Dijk discloses a frame (frame 2) with a push bar 4 (red) designed for the caregiver hold and push. The push bar 4 (red) portion of the frame 2 corresponds to the "handle portion" in the claim.

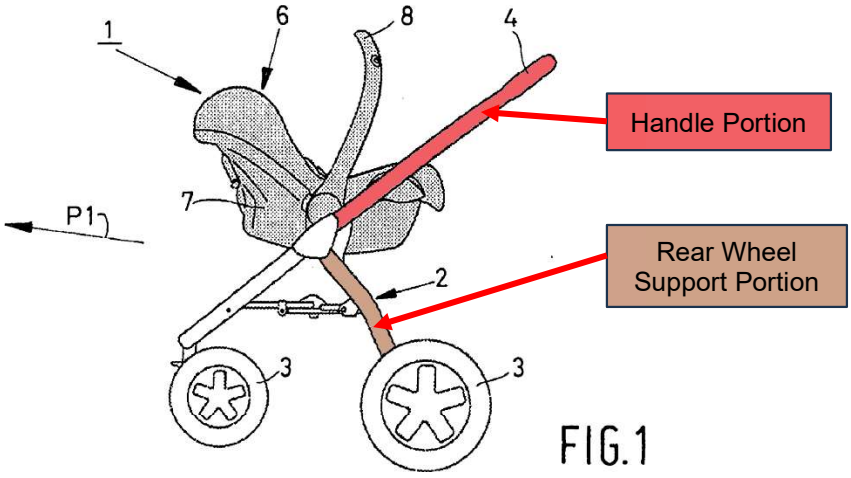
> FIG. 1 shows a stroller 1, according to the present disclosure, which is provided with a collapsible frame 2 comprising a number of wheels 3 as well as **a push bar 4 by which the stroller is configured to be moved in a direction of transport** as indicated by the arrow P1.

(EX1050, Van Dijk, [0037].)



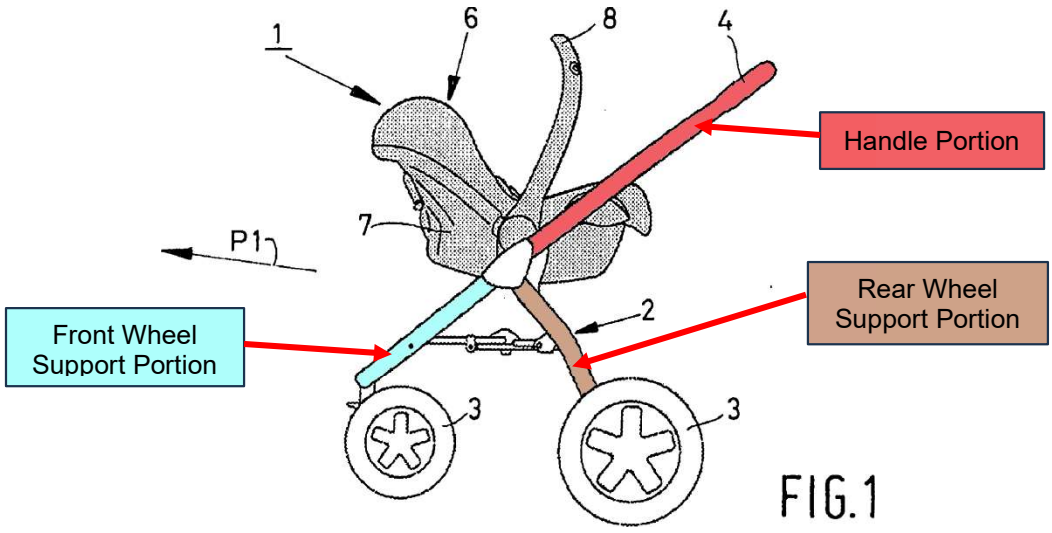
EX1050, Van Dijk, Fig. 1

315. Van Dijk discloses a frame (frame 2) with a portion (brown) attached to the rear wheels (wheels 3), which corresponds to the "rear wheel support portion" in the claim.



EX1050, Van Dijk, Fig. 1

316. Van Dijk discloses a frame (frame 2) with a portion (blue) attached to the front wheels (wheels 3), which corresponds to the "front wheel support portion" in the claim.



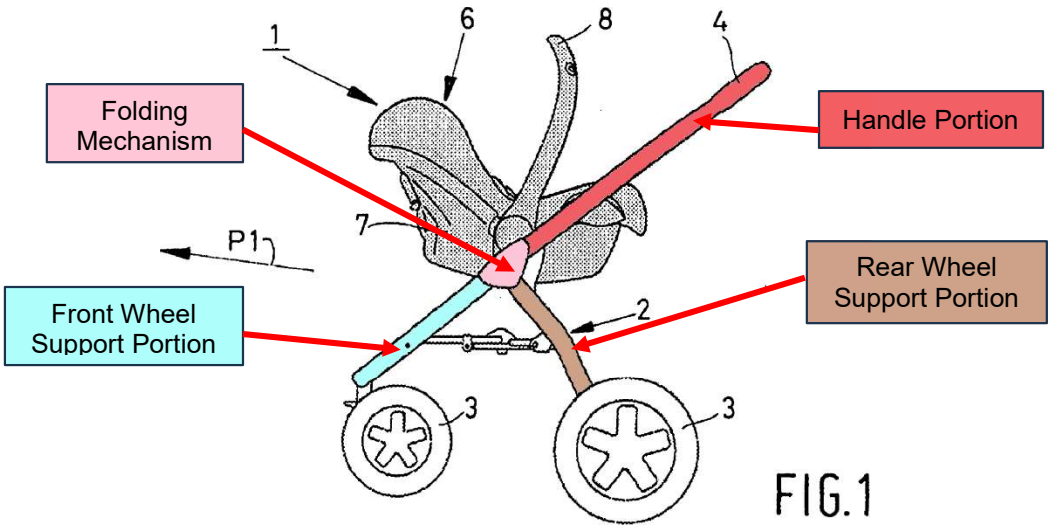
EX1050, Van Dijk, Fig. 1

317. Van Dijk describes its frame 2 as being collapsible, but it does not explicitly describe how the frame 2 collapses.

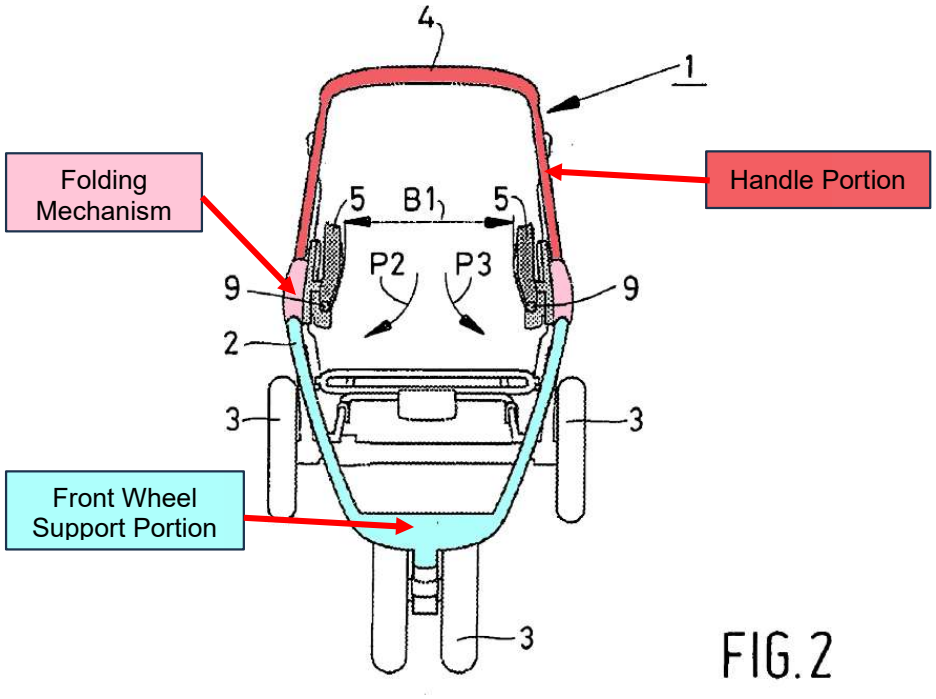
> FIG. 1 shows a stroller 1, according to the present disclosure, which is provided with **a collapsible frame 2** comprising a number of wheels 3 as well as a push bar 4 by which the stroller is configured to be moved in a direction of transport as indicated by the arrow P1.

(EX1050, Van Dijk, [0037].)

318. A POSITA would understand that the pink component below is a folding mechanism that allows the frame 2 to collapse. There are no other illustrated components that would allow the frame 2 to collapse. Additionally, it was common for strollers with similar frame designs to have a folding mechanism at the same location between the handle portion and front wheel support portion. Therefore, a POSITA would understand that this component is the folding mechanism for the frame 2.

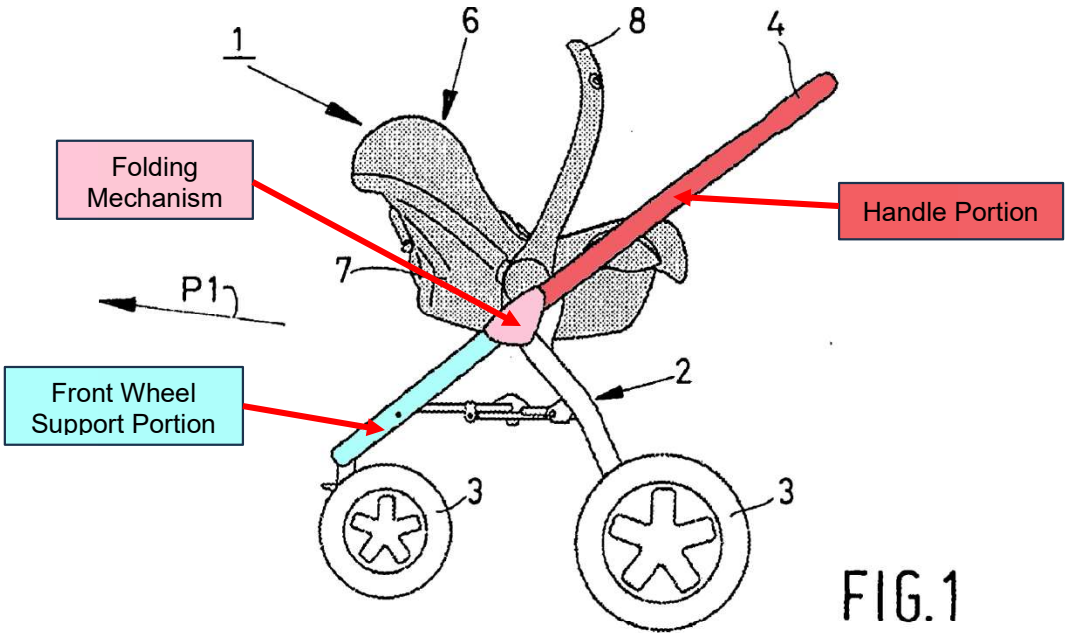


EX1050, Van Dijk, Fig. 1.



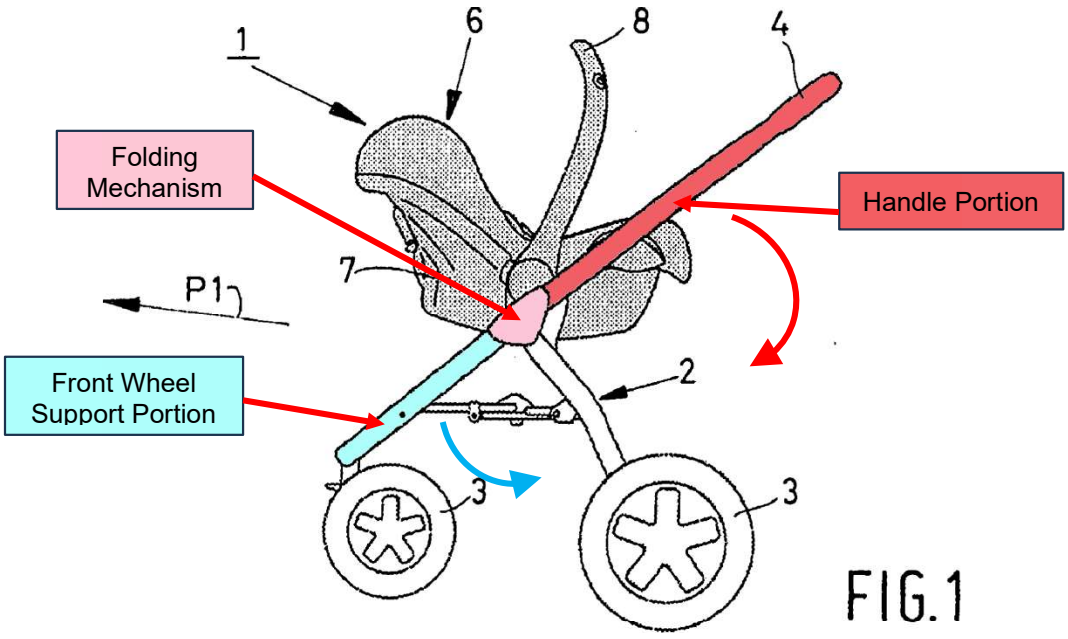
EX1050, Van Dijk, Fig. 2.

319. Fig. 1 of Van Dijk below illustrates the frame 2 in an unfolded configuration. As shown below, the folding mechanism (pink) connects the front wheel support portion (blue) and the handle portion (red) in the unfolded configuration.



EX1050, Van Dijk, Fig. 1.

320. The folding mechanism (pink) also connects the front wheel support portion (blue) and the handle portion (red) in the folded condition. Because Van Dijk does not explicitly describe how the collapsible frame 2 collapses, a POSITA would understand that frame 2 collapses in a conventional manner, which is by the folding mechanism (pink) allowing the handle portion (red) and/or the front wheel support portion (blue) to rotate about a pivot axis of the folding mechanism so that the frame 2 becomes folded and compact. (See Dotsey, [2023].) With the collapsing being performed in this way, the folding mechanism (pink) connects the front wheel support portion (blue) and the handle portion (red) in the unfolded condition and the folded condition.

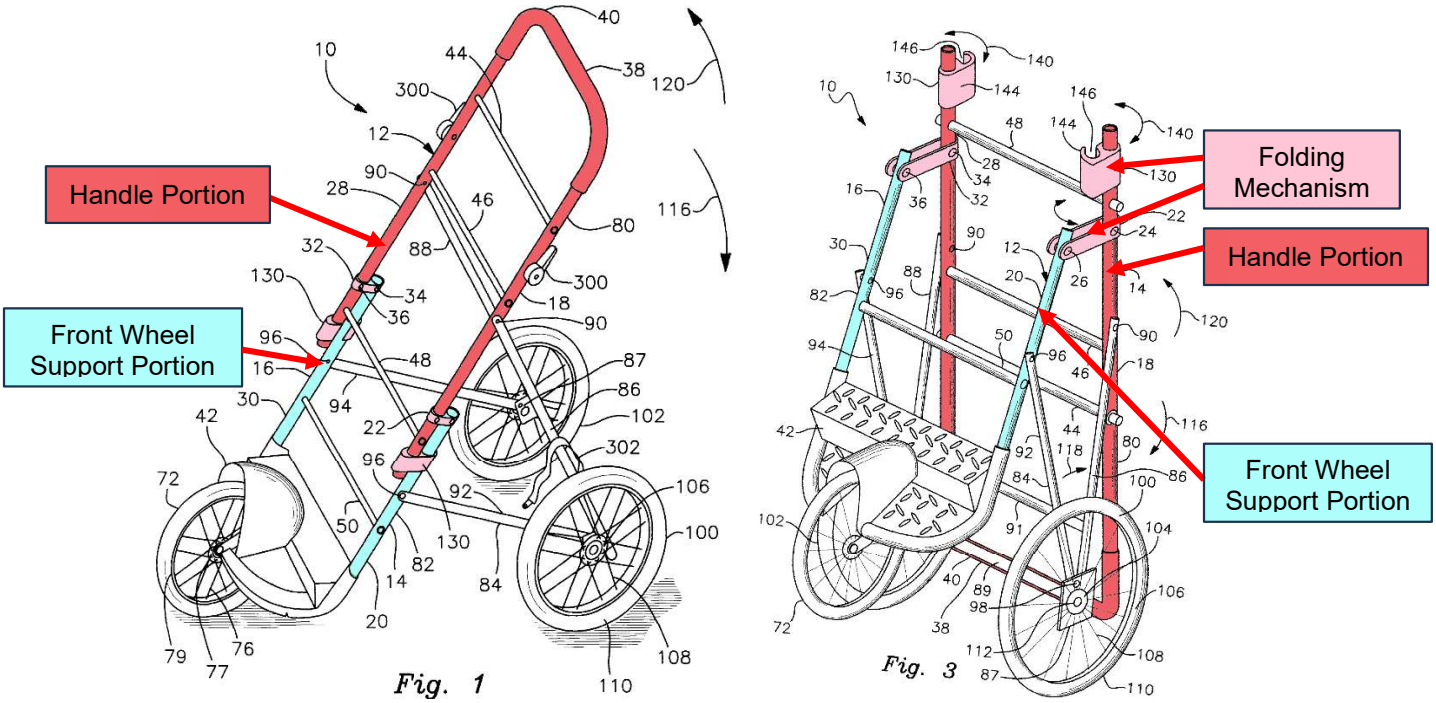


EX1050, Van Dijk, Fig. 1.

321. If Patent Owner argues that Van Dijk does not disclose a folding mechanism that allows such folding, then it would have been obvious in view of Schaaf. The folding mechanism (pink) of Schaaf's frame 12 includes U-shaped brackets 22/32, pins 24/34, pins 26/36, and clips 130, which allow the frame 12 to fold and unfold in a conventional manner. The brackets 22/32 (pink) are secured to the handle portion (red) and front wheel support portion (blue) by the pins 24/34 and 26/36. When the frame 12 is folded from the unfolded state, the front wheel support portion (blue) pivots downward (*i.e.*, towards the rear wheels) about the pins 26/36 (pink), and/or the handle portion (red) also rotates downward (*i.e.*, towards the wheels). The brackets 22/32 (pink) are fixed in position relative to the handle portion (red) by the pins 24/34 (pink).

> **Side section 14 includes a tubular upper segment 18 and a tubular lower segment 20 that is pivotably or foldably connected to segment 18 by a generally U-shaped bracket 22.** Bracket 22 is wrapped about and fixedly connected to segment 18 by a pin 24. FIGS. 2 and 3. **Segment 20 extends through and is pivotably connected to bracket 22 by a second pin 26.** The opposite side section 16 includes a similar pair of upper and lower segments 28 and 30, respectively. (See FIGS. 1 and 3) These segments are pivotably interconnected by a second U-shaped bracket 32 that is wrapped about upper segment 28 and fixed thereto by a pin 34. **Lower segment 30 extends through bracket 32 and is hingedly connected thereto by a pivot pin 36.**

(EX1040, Schaaf, 4:51-63.) As shown below, Schaaf's folding mechanism connects the front wheel support portion (blue) and handle portion (red) in both an unfolded configuration and in a folded configuration.



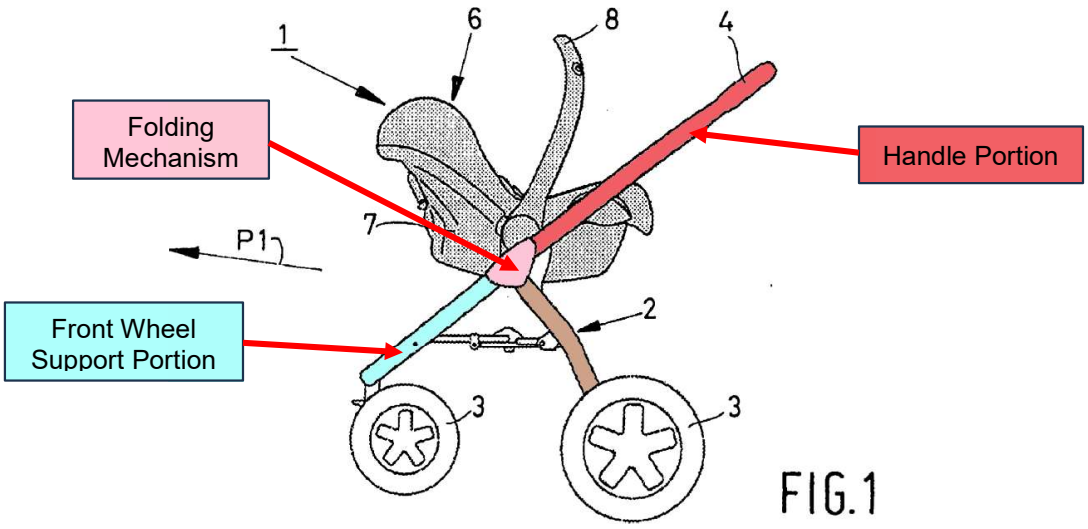
EX1040, Schaaf, Fig. 1 and Fig. 3

322. When the connector portion (pink) of Van Dijk is modified to be a folding mechanism that allows the front wheel support portion (blue) and handle portion (4) to rotate downward, the folding mechanism would connect the front wheel support portion (blue) and handle portion (red) in both the unfolded configuration and folded configuration. Therefore, if Van Dijk does not already disclose a folding mechanism connecting the front wheel support portion and the handle portion in both an unfolded configuration and in a folded configuration, then such a folding mechanism would have been obvious in view of Van Dijk and Schaaf.

323. Therefore, it is my opinion that Van Dijk and Schaaf render obvious limitation [1.c.iii].

… ***[1.c.ii] wherein the folding mechanism connects the rear wheel support portion to the front wheel support portion and the handle portion,***

324. As shown below, Van Dijk's folding mechanism (pink) connects the rear wheel support portion (brown) to the front wheel support portion (blue) and the handle portion (red).



EX1050, Van Dijk, Fig. 1

325. Therefore, it is my opinion that Van Dijk discloses limitation [1.c.ii].

… ***[1.c.iii] wherein the frame includes a stroller seat support portion positioned at a first vertical position adjacent the handle portion, and***

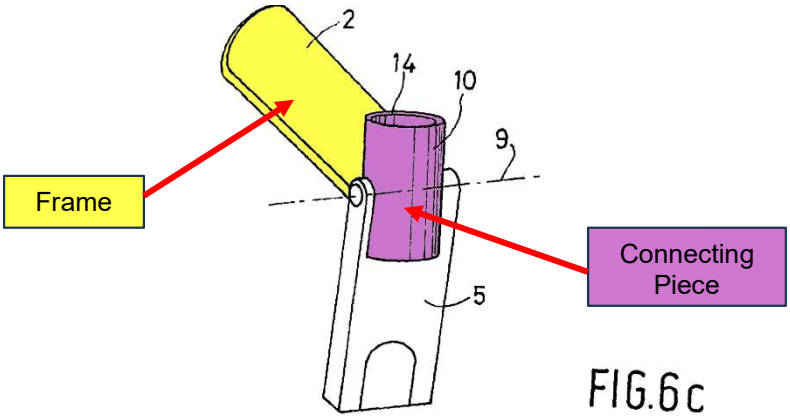
326. In Van Dijk, the connecting pieces 10 (purple) of the mounting mechanisms detachably connect to and support carrycots 12 and child seats 11. The connecting pieces 10 (purple) are fixedly connected to the stroller frame 2 (yellow)

> The present disclosure relates to a stroller provided with at least one adapter, by which a first child seat can be detachably connected to the stroller. **The stroller is furthermore provided with at least one connecting piece, by which a second child seat can be detachably connected to the stroller.** The adapter is movable from at least a first position, in which the first child seat can be detachably connected to the adapter, to at least **a second position connected to the stroller, in which the second child seat can be detachably connected to the connecting piece,** and vice versa.

(EX1050, Van Dijk, [0002].)

> The adapters 5 are pivotable with respect to the frame 2 about pivot axes 9 that extend parallel to a direction of transport, as indicated by the arrow P1. By pivoting the adapters 5 about the pivot axes 9 in the directions indicated by the arrows P2 and P3, respectively, the adapters 5 are moved from a first position A1 to a second position A2, as shown in FIG. 5. In this second position A2, **connecting pieces 10, that are connected to the frame 2, are accessible, which connecting pieces 10 are spaced a distance B2 apart. A child seat 11, as shown in FIG. 3, or a carrycot 12, as shown in FIG. 4, can be connected to the connecting pieces 10. The child seat 11, which is suitable for children of for example 1-4 years of age, is provided with means that can be connected to the connecting pieces 10. The carrycot 12 is provided with similar means.**

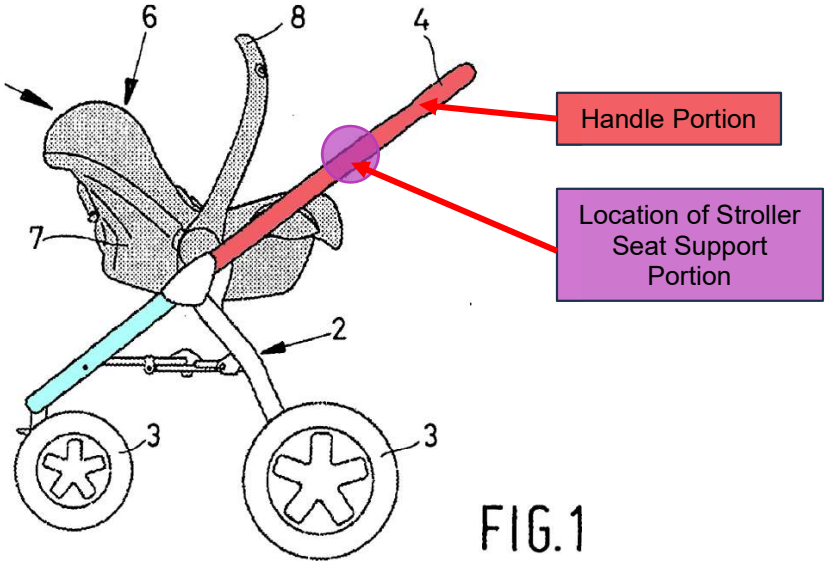
(EX1050, Van Dijk, [0038].)



EX1050, Van Dijk, Fig. 6C

327. The connecting pieces 10 correspond to the "stroller seat support portion" recited in the claim.

328. When the stroller of Van Dijk is modified in view of Schaaf such that one set of mounting mechanisms is located on the handle portion (red), the connecting pieces 10 (stroller seat support portion) are positioned at a first vertical position (*i.e.*, height) adjacent the handle portion (red).



EX1050, Van Dijk, Fig. 1

329. Therefore, it is my opinion that Van Dijk and Schaaf renders obvious

limitation [1.c.iii].

… ***[1.c.iv] wherein the front wheel support portion and the handle portion are substantially parallel when the frame is in the unfolded configuration; and***

330. The front wheel support portion (blue) and handle portion (red) of Van Dijk have the same relationship that is illustrated in the ’231 Patent and the applications to which it claims priority. The front wheel support portion (blue) and handle portion (red) lie in the same common plane (purple line), which is what is illustrated in the ’231 Patent and the applications to which the ’231 Patent claims priority.

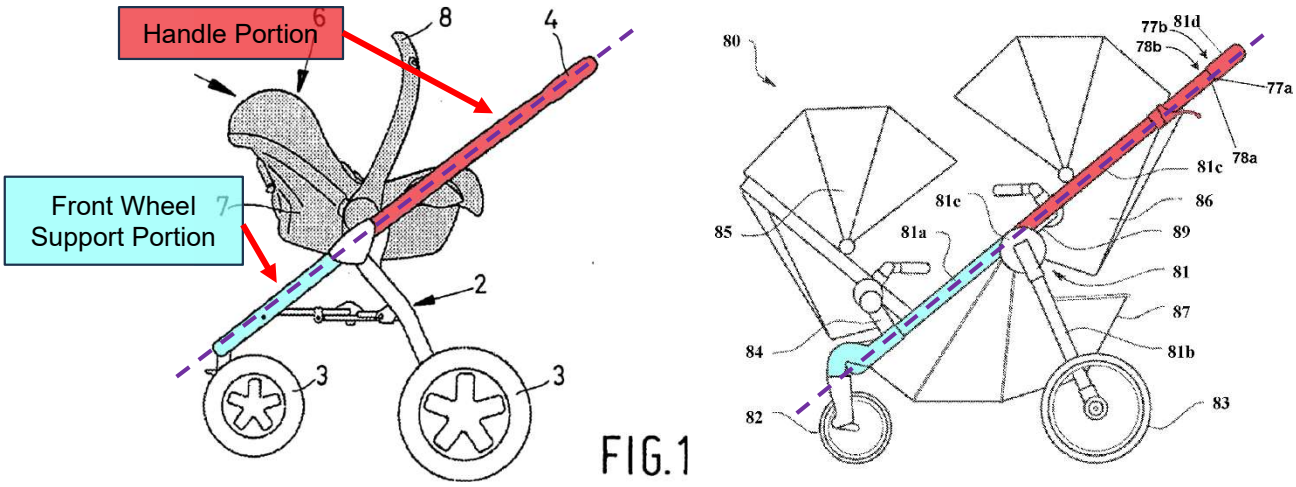


FIGURE 8A

EX1050, Van Dijk, Fig. 1 and EX1020, ’292 Application, p. 66 Fig. 8A

331. Therefore, if the Board determines that the applications to which the ’231 Patent claims priority disclose a front wheel support portion and handle portion that are substantially parallel when the frame is in the unfolded configuration, then

Van Dijk also discloses a front wheel support portion and handle portion that are substantially parallel when the frame is in the unfolded configuration.

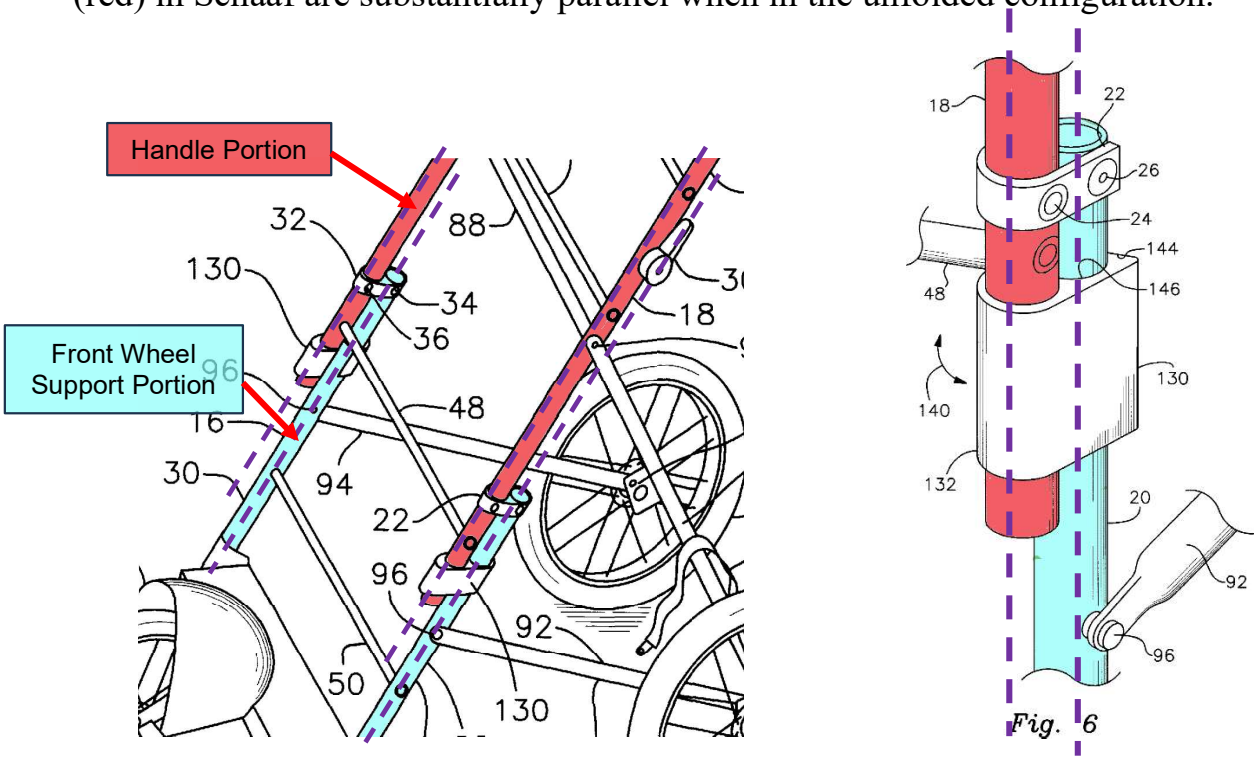
332. Otherwise, Van Dijk in view of Schaaf renders obvious this limitation. Schaaf discloses a front wheel support portion (blue) and handle portion (red) that are substantially parallel when the frame is in the unfolded configuration. Specifically, Schaaf describes that when the frame 12 is unfolded, the upper portion 80 (handle portion) (red) and lower portion 82 (front wheel support portion) (blue) are "not in perfect alignment" such that they are "at least axially parallel to one another."

> **In the open condition, the upper and lower portions 80 and 82 are substantially aligned.** More particularly, upper segments 18 and 28 are orientated relative to respective lower segments 20 and 30 in the manner best depicted in FIGS. 6 and 7. Therein, the upper and lower segments 18 and 20 of side section 14 are illustrated. An analogous construction is employed for the segments of opposite side section 16. **When the stroller is fully opened and operable, the lower end of each upper side segment overlaps the upper end of its associated lower segment. Although the upper and lower segments are not in perfect alignment, they are generally axially aligned (or at least axially parallel to one another).**

(EX1040, Schaaf, 7:40-51.)

333. The front wheel support portion (blue) and handle portion (red) being substantially parallel is shown in Figs. 1 and 6 of Schaaf below. The front wheel

support portion (blue) and handle portion (red) lie in two planes (represented by the dashed purple lines) that are separated by a distance between them. Additionally, the planes on which the front wheel support portion (blue) and handle portion (red) lie do not intersect. Therefore, the front wheel support portion (blue) and handle portion (red) in Schaaf are substantially parallel when in the unfolded configuration.



EX1040, Schaaf, Fig. 1 and Fig. 6

334. A POSITA would have been motivated to make Van Dijk's front wheel support portion (blue) and handle portion (red) substantially parallel as disclosed in Schaaf. First, a POSITA would understand that making these frame portions substantially parallel results in the handle portion (red) being higher than it would otherwise, which provides some additional space for the two seats or stroller accessories, such as a basket below the handle portion (red) and above the rear

wheels. Since there may be limited space for multiple seats on a stroller frame, the additional space may allow seats of different types and sizes to fit more comfortably. Additionally, this modification is a simple substitution of one known type of frame arrangement (one in which the frame portions extend in a common plane) with another known frame arrangement (one with substantially parallel frame portion) to achieve a predicable result (a collapsible stroller frame).

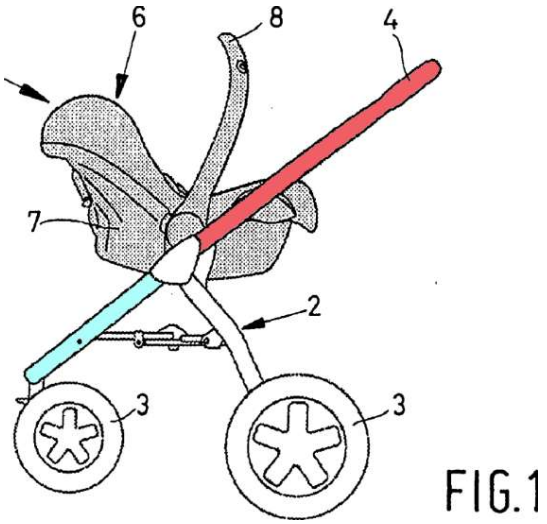


FIG.1

EX1050, Van Dijk, Fig. 1

335. A POSITA would have reasonably expected success when combining Van Dijk and Schaaf. The strollers disclosed in Van Dijk and Schaaf use conventional design components that were well-known in the industry. Combining the teachings of Van Dijk and Schaaf would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

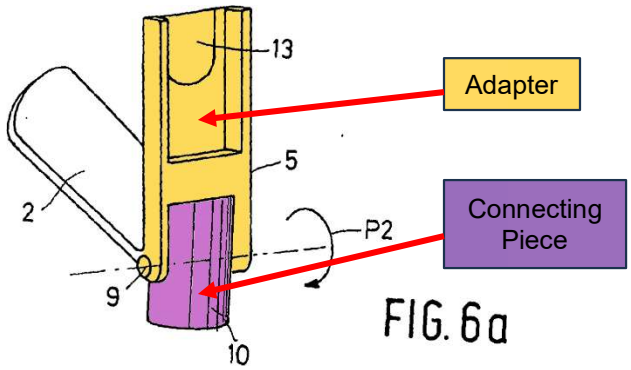
336. Therefore, it is my opinion that Van Dijk and Schaaf render obvious limitation [1.c.iv].

… ***[1.d] a front seat attachment configured for attachment to the front wheel support portion at a second vertical position substantially lower than the first vertical position,***

337. The mounting mechanisms in Van Dijk include adapters 5 (gold) that are located on both sides of the stroller frame 2. The adapters 5 are designed to detachably connect to a stroller seat. Van Dijk's adapters 5 correspond to the "seat attachment" recited in the claim.

> **The child seat 6 is detachably connected to the stroller 1 by connecting the aforementioned means of the child seat 6 to the adapter 5**, thereby making it possible to transport the child seat 6 by the stroller 1. **If a user wishes to use the child seat 6 separately from the stroller 1, for example in order to transport it in a vehicle, the child seat 6 is disconnected from the adapters 5.**

(EX1050, Van Dijk, [0037].)



EX1050, Van Dijk, Fig. 6A

338. The front seat of Schaaf's stroller attaches using crossbar members 48

and 50. The crossbar members 48 and 50 correspond to the "front seat attachment" recited in the claim. In the illustrated embodiment, the crossbar member 48 is connected directly to the handle portion (red), and the crossbar member 50 is connected directly to the front wheel support portion (blue). Therefore, at least part of Schaaf's front seat attachment (gold) is attached to the front wheel support portion (blue).

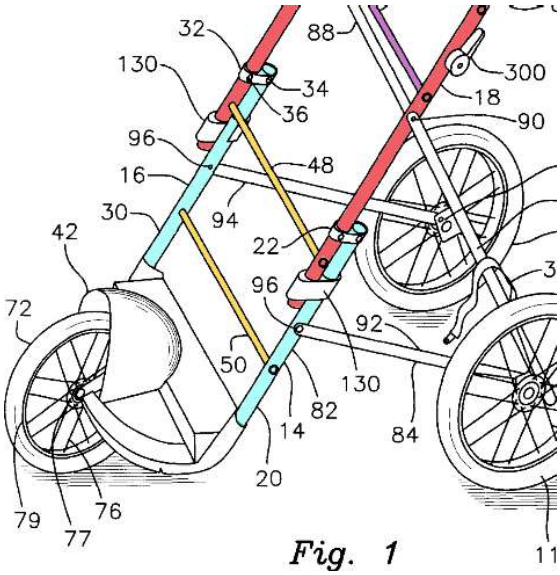
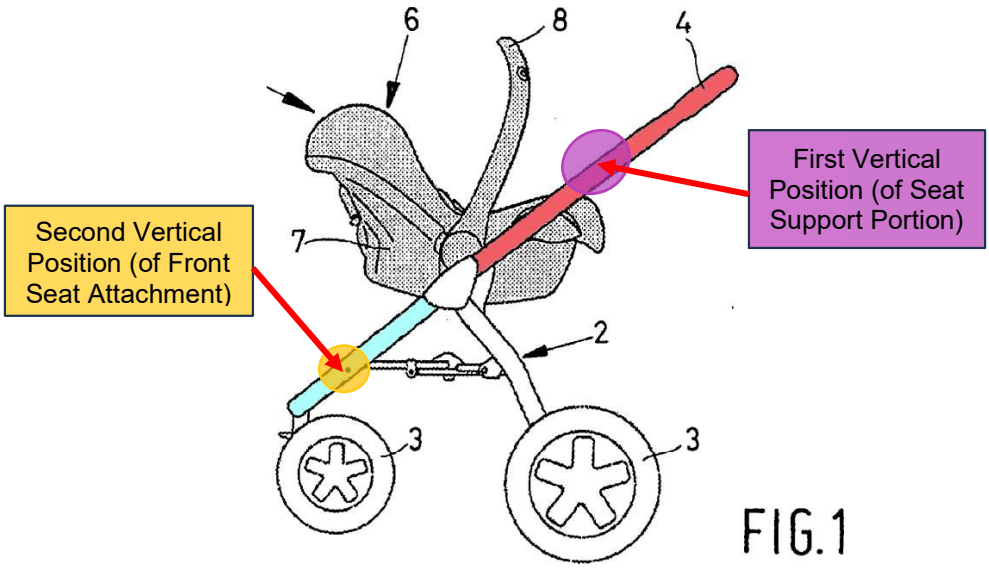


Fig. 1

EX1040, Schaaf, Fig. 1

339. Additionally, in the stroller of Van Dijk/Schaaf, the adapters (front seat attachment) for the front seat would be attached to the front wheel support portion (blue) of Van Dijk's stroller at the location shown below (gold).



EX1050, Van Dijk, Fig. 1

340. As shown above, in the stroller of Van Dijk/Schaaf, the front seat attachment is configured for attachment to the front wheel support portion at a second vertical position (orange) substantially below the first vertical position (where the stroller seat support portion would be positioned) (purple). Therefore, Van Dijk/Schaaf satisfies this claim limitation.

341. Therefore, it is my opinion that Van Dijk and Schaaf render obvious limitation [1.d].

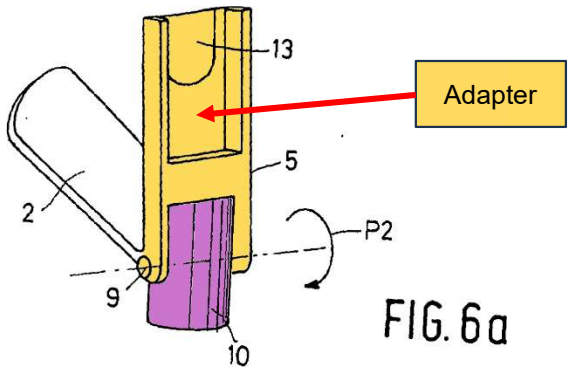
… ***[1.e] wherein the front seat attachment is configured to releasably connect to and support the front stroller seat in either a forward-facing configuration or a backward -facing configuration,***

342. Van Dijk describes that the adapters 5 (front seat attachment) "detachably connect[]" connect to and support the stroller seat.

> **The child seat 6 is detachably connected to the stroller 1 by connecting the aforementioned means of the child seat 6 to the adapter 5,** thereby making it possible to transport the child seat 6 by the stroller 1. **If a user wishes to use the child seat 6 separately from the stroller 1, for example in order to transport it in a vehicle, the child seat 6 is disconnected from the adapters 5.**

(EX1050, Van Dijk, [0002].)

343. A POSITA would recognize that the adapters 5 (front seat attachment) (gold) connect to and support the stroller seat via a connector that was well-known in the art. (EX1050, Van Dijk, [0037] ("Such means are likewise known and will not be explained in more detail herein.").) Additionally, a POSITA would recognize that the adapters 5 (gold) are designed to connect to and disconnect from the stroller seat without using special skills or tools. Therefore, Van Dijk's adapters 5 (front seat attachment) (gold) are configured to releasably support the front stroller seat.



EX1050, Van Dijk, Fig. 6A

344. Additionally, Van Dijk discloses that the adapters 5 can be used to support the seats in forward-facing and backward-facing positions. Therefore, the

adapters 5 (front seat attachment) are configured to releasably connect to and support the front stroller seat in either a forward-facing configuration or a backward -facing configuration.

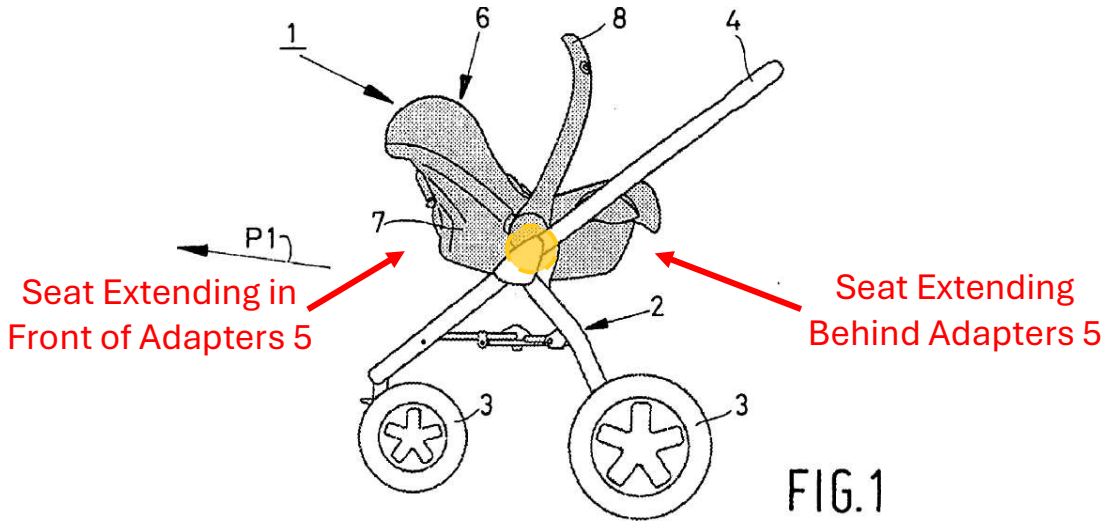
> In the embodiment shown in FIG. 1 and FIG. 3, **a child that is present in the child seat faces a person who pushes the stroller 1. It is within the scope of the present disclosure to mount the child seat in a reverse position, in which the child faces in the direction of motion P1.**

(EX1050, Van Dijk, [0052].)

345. Therefore, it is my opinion that Van Dijk discloses limitation [1.e].

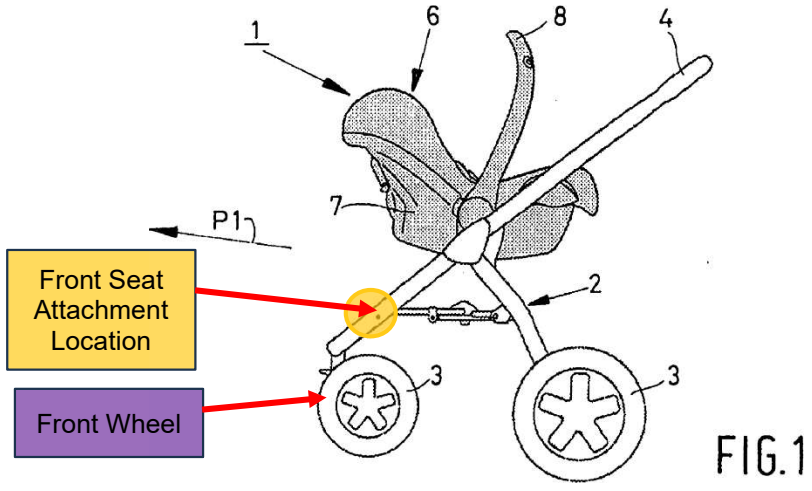
> … ***[1.f] wherein the front seat attachment is configured to support the front stroller seat substantially over the front wheels so that a center of gravity of the stroller system is between the front wheels and the rear wheels;***

346. In Van Dijk, when a stroller seat 6 is mounted on the adapters 5, the stroller seat 6 extends in front and behind the adapter 5. The location of the adapters 5 is indicated below by the gold circle.



EX1050, Van Dijk, Fig. 1

347. In the stroller of Van Dijk/Schaaf, the location of the adapters 5 (front seat attachment) is shown below (indicated by the gold circle). As shown, the adapter 5 would be located over the front wheels. Because the seat 6 in Van Dijk extends in front of and behind the adapters 5, the adapters 5 (front seat attachment) in Van Dijk/Schaaf are configured to support the front stroller seat substantially over the front wheels.



EX1050, Van Dijk, Fig. 1

348. Additionally, Fig. 10 of Schaaf illustrates a front stroller seat being supported substantially over a front wheel of the stroller. A POSITA would see that the vast majority of the frame components are within the stroller's wheelbase, that the rear seat is within the wheelbase, and that the front seat does not extend significantly in front of the front wheel. Therefore, a POSITA would understand that the center of gravity of Schaaf's stroller is between the front wheels and rear wheels.

349. For the same reasons, a POSITA would understand that the location of the front seat in Van Dijk/Schaaf being substantially over the front wheels results in the center of gravity of the stroller system being located between the front wheels and rear wheels. However, if Patent Owner argues that the stroller of Van Dijk/Schaaf does not result in the center of gravity being located between the front wheels and rear wheels, then it would have been obvious to further modify Van Dijk/Schaaf such that the center of gravity is located between the front wheels and rear wheels. As I discussed above, a POSITA would have known it was desirable to have a stroller's center of gravity located between the stroller's front and rear wheels to make the stroller more stable and reduce the risk of tipping over and injuring a child. A POSITA would also have known that having the center of gravity located between the front and rear wheels helps make the stroller easier to steer and control.

350. A POSITA would have reasonably expected success in further modifying Van Dijk/Schaaf to have the center of gravity located between the front

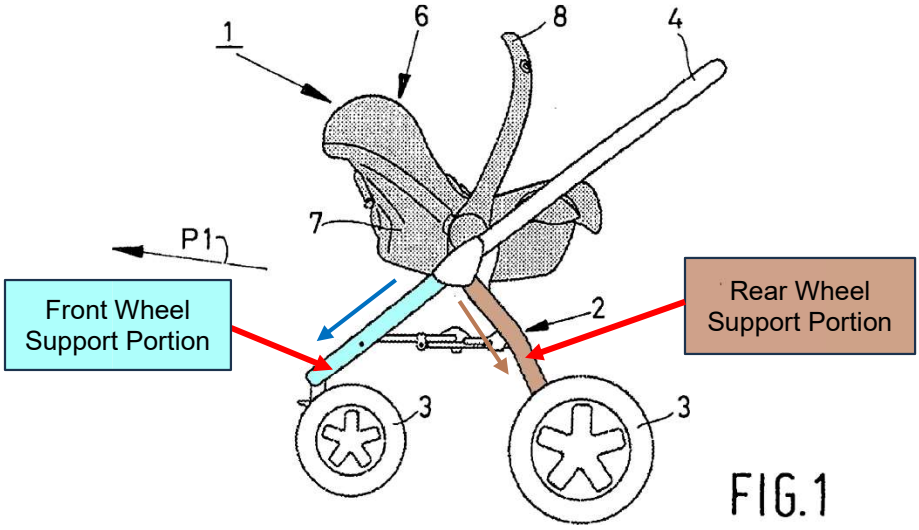
and rear wheels. A POSITA would have accomplished this by simply choosing component materials and/or arranging the components so that the center of gravity was between the wheels. For example, if the center of gravity was in front of the front wheels, a POSITA could shift the center of gravity of the stroller backwards by moving components and/or change part materials such that the weight at the front of the stroller was reduced and/or the weight at the rear of the stroller was increased. The strollers disclosed in Van Dijk and Schaaf use conventional design components that were well-known in the industry. Combining the teachings of Van Dijk with Schaaf would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

351. Therefore, it is my opinion that Van Dijk and Schaaf render obvious limitation [1.f].

> … ***[1.g] wherein the rear wheel support portion extends diagonally from the front wheel support portion when the frame is in the unfolded configuration, and the rear wheel support portion is disposed adjacent to both the front wheel support portion and the handle portion when the frame is in the folded configuration; and***

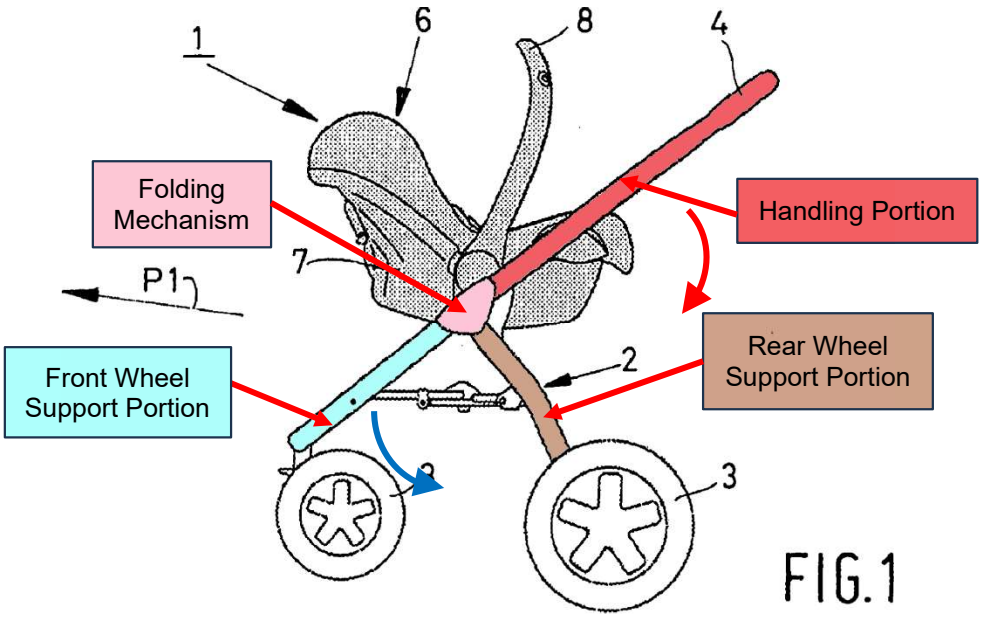
352. Fig.1 of Van Dijk below shows the frame 2 in the unfolded configuration. As shown below, the rear wheel support portion (brown) extends

diagonally from the front wheel support portion (blue) when the frame is in the unfolded configuration.



EX1050, Van Dijk, Fig.1

353. The red and blue arrows below show how a POSITA would understand Van Dijk's frame 2 to fold (or, alternatively, how it would fold in light of the modifications discussed above). The handle portion (red) and/or front wheel support portion (blue) would rotate about a pivot axis of the folding mechanism (pink) towards the rear wheels 3. As indicated below, when the frame 2 is in the folded configuration, the rear wheel support portion (brown) would be disposed adjacent to both the front wheel support portion (blue) and the handle portion (red). A POSITA would have known that this arrangement was a conventional position for a folded stroller.

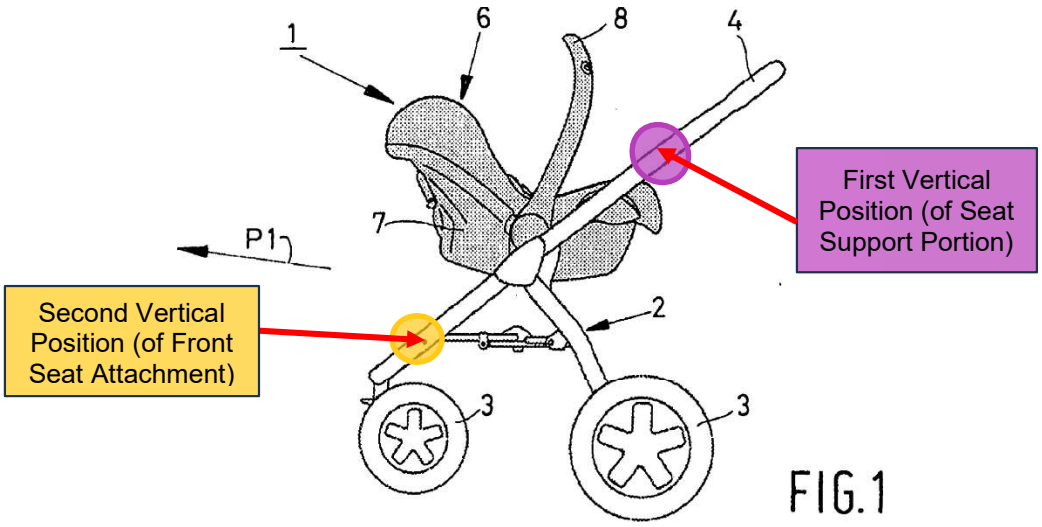


EX1050, Van Dijk, Fig.1

354. Therefore, it is my opinion that Van Dijk discloses limitation [1.g] or, alternatively, that Van Dijk and Schaaf render obvious limitation [1.g].

> … ***[1.h] wherein the stroller seat support portion positioned at the first vertical position and the front seat attachment at the second vertical position create an inline descending configuration of the rear stroller seat and the front stroller seat.***

355. The first vertical position of the stroller seat support portion (purple) and the second vertical position (gold) of the front seat attachment are shown below. These positions result in the front stroller seat being lower than the rear stroller seat. Therefore, an "inline descending configuration" of the rear stroller seat and the front stroller seat is created.

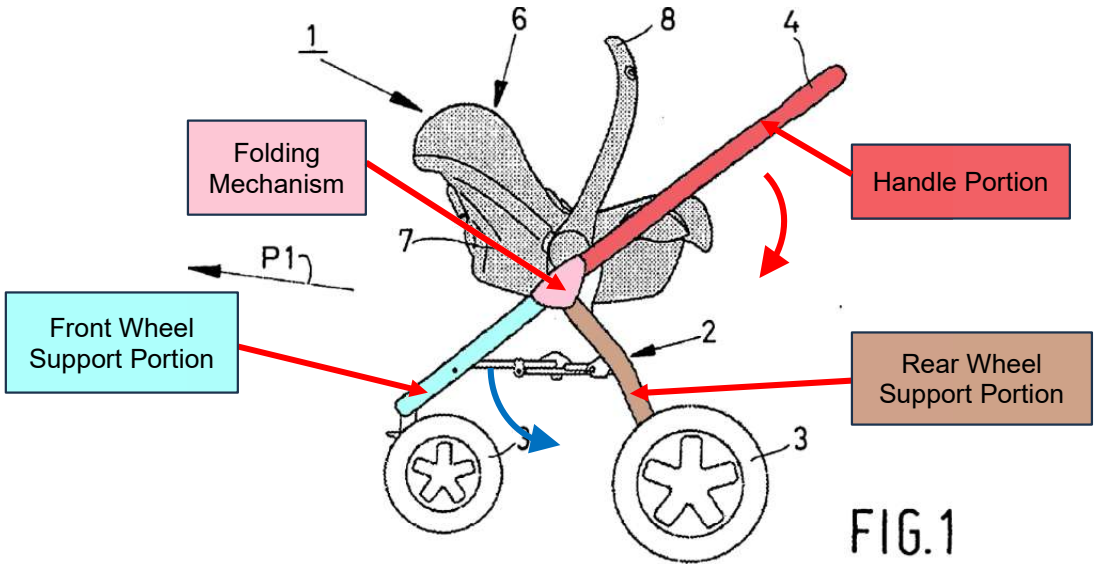


EX1050, Van Dijk, Fig. 1

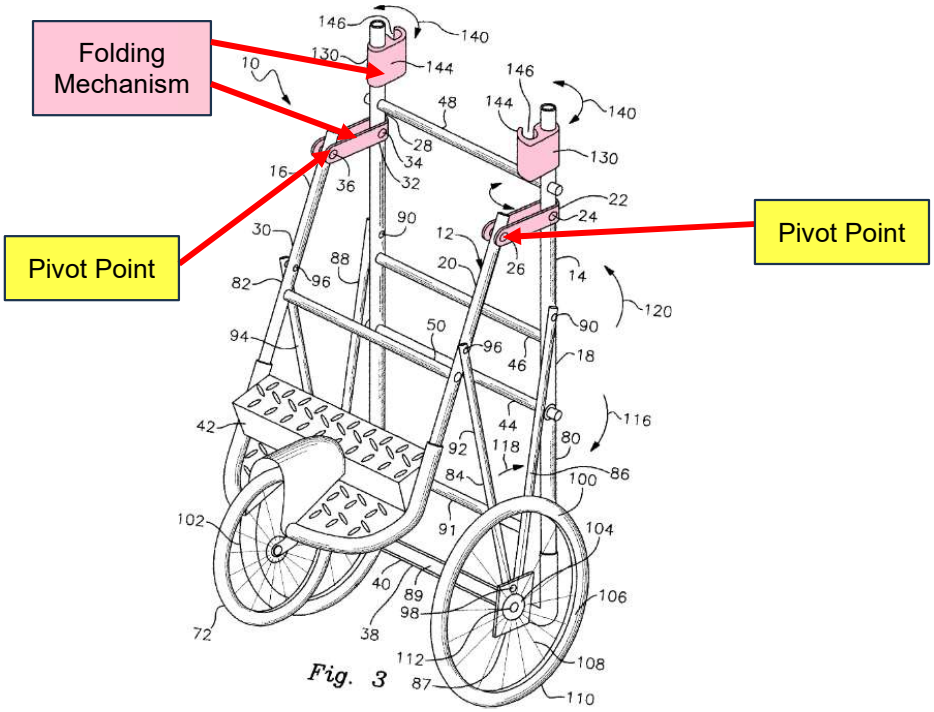
356. Therefore, it is my opinion that Van Dijk and Schaaf render obvious limitation [1.h] and that claim 1 is obvious.

… ***[2] The stroller system of claim 1, wherein the folding mechanism includes at least one pivot point.***

357. A POSITA would know that any mechanism that provides the ability for a stroller frame to fold, including a "folding mechanism" as recited in the claim, necessarily includes a pivot point (*i.e.*, the point/axis about which frame components pivot). Additionally, Schaaf's folding mechanism (pink) discloses pivots 26/36, which are pivot points. Therefore, Van Dijk's folding mechanism (pink) includes at least one pivot point (*i.e.*, the point/axis about which the front wheel support portion (blue) and handle portion (red) pivot.



EX1050, Van Dijk, Fig. 1



EX1040, Schaaf, Fig. 3

358. Therefore, is it my opinion that Van Dijk discloses the limitation of claim 2 or, alternatively, that it is obvious in view of Van Dijk and Schaaf, and that this claim is obvious.

… ***[3] The stroller system of claim 1, wherein the stroller seat support portion is configured to support the rear stroller seat substantially over the rear wheels.***

359. As can be seen in Figs. 3 and 4 of Van Dijk below, when a child seat 11 or carrycot 12 is mounted to the connecting pieces 10 (stroller seat support portion), the child seat 11 and carrycot 12 extend in front of and behind the connecting pieces 10. Below, the location of the connecting pieces 10 is indicated by red circles.

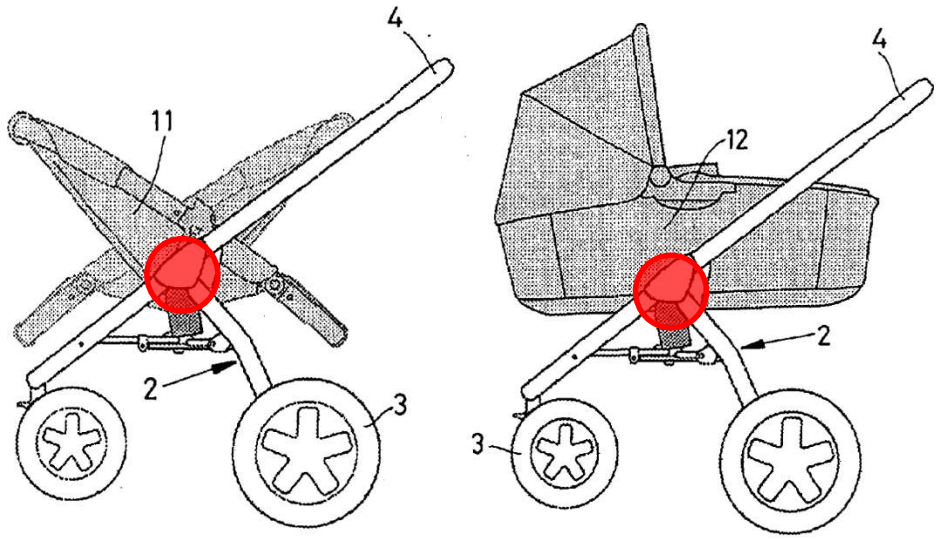
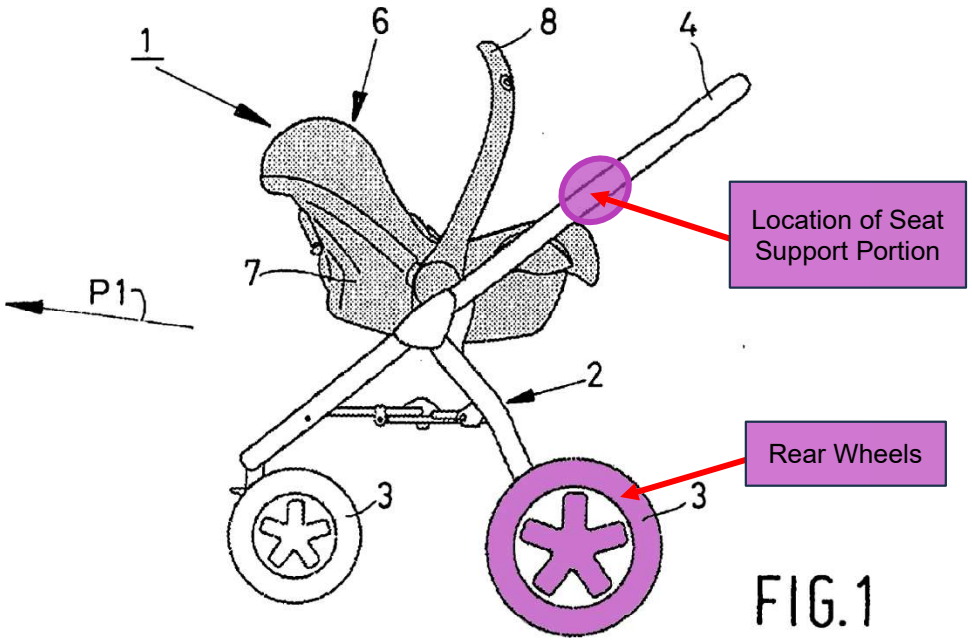


FIG. 3 FIG. 4

EX1050, Van Dijk, Figs. 3 and 4

360. The location of the connecting pieces 10 (stroller support portion) in Van Dijk/Schaaf is indicated below by a purple circle. As can be seen below, the stroller seat support portion is configured to support the rear stroller seat substantially over the rear wheels 3 (purple) in the stroller of Van Dijk/Schaaf.

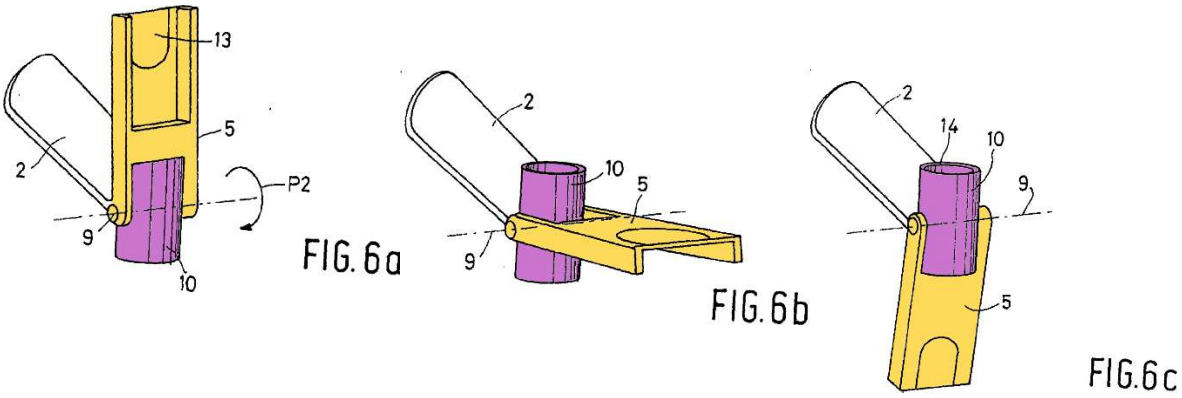


EX1050, Van Dijk, Fig. 1

361. Therefore, it is my opinion, that Van Dijk and Schaaf render obvious the additional limitation of claim 3 and that this claim is obvious.

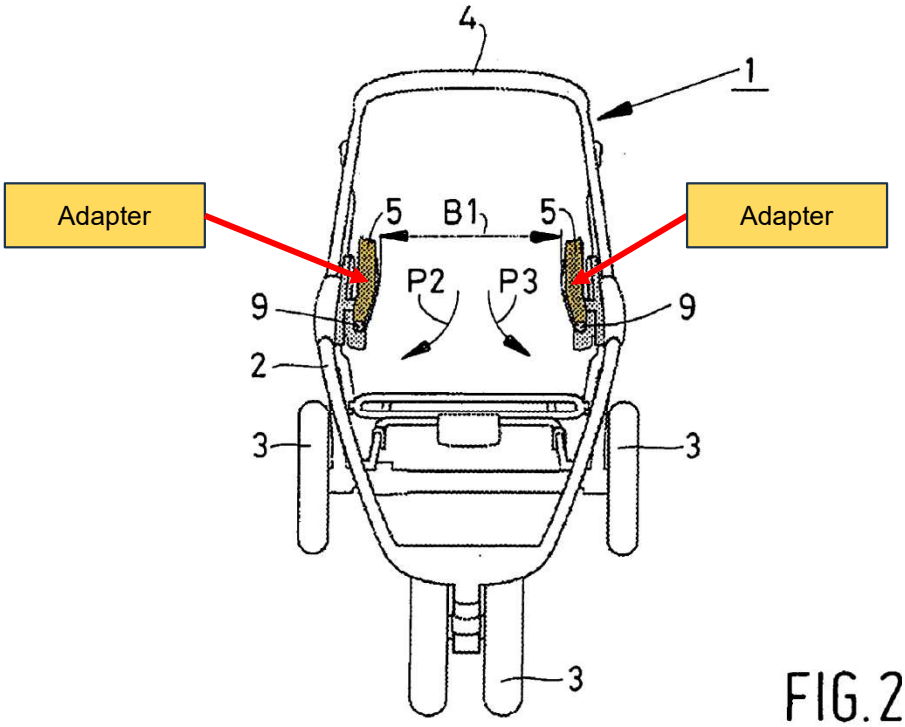
> … ***[4] The stroller system of claim 1, wherein the front seat attachment includes a first connector portion and a second connector portion, the first connector portion configured to removably attach to a left side of the front wheel support portion, and the second connector portion configured to removably attach to a right side of the front wheel support portion.***

362. The adapters 5 (gold) in Van Dijk are pivotally connected to the stroller frame 2. (EX1050, Van Dijk, [0037], [0042]-[0044].)



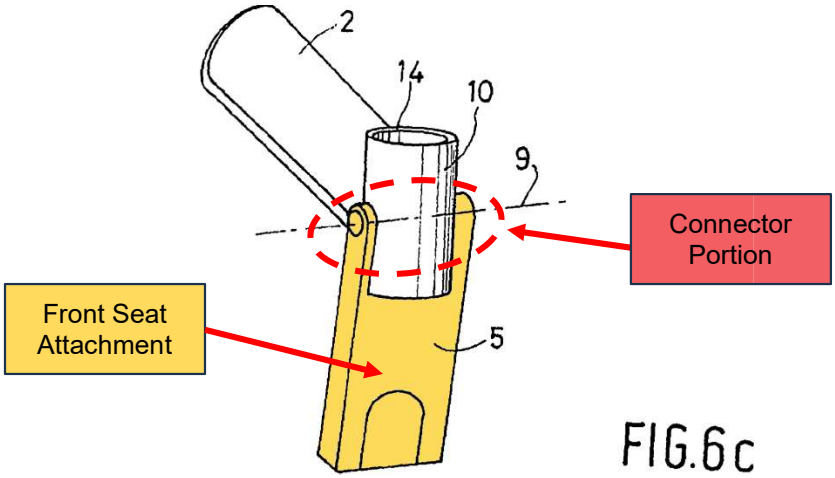
EX1050, Van Dijk, Figs. 6A-6C

363. As shown in Fig. 2 below, a left adapter 5 (gold) is attached to the left side of the frame 2, and a right adapter 5 (gold) is attached to the right side of the frame 2.



EX1050, Van Dijk, Fig. 2

364. The connector portion of the adapter 5 that connects to the frame 2 is circled below and includes the pin that defines the pivot axis 9.



EX1050, Van Dijk, Fig. 6

365. In the stroller of Van Dijk/Schaaf, the left and right adapters 5 (front seat attachment) are located on the left and right sides of the front wheel support portion of the frame 2. Therefore, in the stroller of Van Dijk/Schaaf the front seat attachment includes a first connector portion and a second connector portion, the first connector portion configured to attach to a left side of the front wheel support portion, and the second connector portion configured to attach to a right side of the front wheel support portion.

366. Van Dijk also explains that removable adapters for stroller seats were known in the art.

> If a child seat is to be connected to the connecting pieces, **the adapter must be removed from the stroller** and be stored separately. A drawback of this is that if the user forgets to take the adapter along, the child seat that is to be connected to the adapter cannot be connected to the stroller.

(EX1050, Van Dijk, [0015].)

367. A POSITA would have been motivated to make Van Dijk's adapters 5 removable (as taught in Van Dijk) because it would allow different types of adapters to be able to be used with the stroller. Different adapters are often necessary to allow different types of seats to be used with the stroller. One way to make the adapters 5 removable would be to make the pivot axes 9 a removable pin that does not need special tools or skills to remove.

368. A POSITA would have reasonably expected success when making this modification to Van Dijk's adapters 5. The strollers disclosed in Van Dijk use conventional design components that were well-known in the industry. This modification would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

369. Therefore Van Dijk's modified adapters 5 include a first connector portion and a second connector portion, the first connector portion configured to removably attach to a left side of the front wheel support portion, and the second connector portion configured to removably attach to a right side of the front wheel support portion.

370. Therefore, it is my opinion that Van Dijk and Schaaf renders obvious the additional limitations of claim 4 and that this claim is obvious.

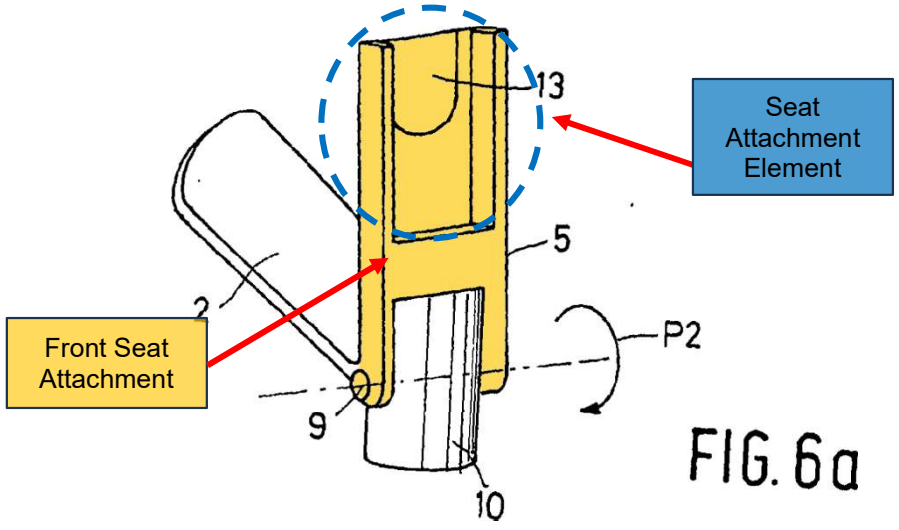
> … ***[5] The stroller system of claim 4, wherein the front seat attachment includes a pair of seat attachment elements configured to releasably support the front stroller seat in either the forward-facing configuration or in the backward-facing configuration.***

371. Van Dijk describes that the adapters 5 (front seat attachment) include slots 13 that connect to a corresponding plate-shaped element on the stroller seat.

> The adapters 5 arc pivotally connected to the frame 2 about a pivot axis 9. The adapter 5 is provided with a slot 13 on a side remote from the pivot axis 9, into which slot 13 a plate-shaped element connected to a child seat can be slid and be positioned therein (not shown).

(EX1050, Van Dijk, [0042].)

372. The slot 13 of the adapter 5 is circled below and corresponds to the "seat attachment element" recited in the claim.



EX1050, Van Dijk, Fig. 6A

373. A POSITA would understand that the adapters 5 are configured to support a stroller seat. (EX1050, Van Dijk, Fig. 2). Van Dijk also describes that the

adapters detachably connect seats to the stroller.

> The child seat 6 is provided with means for connection to the adapters 5. Such means are likewise known and will not be explained in more detail herein. **The child seat 6 is detachably connected to the stroller 1 by connecting the aforementioned means of the child seat 6 to the adapter 5,** thereby making it possible to transport the child seat 6 by the stroller 1. **If a user wishes to use the child seat 6 separately from the stroller 1, for example in order to transport it in a vehicle, the child seat 6 is disconnected from the adapters 5.**

(EX1050, Van Dijk, [0037].)

374. Van Dijk also discloses that the adapters 5 can support stroller seats in forward-facing or backward-facing configurations.

> In the embodiment shown in FIG. 1 and FIG. 3, a child that is present in the child seat faces a person who pushes the stroller 1. It is within the scope of the present disclosure to mount the child seat in a reverse position, in which the child faces in the direction of motion P1.

(EX1050, Van Dijk, [0052].)

375. Therefore, the slots 13 (seat attachment elements) of the adapters 5 (front seat attachment) are configured to releasably support the front stroller seat in either the forward-facing configuration or in the backward-facing configuration.

376. Therefore, it is my opinion that Van Dijk discloses the additional limitations of claim 5 and that this claim is obvious.

> … ***[6] The stroller system of claim 5, wherein the front wheel support portion includes a first attachment portion and a second attachment portion, the first attachment portion on the left side and configured to support the first connector portion, and the second attachment portion on the right side and configured to support the second connector portion.***

377. The stroller of Van Dijk/Schaaf involves a pair of Van Dijk's mounting mechanisms located on the front wheel support portion, with one mounting mechanism on the left side and one mounting mechanism on the right side.

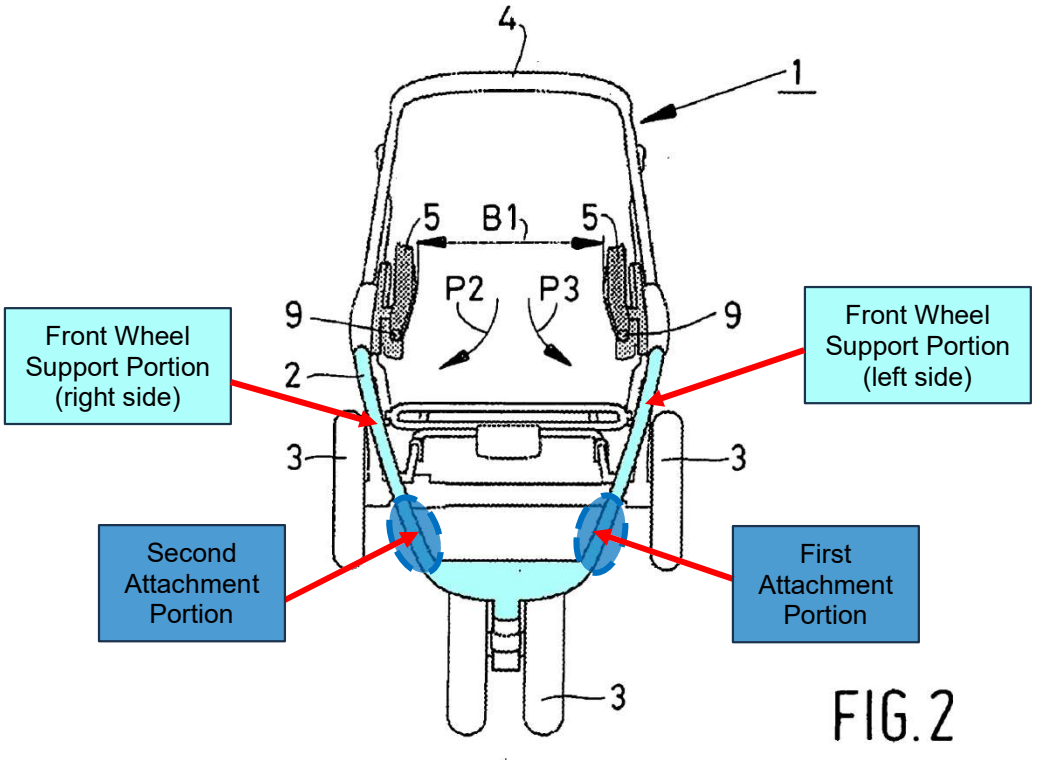
378. In the '231 Patent, the portions of the stroller frame where a seat attachment is attached is called "attachment portions."

> 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 FIG. 3, to be connected to the stroller.**

(EX1012,'231 Patent, 4:49-60.)

379. The portion of the front wheel support portion (blue) of Van Dijk's frame 2 correspond to the claimed first attachment portion and second attachment

portion recited in the claim. The first attachment portion and second attachment portion are identified below. In the stroller of Van Dijk/Schaaf, the first (left) attachment portion supports the first connector portion of the adapter 5, and the second (right) attachment portion supports the second connector portion of the adapter 5.



EX1050, Van Dijk, Fig. 2

380. Therefore, it is my opinion that Van Dijk and Schaaf render obvious the additional limitations of claim 6 and that this claim is obvious.

… ***[7] The stroller system of claim 6, wherein the front seat attachment includes at least one attachment frame member.***

381. The ’231 Patent describes that the seat attachment 20 in Fig. 3 includes

attachment frame members 24. The attachment frame member connects to the stroller frame and the seat support element.

> 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 FIG. 2, the seat attachment 20 can include a wheel support frame 26 that is pivotally connected to two attachment frame members 24.**

(EX1012, '231 Patent, 5:25-33.)

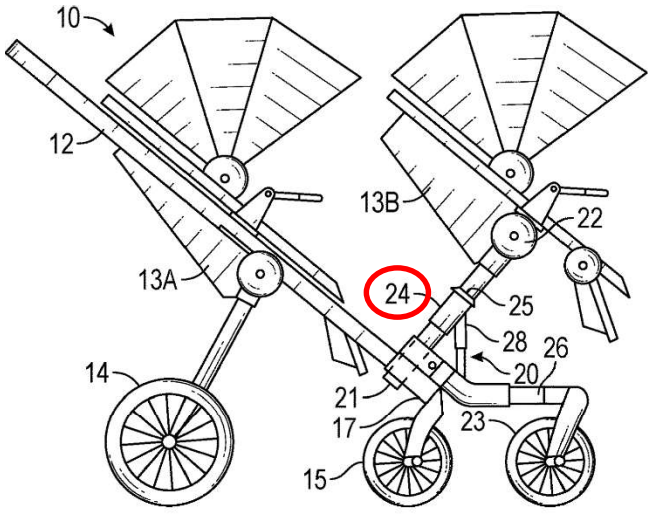
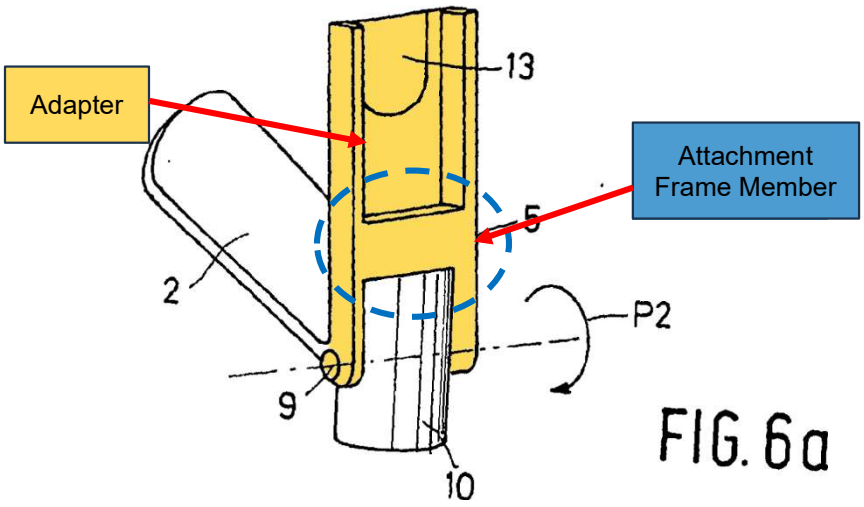


FIG. 3

EX1003, Zehfuss, Fig. 3

382. The portion of the adapter 5 (front seat attachment) (gold) that connects to the stroller frame and the seat support element is the attachment frame member of the adapter 5. The attachment frame member of the adapter 5 in Van Dijk is

identified below



EX1050, Van Dijk, Fig. 6A

383. Therefore, it is my opinion that Van Dijk discloses the additional limitations of claim 7 and that this claim is obvious.

> … ***[8] The stroller system of claim 4, wherein the front wheel support portion includes a pair of parallel support members.***

384. Schaaf discloses that its front wheel support portion includes lower side segments 20 and 30 (blue). The side segments 20 and 30 are opposite portions of the side sections 14 and 16, which Schaaf describes as "generally parallel." A POSITA would understand Fig. 1 of Schaaf to show that the lower side segments 20 and 30 (blue) are parallel. The side segments 20 and 30 (blue) correspond to the "pair of parallel support members" in the claim.

> As best shown in FIG. 1, frame 12 comprises a pair of elongate, **generally parallel side sections 14 and 16. Side section 14 includes a tubular upper segment 18 and a tubular lower segment 20** that is

pivotably or foldably connected to segment 18 by a generally U-shaped bracket 22. Bracket 22 is wrapped about and fixedly connected to segment 18 by a pin 24. FIGS. 2 and 3. Segment 20 extends through and is pivotably connected to bracket 22 by a second pin 26. The opposite side section 16 includes a similar pair of upper and lower segments 28 and 30, respectively.

(EX1040, Schaaf, 4:49-58.)

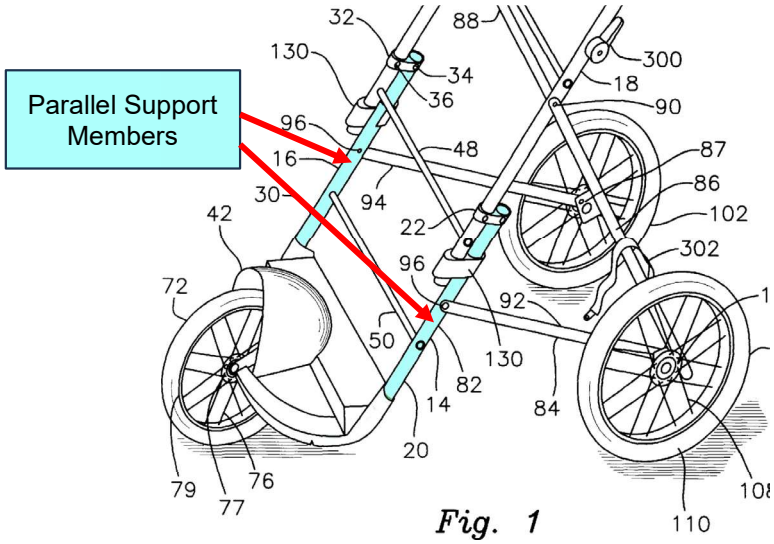


Fig. 1

EX1040, Schaaf, Fig. 1

385. A POSITA would have been motivated to modify Van Dijk's front wheel support portion to incorporate Schaaf's pair of parallel support members. A POSITA would understand that it would involve simply substituting the curved portions of Van Dijk's front wheel support portion with the parallel members to achieve a predicable result (a stroller frame) without changing the functionality of the frame. Additionally, a POSITA would also understand that it would likely be easier and less expensive to develop and manufacture a frame with the straight,

parallel support members than it would to develop and manufacture the curved portions of Van Dijk's front wheel support portion.

386. A POSITA would have reasonably expected success when combining Van Dijk and Schaaf. The strollers disclosed in Van Dijk and Schaaf use conventional design components that were well-known in the industry. Combining the teachings of Van Dijk and Schaaf would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

387. Therefore, it is my opinion that Schaaf discloses the additional limitations of claim 8 and that this claim is obvious.

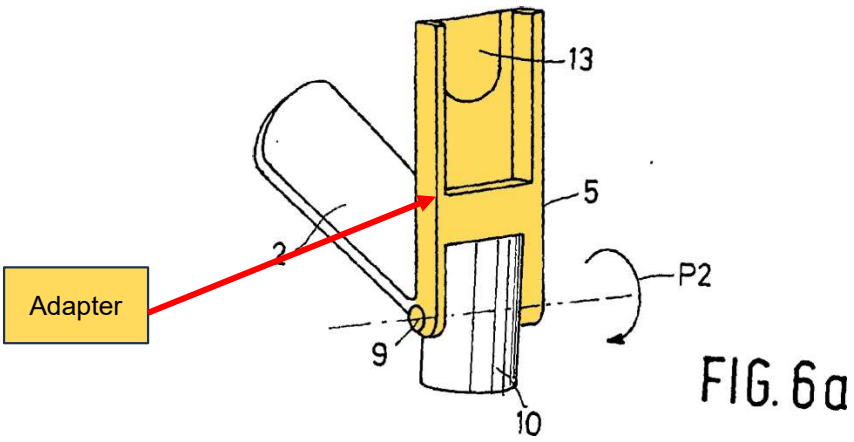
> … ***[9] The stroller system of claim 8, wherein the parallel support members include a pair of attachment portions configured to support the first connector portion and the second connector portion.***

388. As discussed above, Van Dijk's front wheel support portion includes a pair of attachment portions. When modifying Van Dijk's front wheel support portion to incorporate the pair of parallel support members, the modified front wheel support portion would still include the attachment portions (*i.e.*, the portion of the front wheel support portion where the connector portions of the front seat support are supported).

389. Therefore, it is my opinion that Van Dijk and Schaaf render obvious the additional limitations of claim 9 and that this claim is obvious.

> … ***[10] The stroller system of claim 9, wherein the attachment portions include left and right slots in the parallel support members configured to receive the first connector portion and the second connector portion.***

390. In Van Dijk, the adapters 5 include pins that define the pivot axes about which the adapters 5 pivot. The pins insert into slots in the frame 2. Therefore, in the modified stroller of Van Dijk/Schaaf, the attachment portions discussed above would include left and right slots (a left slot in the attachment portion on the left side of the front wheel support portion, and a right slot in the attachment portion on the right side of the front wheel support portion).



EX1050, Van Dijk, Fig. 6a

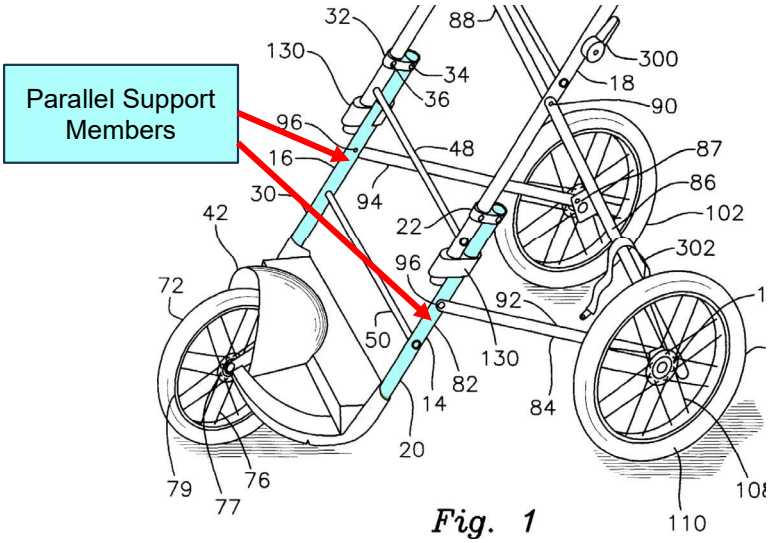
391. Therefore, it is my opinion that Van Dijk and Schaaf render obvious the additional limitations of claim 10 and that this claim is obvious.

… ***[11] The stroller system of claim 8, wherein the parallel support members include a pair of tubular structures, each of the tubular structures having a rounded cross-section.***

392. Schaaf discloses that the lower side segments 20 and 30 (parallel support members) (blue) include a pair of tubular structures and that each of the tubular structures have a rounded cross-section. The tubular structures and rounded cross-section are also visible in Fig. 1 below.

> Side section 14 includes a tubular upper segment 18 and **a tubular lower segment 20** that is pivotably or foldably connected to segment 18 by a generally U-shaped bracket 22. Bracket 22 is wrapped about and fixedly connected to segment 18 by a pin 24. FIGS. 2 and 3. Segment 20 extends through and is pivotably connected to bracket 22 by a second pin 26. **The opposite side section 16 includes a similar pair of upper and lower segments 28 and 30, respectively.** (See FIGS. 1 and 3) These segments are pivotably interconnected by a second U-shaped bracket 32 that is wrapped about upper segment 28 and fixed thereto by a pin 34. Lower segment 30 extends through bracket 32 and is hingedly connected thereto by a pivot pin 36.

(EX1040, Schaaf, 4:51-63.)



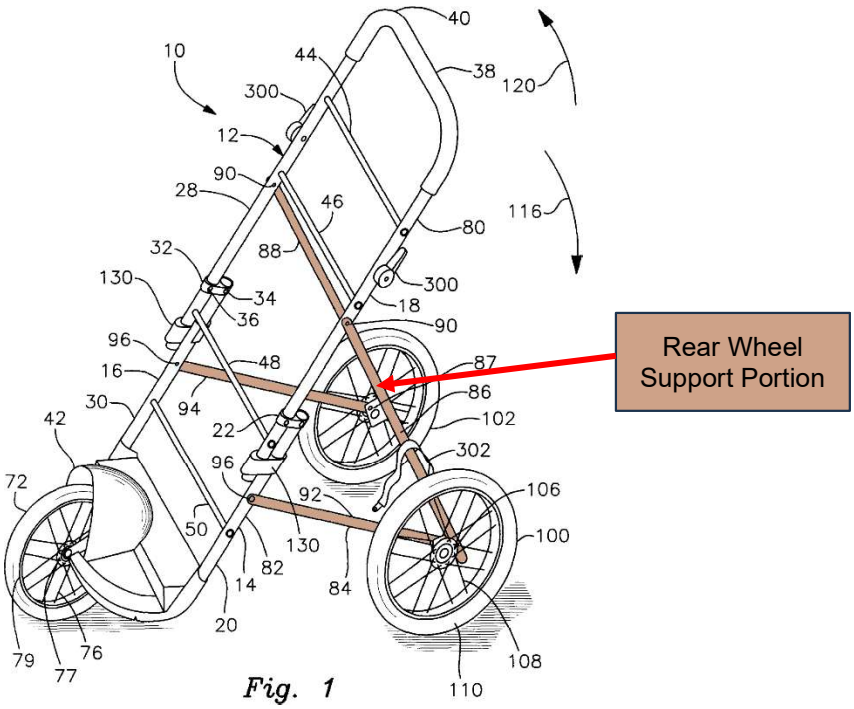
EX1040, Schaaf, Fig. 1

393. As discussed above, it would have been obvious to incorporate Schaaf's parallel support members into Liao's frame design.

394. Therefore, it is my opinion that Schaaf discloses the additional limitations of claim 11 and that this claim is obvious.

> … ***[12] The stroller system of claim 8, wherein the rear wheel support portion includes a pair of parallel support members connected by the folding mechanism to the parallel support members of the front wheel support portion.***

395. Schaaf discloses a frame 12 having a subframe assembly 84 (rear wheel support portion) (brown). (EX1040, Schaaf, 6:20-22.) Schaaf also discloses that the side sections 14 and 16 of the frame are "generally parallel." (Schaaf, 4:49-50.) In light of the description that the side sections 14 and 16 are generally parallel, a POSITA would understand that the sides of the subframe assembly 84 illustrated in Fig. 1 are also generally parallel.



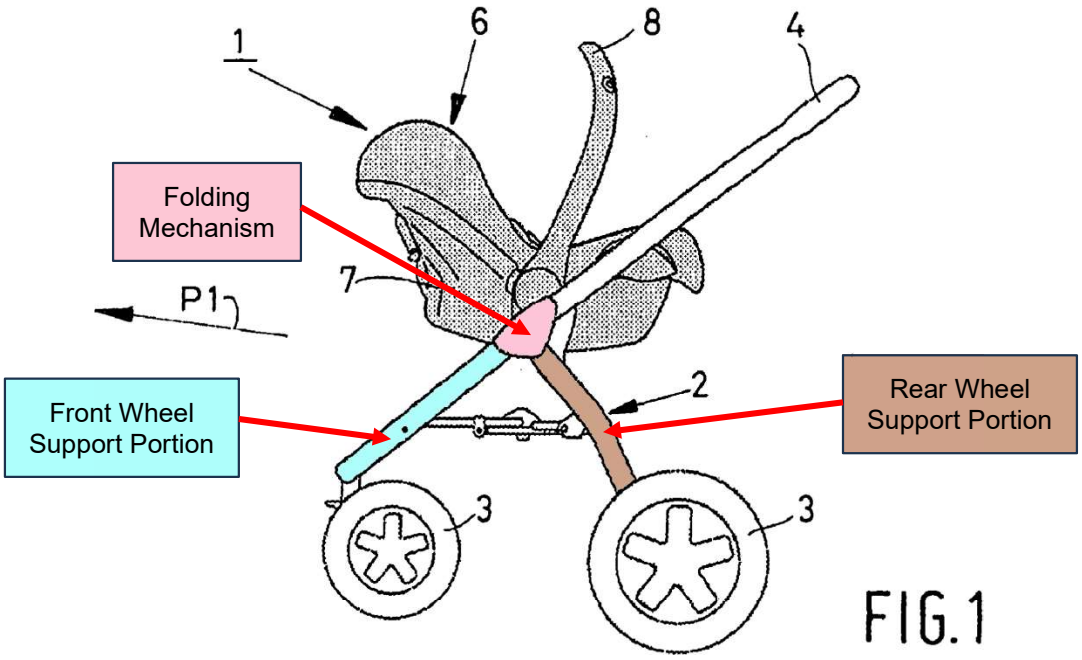
EX1040, Schaaf, Fig. 1

396. A POSITA would have been motivated to make Van Dijk's rear wheel support portion parallel, as suggested in Schaaf, because it would have been a simple substitution of one type of known rear wheel support portion with another known rear wheel support portion to achieve a predictable result. Additionally, a POSITA would have known that it would have been less expensive and easier to develop and manufacture straight, parallel rear wheel support portions rather than components that are curved or bent.

397. A POSITA would have reasonably expected success when combining Van Dijk and Schaaf. The strollers disclosed in Van Dijk and Schaaf use conventional design components that were well-known in the industry. Combining the teachings of Van Dijk and Schaaf would have been a straightforward integration

of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

398. Van Dijk already discloses that the folding mechanism (pink) connects the rear wheel support portion (brown) to the front wheel support portion (blue). Therefore, when the frame of Van Dijk is further modified so that the rear wheel support portion (brown) includes parallel support members, the rear wheel support portion includes a pair of parallel support members connected by the folding mechanism to the parallel support members of the front wheel support portion.

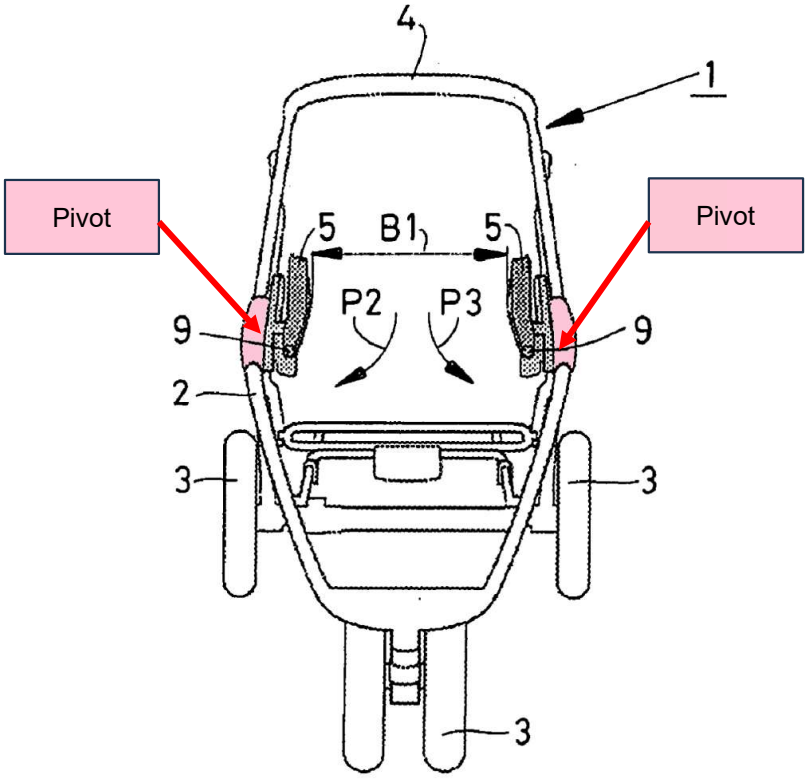


EX1050, Van Dijk, Fig. 1

399. Therefore, it is my opinion that Van Dijk and Schaaf render obvious the additional limitations of claim 12 and that this claim is obvious.

… ***[13] The stroller system of claim 12, wherein the folding mechanism includes a pair of pivots spaced apart and configured to connect corresponding ones of the parallel support members of the rear and front wheel support portions.***

400. The folding mechanism (pink) of the stroller of Van Dijk/Schaaf includes pivots. The handle portion and/or front wheel support portion of the frame fold (*i.e.*, fold) about the two pivots of the folding mechanism. The locations of the pivots are shown below, and they are spaced apart (with one on the left side of the frame and one on the right side of the frame).



EX1050, Van Dijk, Fig. 2

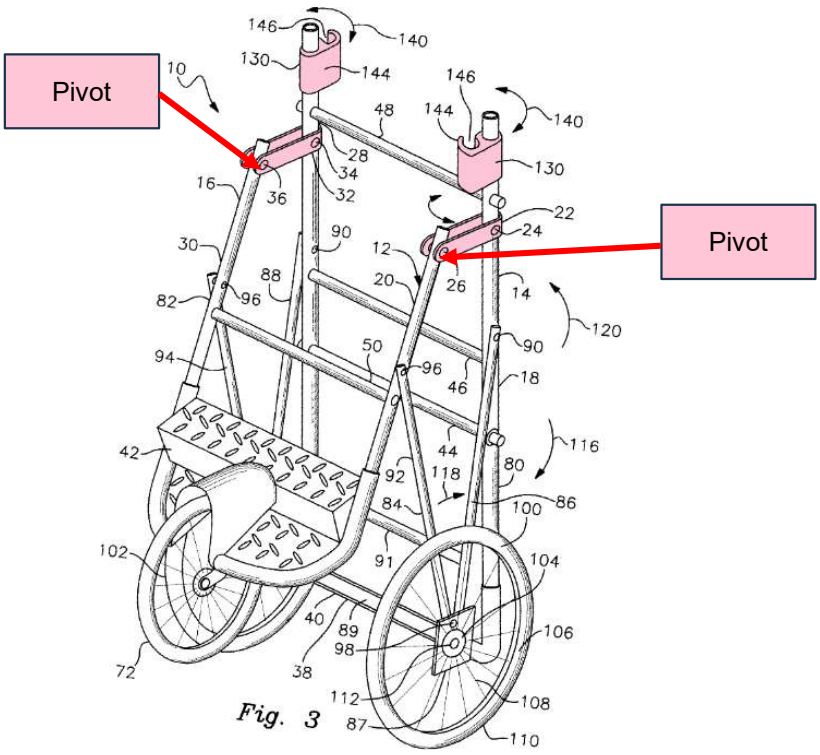
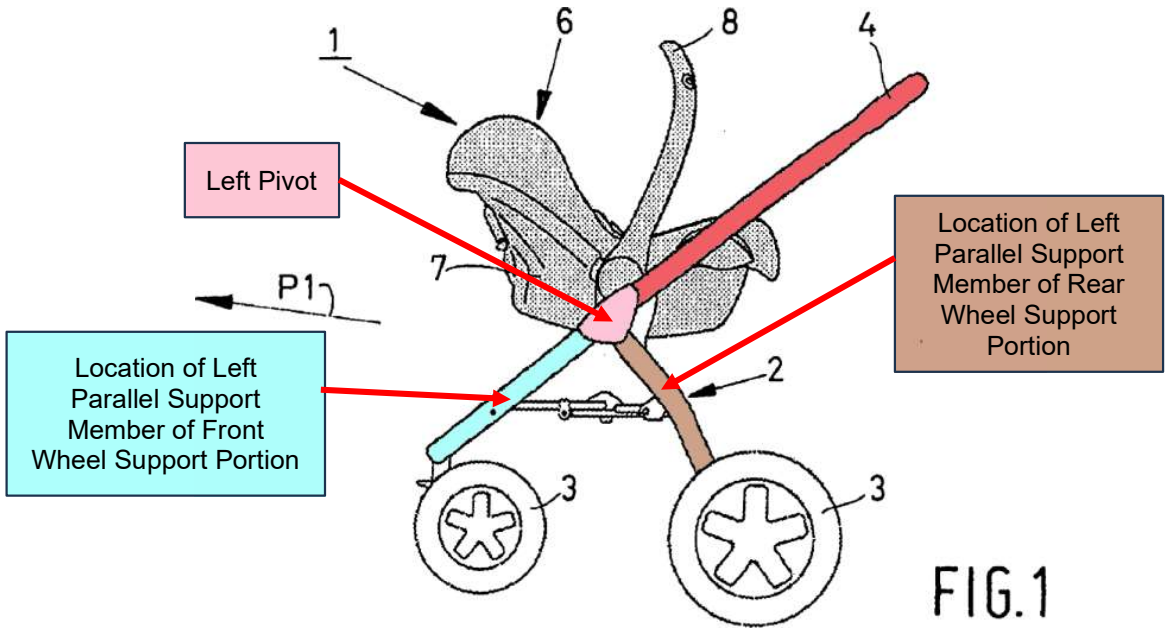


Fig. 3

EX1040, Schaaf, Fig. 3

401. The pivots in Van Dijk/Schaaf connect corresponding ones of the parallel support members of the rear wheel support portion (brown) and front wheel support portion (blue) of the modified stroller of Van Dijk/Schaaf.



EX1050, Van Dijk, Fig. 1

402. Therefore, it is my opinion that Van Dijk and Schaaf renders obvious the additional limitations of claim 13 and that this claim is obvious.

> … ***[14] The stroller system of claim 13, wherein the handle portion includes a pair of parallel support members and a crossbar, wherein the parallel support members of the handle portion connect to the parallel support members of the front wheel support portion via the folding mechanism, and wherein the parallel support members of the handle portion and of the front wheel support portion extend diagonally downwards from the crossbar of the handle portion.***

403. Van Dijk's handle portion includes a pair of parallel support members (dark red) and a crossbar (light red), shown below.

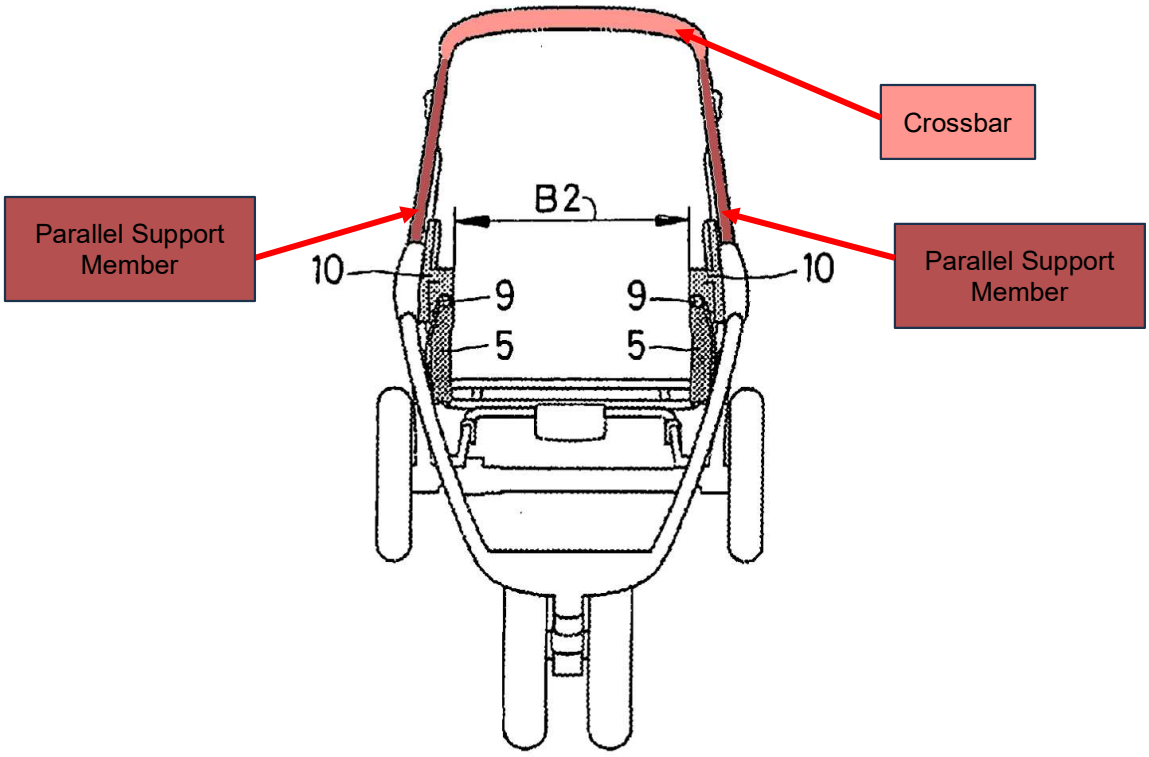
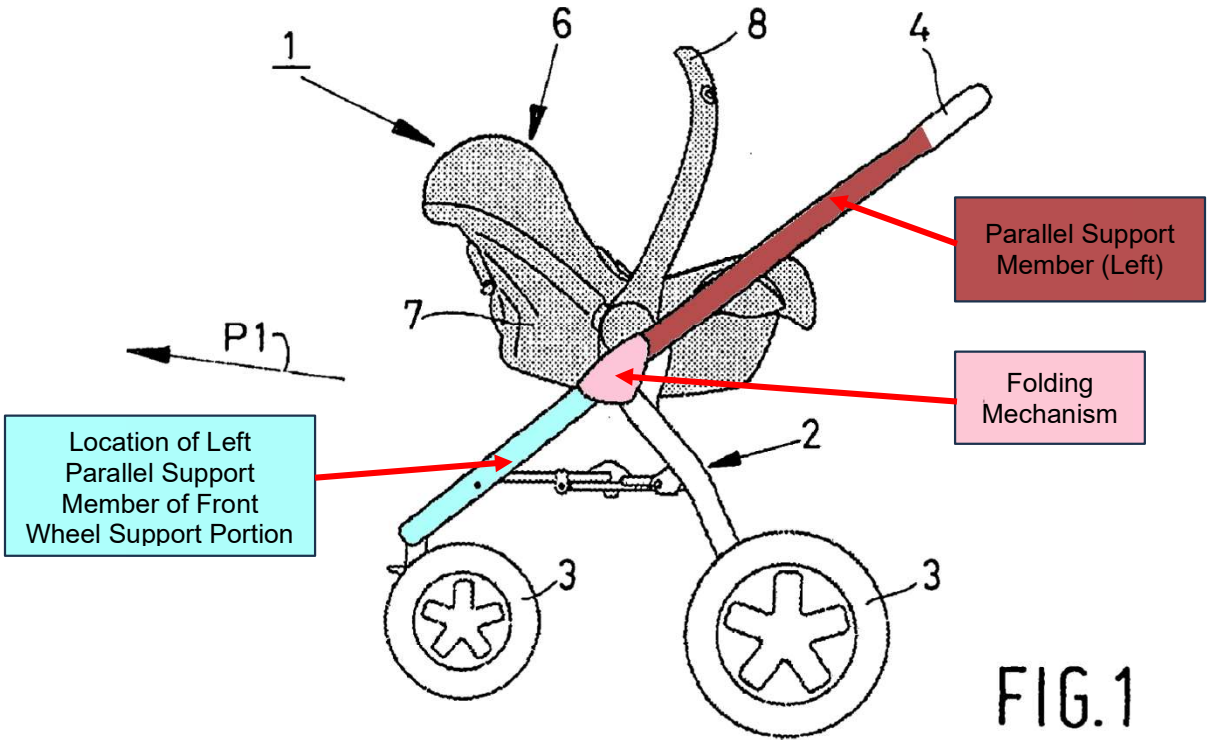


FIG. 5

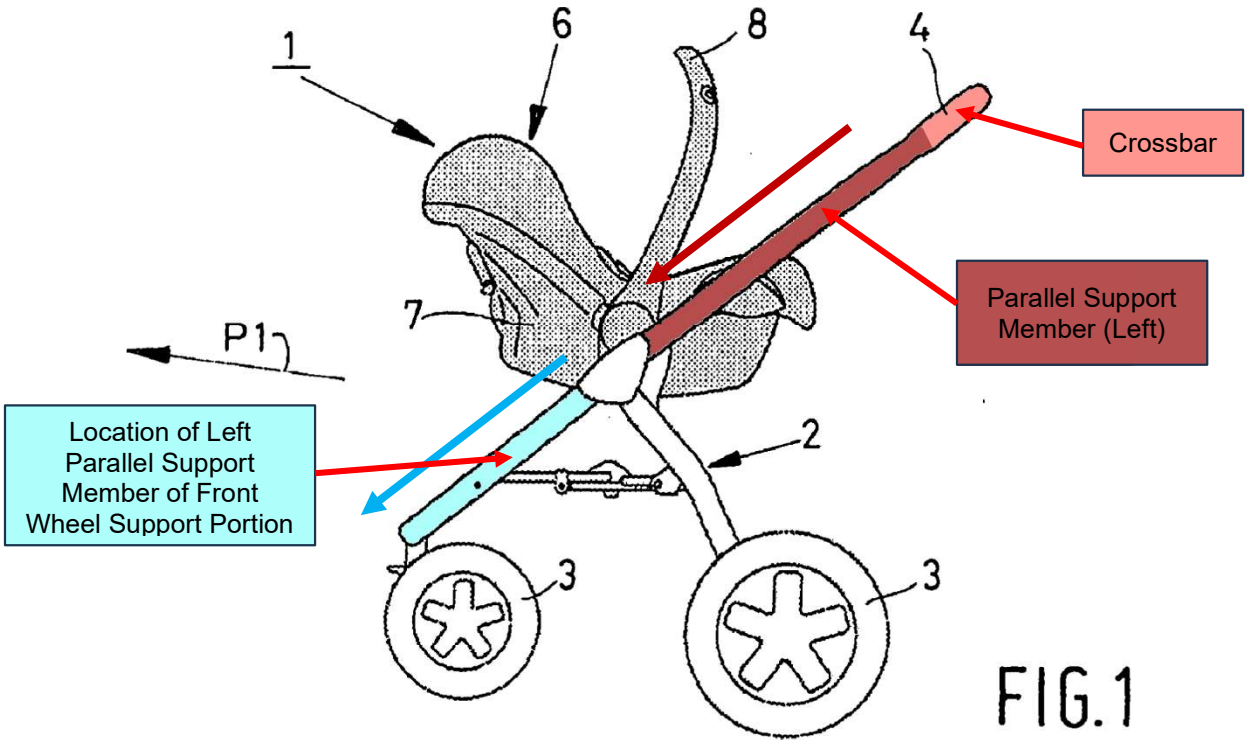
EX1050, Van Dijk, Fig. 5

404. The parallel support members (dark red) of Van Dijk's handle portion connect to the parallel support members of the front wheel support portion of the front wheel support portion of Van Dijk/Schaaf via the folding mechanism (pink), as shown below. The figure below shows the left side of the stroller of Van Dijk. A POSITA would understand from Fig. 5 of Van Dijk that the stroller is generally symmetrical and that corresponding components are located on the right side of the stroller.



EX1050, Van Dijk, Fig. 1

405. As shown below, the parallel support members (dark red) of the handle portion and the parallel support members of the front wheel support portion extend diagonally downwards from the crossbar of the handle portion. This is true even when Van Dijk's frame is modified in view of Schaaf so that the front wheel support portion (blue) and handle portion (red) are substantially parallel. (See discussion for claim 14 of Ground 1).



EX1050, Van Dijk, Fig. 1

406. Therefore, it is my opinion that Van Dijk and Schaaf render obvious the additional limitations of claim 14 and that this claim is obvious.

> … ***[15] The stroller system of claim 1, wherein the stroller seat support portion is configured to releasably support the rear stroller seat.***

407. Van Dijk discloses that stroller seats can be detachably connected to the connecting pieces 10 (stroller seat support portion). Therefore, the stroller seat support portion of Van Dijk/Schaaf is configured to releasably support the rear stroller seat.

> The present disclosure relates to a stroller provided with at least one adapter, by which a first child seat can be detachably connected to the stroller. **The stroller is furthermore provided with at least one**

> **connecting piece, by which a second child seat can be detachably connected to the stroller.** The adapter is movable from at least a first position, in which the first child seat can be detachably connected to the adapter, to at least a second position connected to the stroller, in which the second child seat can be detachably connected to the connecting piece, and vice versa.

(EX1050, Van Dijk, [0002].)

408. Therefore, it is my opinion that Van Dijk discloses the additional limitation of claim 15 and that this claim is obvious.

> … ***[16] The stroller system of claim 1, wherein the stroller seat support portion is configured to support the rear stroller seat in either a forward-facing configuration or a backward-facing configuration.***

409. Van Dijk discloses that the connecting pieces 10 (stroller seat support portion) can support the seat in forward-facing and backward-facing configurations.

> In the embodiment shown in FIG. 1 and FIG. 3, a child that is present in the child seat faces a person who pushes the stroller 1. It is within the scope of the present disclosure to mount the child seat in a reverse position, in which the child faces in the direction of motion P1.

(EX1050, Van Dijk, [0052].)

410. Fig. 3 of Van Dijk also illustrates seats being supported by connecting pieces 10 in forward-facing and rear-facing configurations

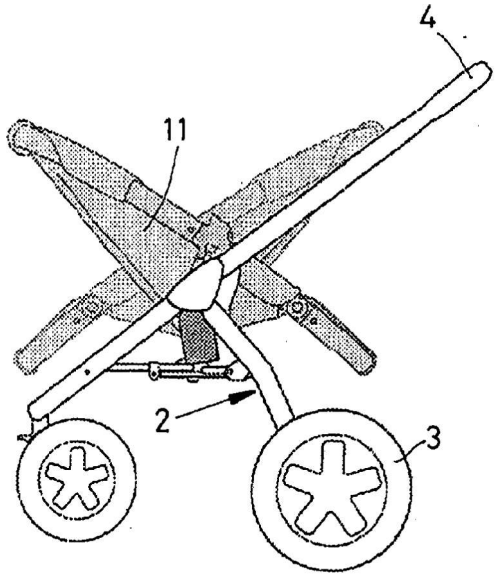


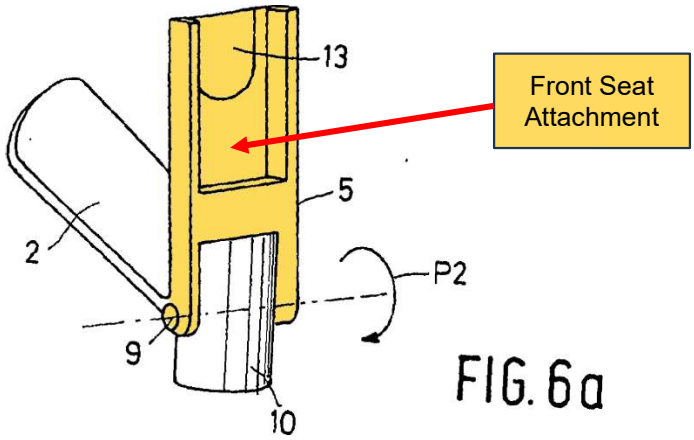
FIG. 3

EX1050, Van Dijk, Fig. 3

411. Therefore, it is my opinion that Van Dijk and Schaaf render obvious the additional limitations of claim 16 and that this claim is obvious.

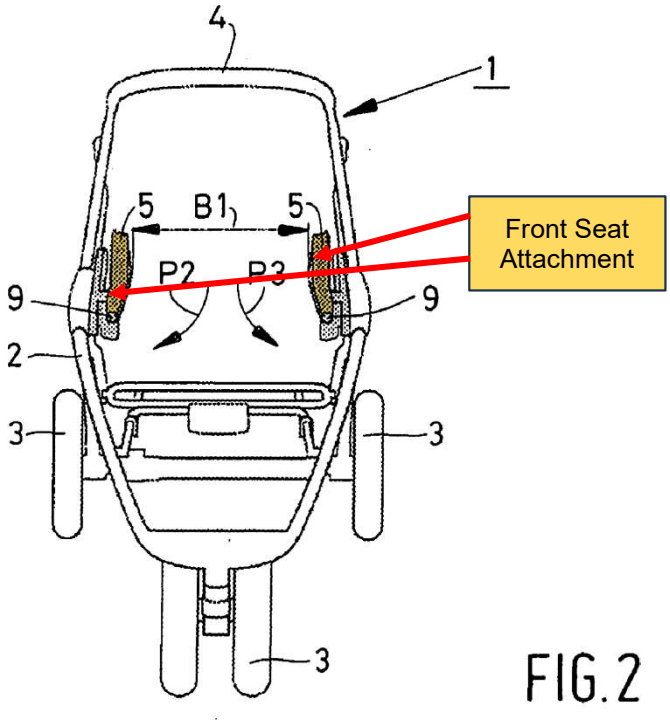
> … ***[17] The stroller system of claim 1, wherein the front seat attachment is further configured to connect to one or more sides of the front stroller seat.***

412. The slots 13 of the adapters 5 (front seat attachment) (gold) in Van Dijk are conventional stroller seat connectors that were well-known in the art. (EX1050, Van Dijk, [0037] ("The child seat 6 is provided with means for connection to the adapters 5. Such means are likewise known and will not be explained in more detail herein.") A POSITA would know that they connect to the left and right exterior sides of stroller seats.



EX1050, Van Dijk, Fig. 6A

413. Fig. 2 of Van Dijk shows the adapters 5 are located on the interior side of the left and right sides of the frame 2. This positioning confirms that the adapters 5 connect to the left and right sides of a stroller seat.

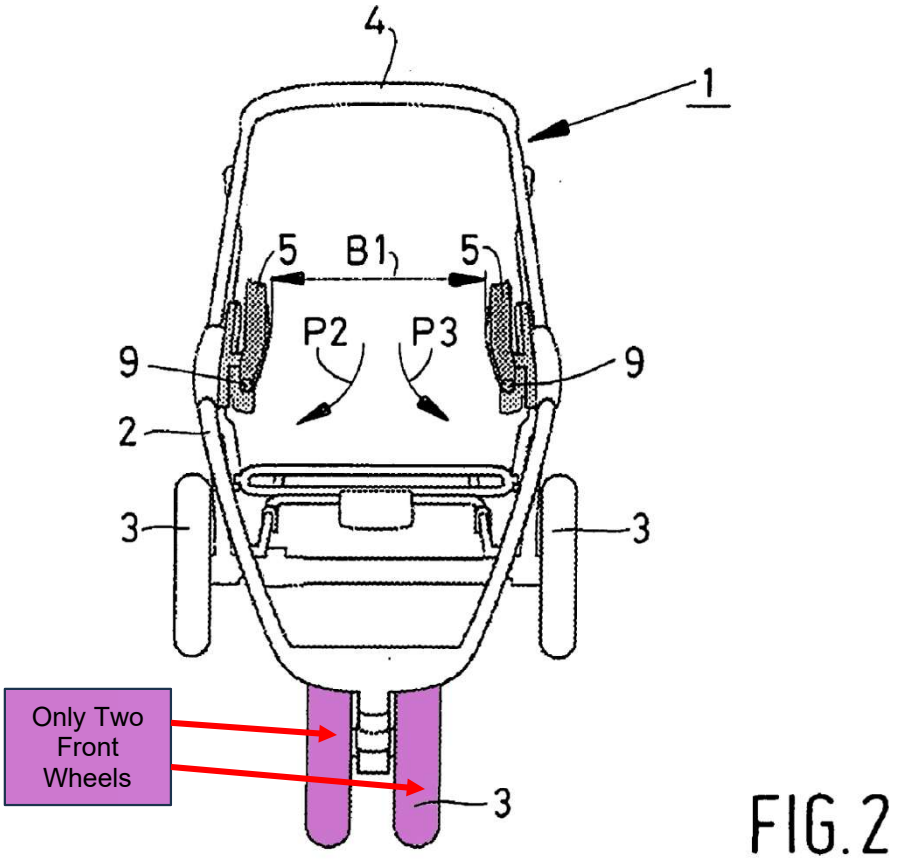


EX1050, Van Dijk, Fig. 2

414. Therefore, it is my opinion that Van Dijk discloses the additional limitations of claim 17 and that this claim is obvious.

… ***[19] The stroller system of claim 1, wherein the pair of front wheels includes only two front wheels.***

415. Van Dijk's frame 2 includes only two front wheels (purple), shown below.



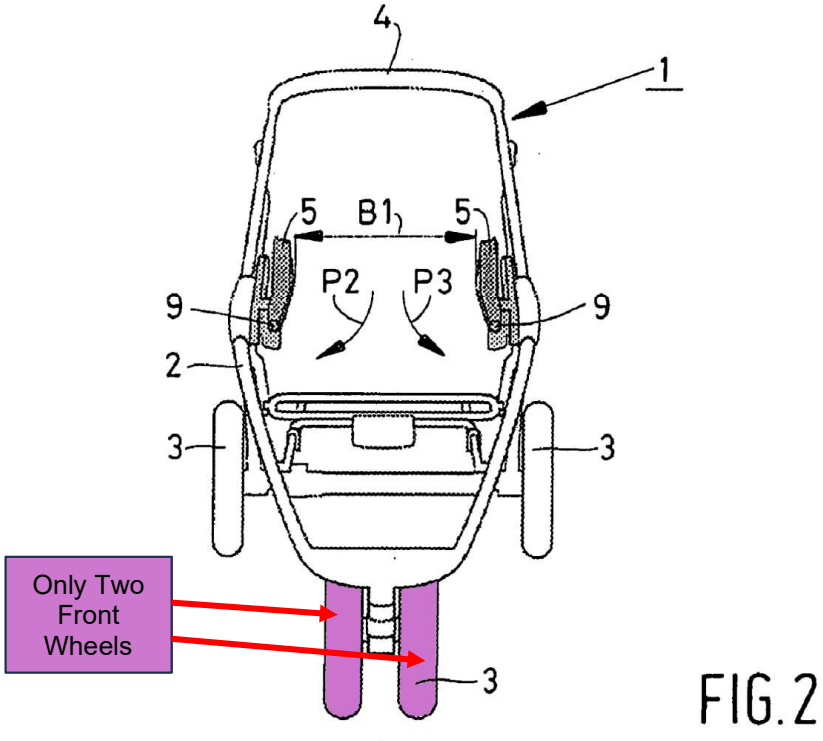
EX1050, Van Dijk, Fig. 2

416. Therefore, it is my opinion that Van Dijk discloses the additional limitation of claim 19 and that this claim is obvious.

… ***[20] The stroller system of claim 19, wherein the only two front wheels are laterally spaced apart from each other on a left side and a right side of the front wheel support portion.***

417. The front wheels 3 of Van Dijk are not laterally spaced apart from each

other on a left side and a right side of the front wheel support portion. They are located towards the middle of the front wheel support portion.



EX1050, Van Dijk, Fig. 2

418. However, having wheels located on the outermost sides of the frame was well known. (*See, e.g.*, EX1048, Dotsey, Fig. 1; EX1051, Liao, Fig. 1.) A POSITA would have been motivated to make Van Dijk's two front wheels laterally spaced apart on the left side and right side of the front wheel support portion because it would increase stability of the frame. Moving the two front wheels outward would reduce the risk of the stroller tipping over on one of its sides.

419. A POSITA would have reasonably expected success when combining making this modification. The stroller disclosed in Van Dijk uses conventional

design components that were well-known in the industry, and strollers with front wheels on the outside of the frame were extremely common. This modification would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

420. Therefore, it is my opinion that Van Dijk and the knowledge of a POSITA render obvious the additional limitations of claim 20 and that Van Dijk and Schaaf render obvious this claim.

> … ***[21] The stroller system of claim 1, wherein the folded configuration includes at [l]least partially overlapping the front wheel support portion and the handle portion.***

421. As discussed above, the ’231 Patent does not provide any explicit description of a folded configuration including at least partially overlapping the front wheel support portion and the handle portion. The ’231 Patent merely describes that the stroller 80 can be folded into a more compact size for storing or transportation.

> **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.** FIG. 8B shows the stroller 10 in a folded configuration.

(EX1012,’231 Patent, 9:34-38.)

422. Fig. 8B below shows the stroller 80 in a folded configuration.

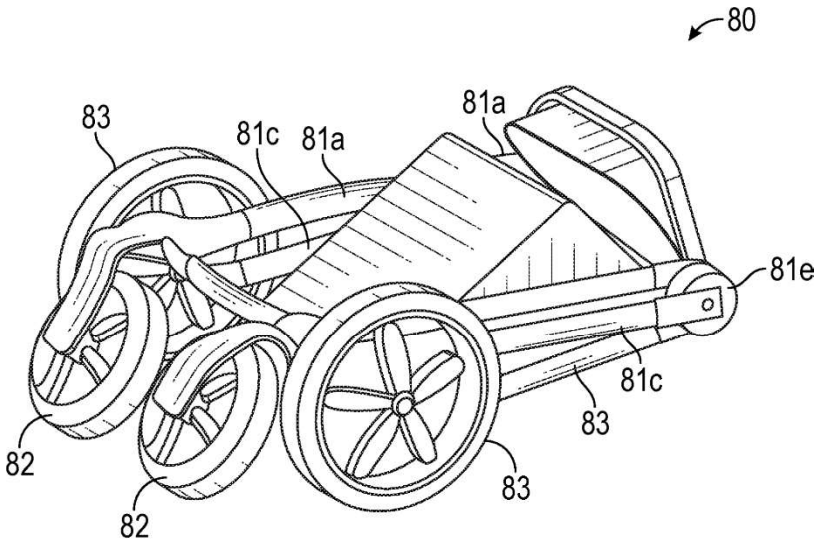
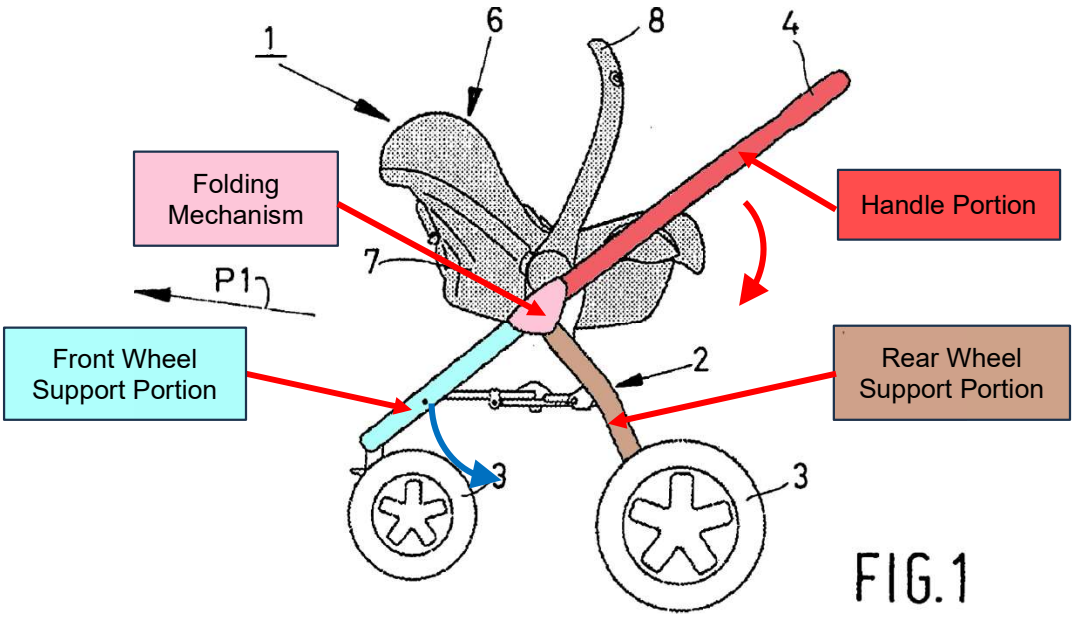


FIG. 8B

EX1012, '231 Patent, Fig. 8B

423. As discussed above, the stroller of Van Dijk/Schaaf folds about a pivot axis of the folding mechanism (pink) such that the handle portion (red) and/or front wheel support portion (blue) rotate towards the rear wheels. (EX1050, Van Dijk, [0037]; EX1040, Schaaf, 4:43-63.)



EX1050, Van Dijk, Fig. 1

424. Therefore, it is my opinion that, to the extent that the '231 Patent discloses the additional limitation of claim 21, the stroller of Van Dijk/Schaaf also discloses or renders it obvious and that this claim is obvious.

> … ***[22] The stroller system of claim 1 wherein the front seat attachment is configured to releasable attach to the front wheel support portion.***

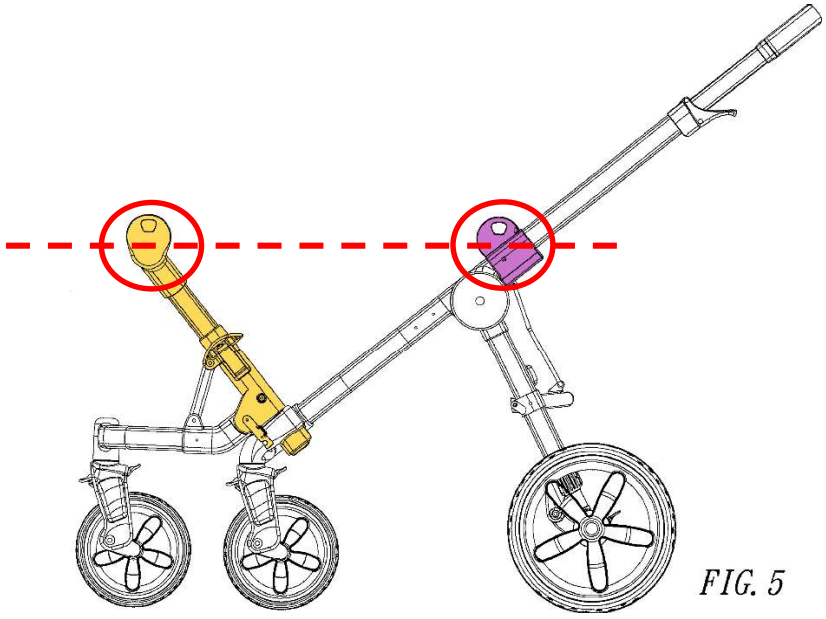
425. As I discussed above for claim 4, it would have been obvious to modify Van Dijk's adapters 5 (front seat attachment) to be able to releasably attached to the front wheel support portion. For the same reasons, it is my opinion that Van Dijk renders obvious this limitation of claim 22.

426. Therefore, it is my opinion that Van Dijk renders obvious the additional limitation of claim 22 and that this claim is obvious.

C. Ground 3 – Claims 1-17 and 19-22 are obvious over Liao and Schaaf

1. Overview of the Combination of Liao and Schaaf

427. Liao discloses a stroller designed to support two stroller seats in an in-line configuration. The front seat is supported by seat support posts (gold) of a front seat attachment, and the rear seat is supported by a stroller seat support portion (purple). In Liao's stroller design, the points where the seats attach to the front seat attachment (gold) and the stroller seat support portion (purple) are approximately level, as shown in Fig. 5 below.



EX1051, Liao, Fig. 5

428. By having the attachment points approximately level, the front and rear seats in Liao's stroller system are positioned at approximately the same height when seats of the same type are attached. This is shown below in Fig. 11.

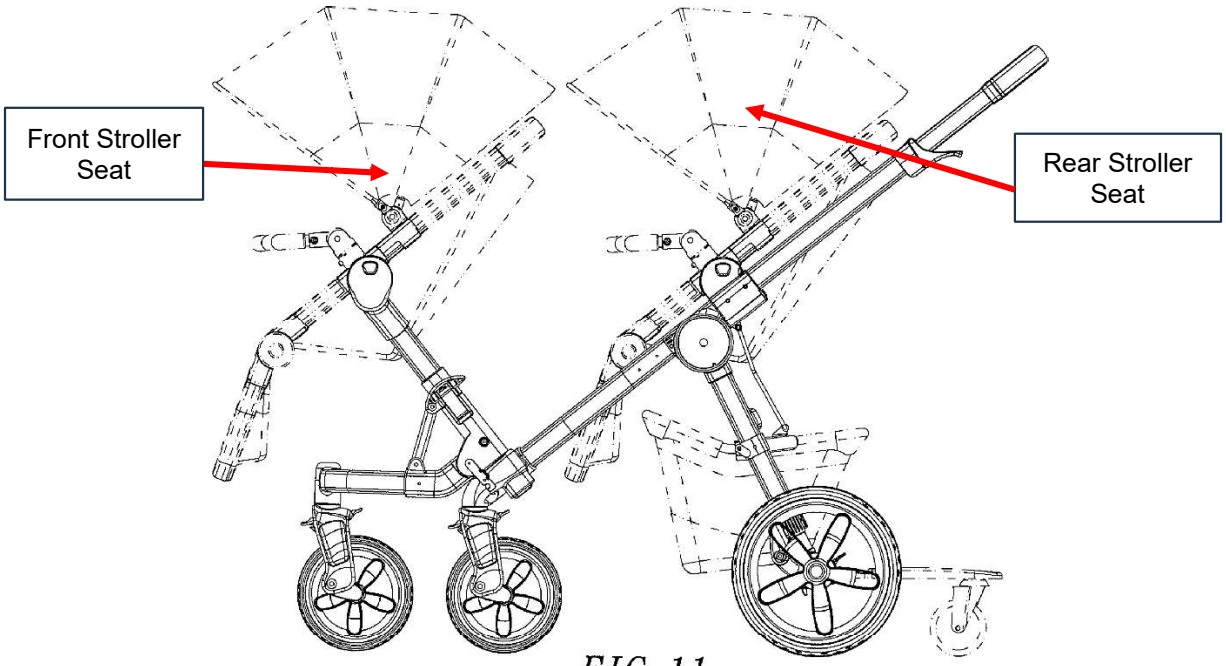


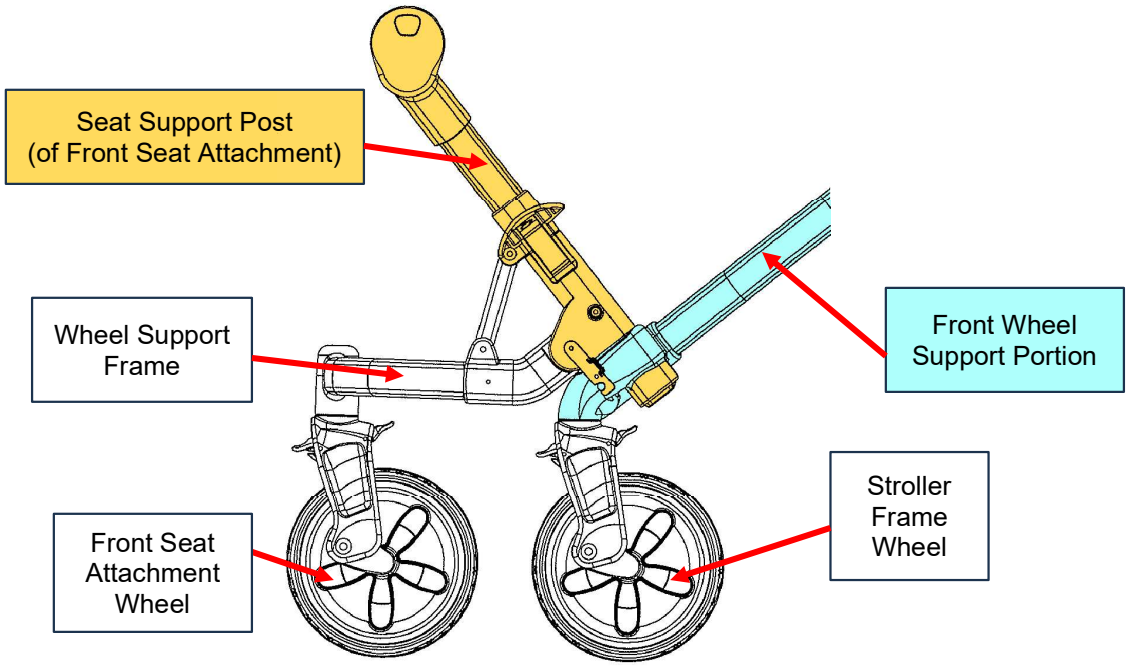
FIG. 11

EX1051, Liao, Fig. 11

429. Although Liao's design provides the ability to convert a single-stroller into a double-stroller and transport two children, a POSITA would have understood that there were disadvantages with Liao's design. First, Liao's seating arrangement results in the child in the rear seat having his or her view obstructed by the front seat.

430. Second, Liao's seating arrangement makes it necessary for the front seat attachment to include the wheel and a wheel support frame (labeled below). In order for the tops of the seat support posts (gold) to be at the same height as the seat support portion, the seat support posts (gold) must extend significantly in front of the stroller frame's front wheels. This shifts the center of gravity of the stroller system forward and risks the stroller tipping over (especially when a child is in the front stroller seat). Liao's front seat attachment wheel and wheel support frame

counteract this problem and reduce the risk of tipping over.



EX1051, Liao, Fig. 5

431. A POSITA would have understood that Liao's front seat attachment design was disadvantageous. The additional wheel and wheel support frame add cost, complexity, space, and weight to the stroller system. Additionally, Liao's front seat attachment must be removed from the stroller frame before the stroller frame can be collapsed for transportation or storage.

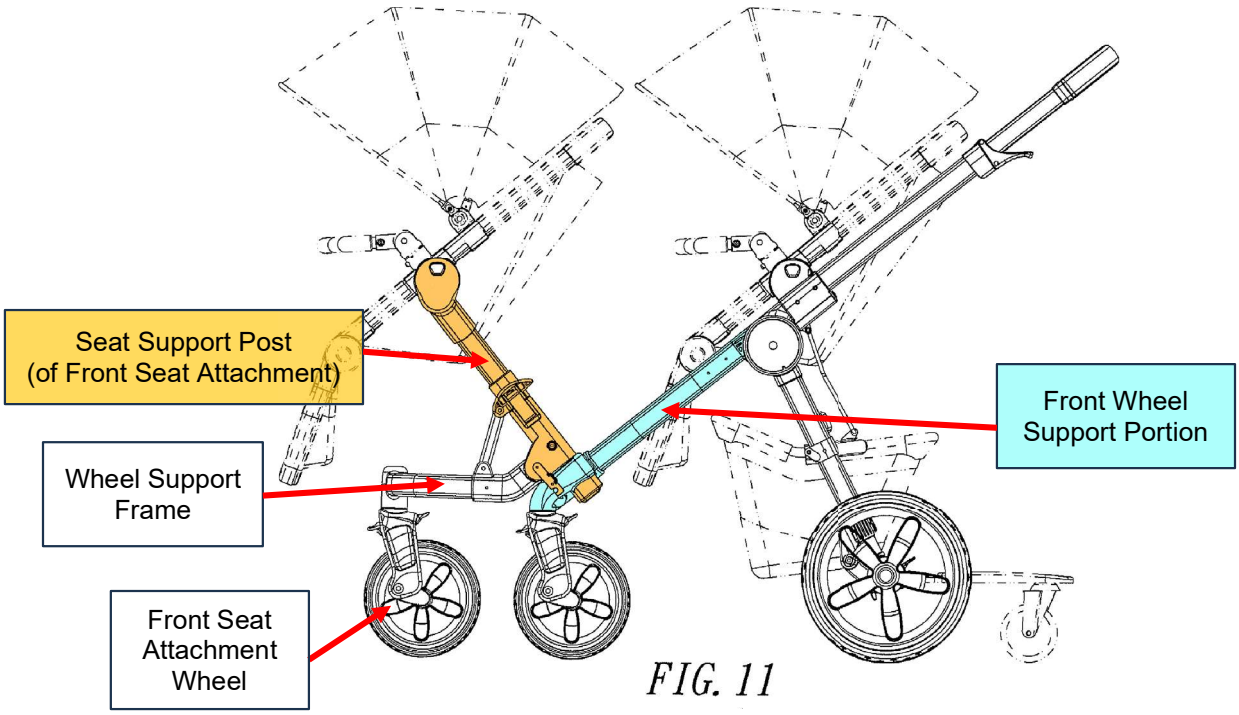


FIG. 11

EX1051, Liao, Fig. 11

432. Like Liao, Schaaf discloses a stroller that supports two stroller seats in an inline configuration. However, as shown in Fig. 10 of Schaaf, the rear seat S and front seat S2 are arranged in an inline descending configuration (*i.e.*, the rear seat is higher than the front seat). Also, instead of the front seat being supported significantly in front of the frame's front wheel, the front seat is supported close to the front wheel support portion (blue) of the frame.

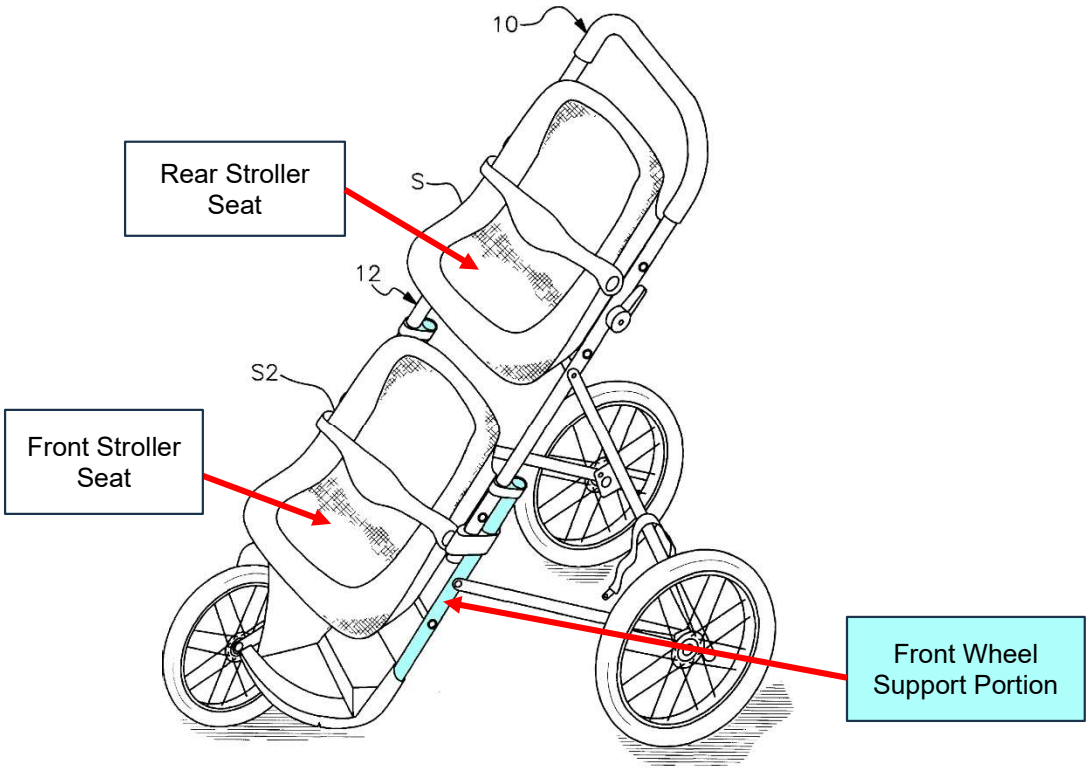


Fig. 10

EX1040, Schaaf, Fig. 10

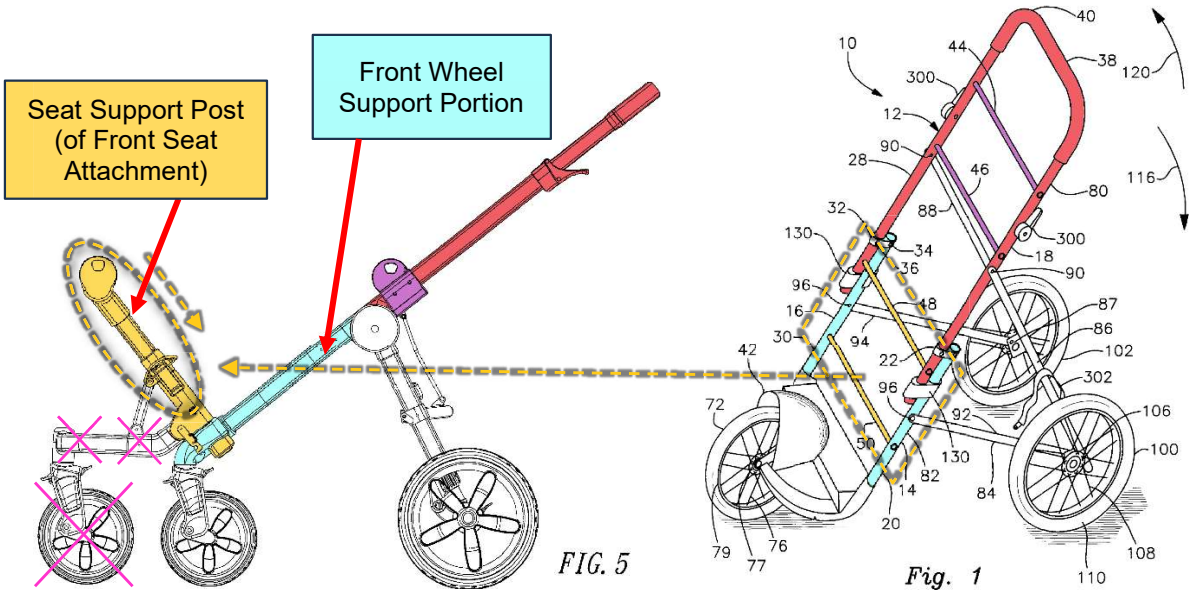
433. A POSITA would have understood that Schaaf's frame components are within the stroller's wheelbase, that the rear seat is within the wheelbase, and that the front seat does not extend significantly in front of the front wheel. A POSITA would understand that this arrangement results in the center of gravity being between the front wheels and rear wheels and reduces the risk of the stroller tipping over. A POSITA would also understand that an additional wheel in front of the Schaaf's existing front wheel (like the one in Liao) is not necessary because the center of gravity is between the front and rear wheels.

434. A POSITA would have been motivated to modify the stroller system of

Liao such that the stroller seats were in an inline descending configuration (*i.e.*, the rear seat higher than the front seat) and the front seat was supported close to the front wheel support portion, as taught in Schaaf. As I discussed above, a POSITA would have understood from Schaaf that making these modifications to Liao's stroller would allow the additional wheel and wheel support frame to be omitted from the front seat attachment. Omitting these components from the front seat attachment would reduce the cost, complexity, space, and weight of the stroller system. Additionally, Liao's stroller frame could be folded without having to first remove the (modified) front seat attachment. Additionally, a POSITA would have known it would have been beneficial for Liao's stroller seats to be in an inline descending configuration, because the child sitting in the rear seat would not have his or her view obstructed by the front seat. (EX1040, Schaaf, 10:29-36 ("The unique "double decker" construction of the stroller is ideal for twins. … Alternative seating heights are provided for the children so that they are able to observe from different levels and are allowed to experience a variety of interesting strolling positions."))

435. The modification of Liao in view of Schaaf would have been simple and straight-forward to a POSITA. It would have involved (1) removing the wheel and wheel support frame of the front seat attachment and (2) shortening the seat support posts of Liao's front seat attachment, so that the front seat is positioned lower and closer to the front wheel support portion (blue). These modifications in view of

Schaaf are depicted below.



EX1051, Liao, Fig. 5 and EX1040, Schaaf, Fig. 1.

436. A POSITA would have reasonably expected success when combining Liao and Schaaf. The strollers disclosed in Liao and Schaaf use conventional design components that were well-known in the industry. Combining the teachings of Liao and Schaaf would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

2. Analysis of Claims 1-17 and 19-22

… ***[1.pre] A stroller system for supporting a front stroller seat and a rear stroller seat, the system comprising:***

437. Liao illustrates a stroller system for supporting a front stroller seat and a rear stroller seat.

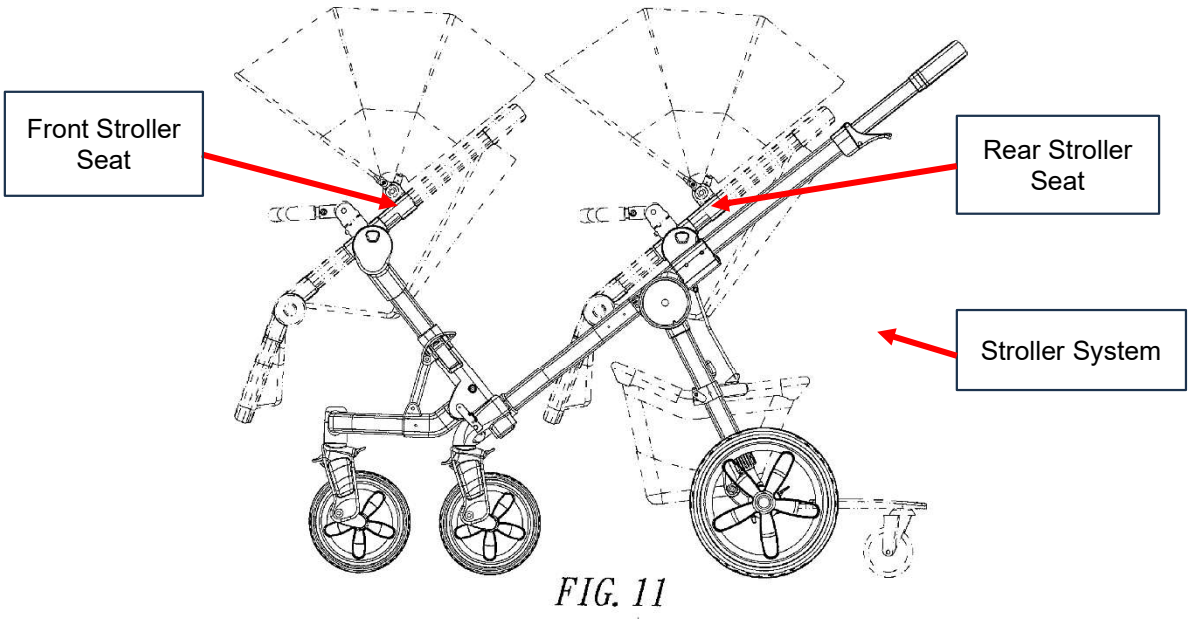


FIG. 11

EX1051, Liao, Fig. 11

438. Therefore, it is my opinion that Liao discloses limitation [1.pre].

… ***[1.a]-[1.b] a pair of rear wheels; a pair of front wheels;***

439. Liao's stroller includes a pair of front wheels and a part or rear wheels for the frame.

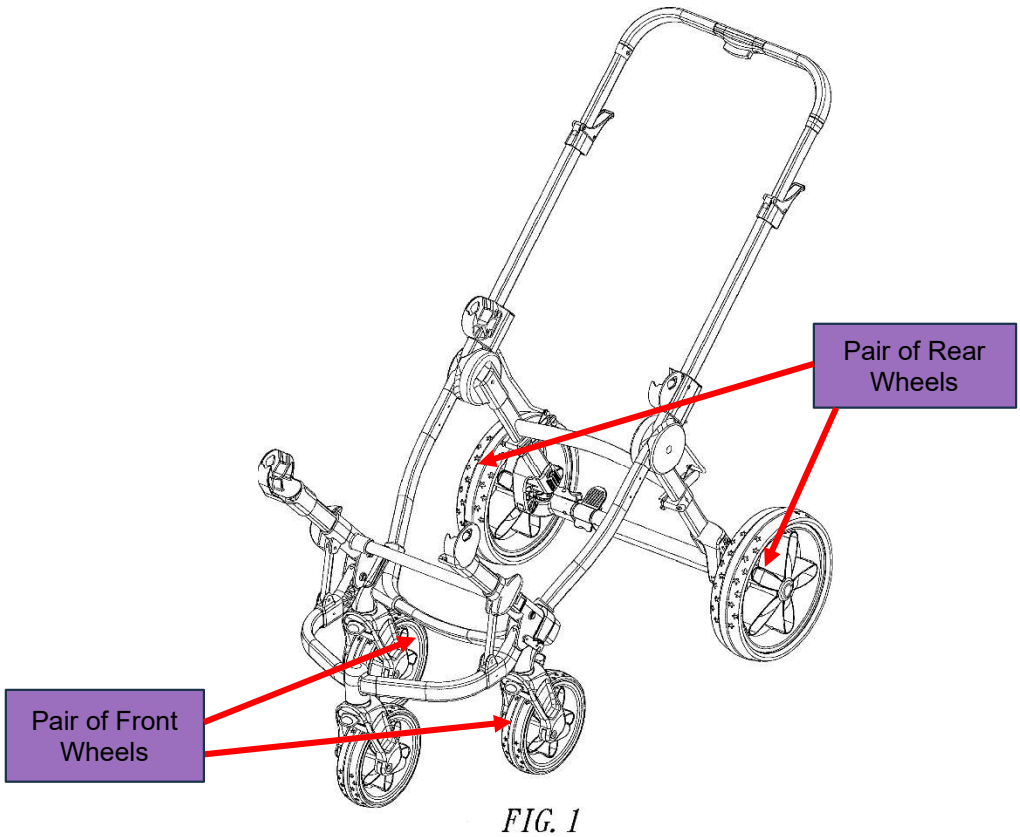


FIG. 1

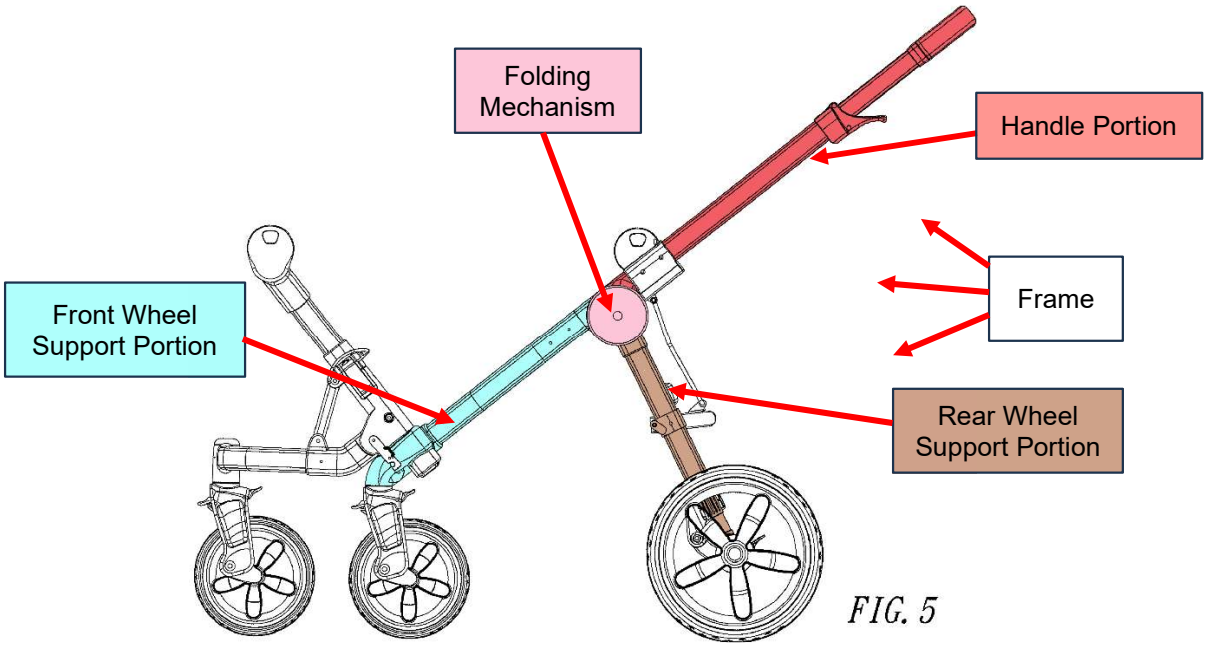
EX1051, Liao, Fig. 1

440. Therefore, it is my opinion that Liao discloses limitations [1.a]-[1.b].

… ***[1.c.i] a frame including a handle portion, a rear wheel support portion, a front wheel support portion and a folding mechanism connecting the front wheel support portion and the handle portion in both an unfolded configuration and in a folded configuration,***

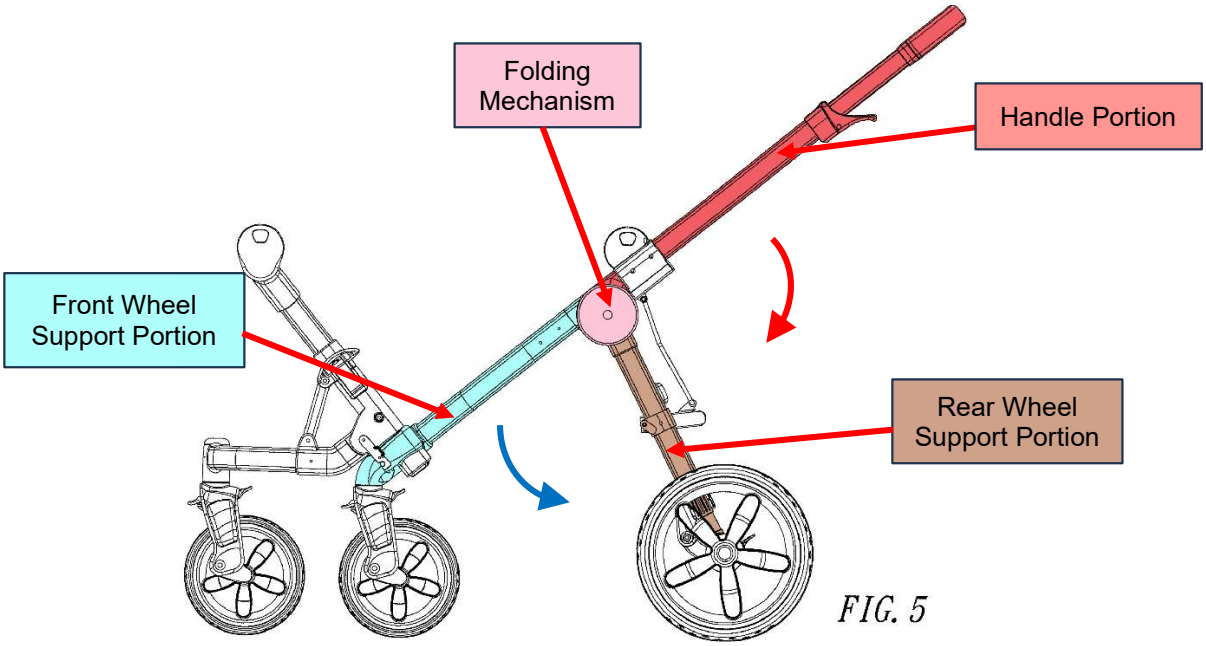
441. The stroller frame in Liao includes a handle portion (red), rear wheel support portion (brown), front wheel support portion (blue) and folding mechanism (pink). The handle portion (red) is the portion of Liao's frame that would be held and pushed by a caregiver. The rear wheel support portion (brown) is attached to two rear wheels. The front wheel support portion (blue) is attached to two front

wheels.



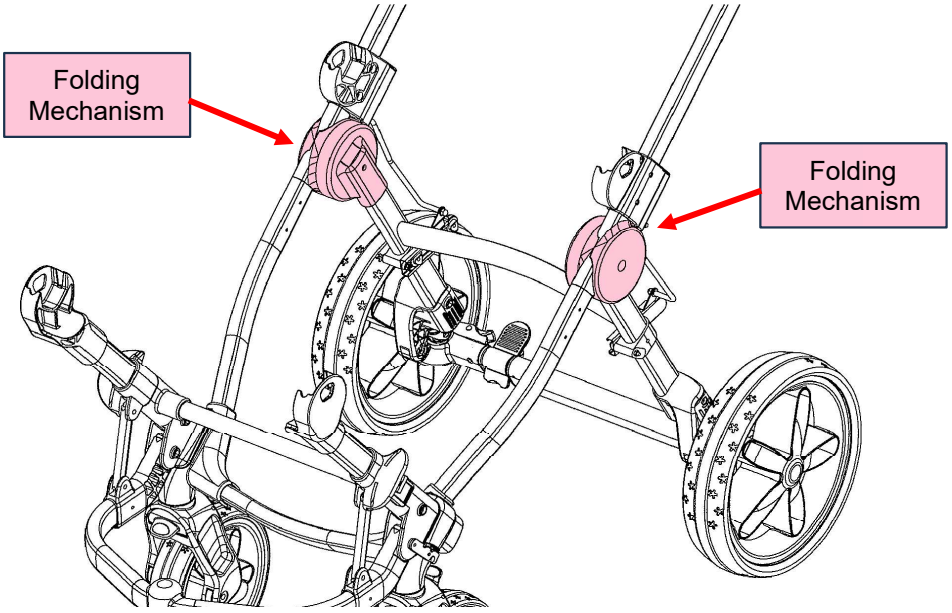
EX1051, Liao, Fig. 5

442. As shown above, the folding mechanism (pink) connects the front wheel support portion (blue) and the handle portion (red) when the frame is in the unfolded configuration. A POSITA would recognize that the folding mechanism (pink) allows the frame to fold by the handle portion (red) and front wheel support portion (blue) simply rotating about a pivot axis, as indicated below. Therefore, the folding mechanism (pink) also connects the front wheel support portion (blue) and the handle portion (red) in in a folded configuration.



EX1051, Liao, Fig. 5

443. Fig. 1 of Liao below shows a perspective view of the folding mechanism (pink). A POSITA would recognize those components as being hubs of a folding mechanism, and not merely a fixed coupling between the frame portions.



EX1051, Liao, Fig. 1

444. The folding mechanism includes the circular housings and pivot pin in order to contain and support the arcuate internal components used for rotating the frame portions relative to each other about the pivot axis defined through the pivot pin. There is no reason to include the circular housings and pivot pin in a stationary coupling due to its bulk compared to a simple sleeve or Tee coupling. Therefore, it is clear to me (and a POSITA) that Liao has a folding mechanism that allows frame portions to pivot relative to each other.

445. Liao further illustrates a release button on the handlebar. It was very common to place a release button for unlocking the folding mechanisms on the handlebar.

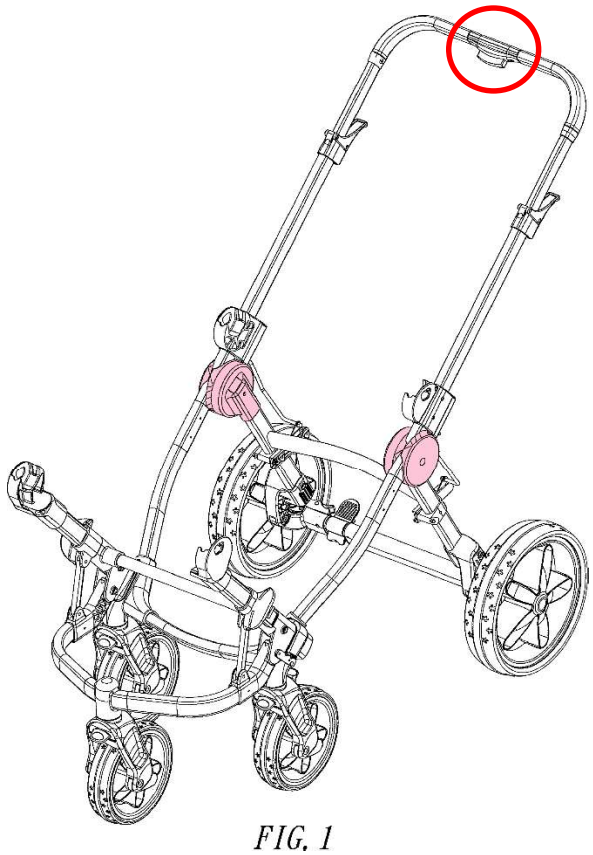
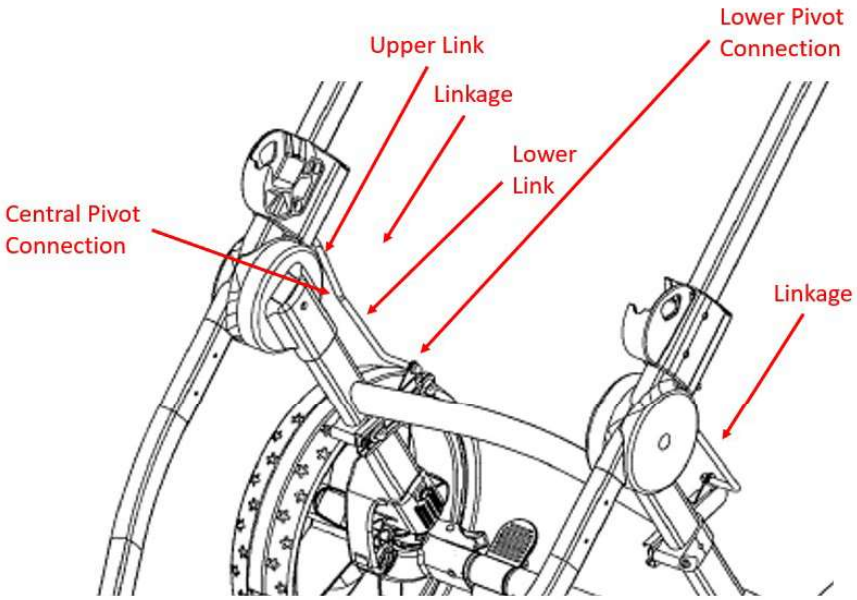


FIG. 1

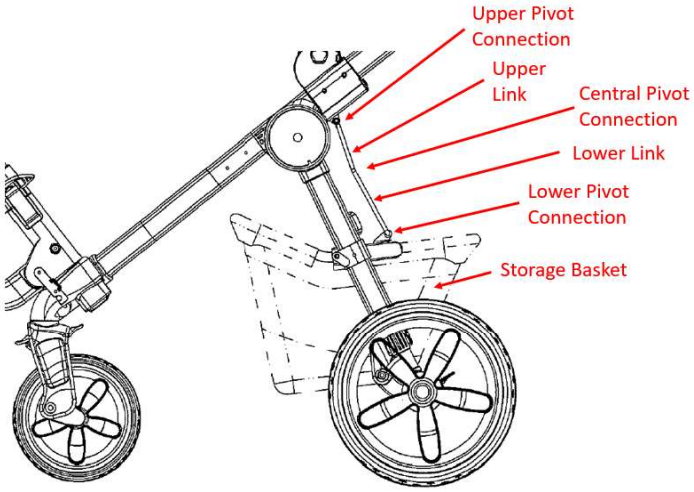
EX1051, Liao, Fig. 1

446. Furthermore, Liao illustrates accessory components designed to accommodate folding of the frame members. For example, Liao discloses a lower basket supported between the rear wheel support portion. The support structure for the lower basket includes a pair of linkages. Each linkage is illustrated as having an upper link with an upper pivot connection, a lower link with a lower pivot connection, and a central pivot connection joining the upper and lower links. Each linkage is also bent slightly forward at the central pivot with the links slightly angled relative to each other. These pivot connections plus the forward angle of the links relative to each other clearly illustrate that each linkage is designed to collapse about

the central pivot.



EX1051, Liao, Fig. 1



EX1051, Liao, Fig. 8

447. My reading of Liao is confirmed by his contemporaneous filing of his Taiwanese Design Patent No. D129880 (EX1053) directed to the exact same design.

448. The Taiwanese design patent includes a "Description of the Invention"

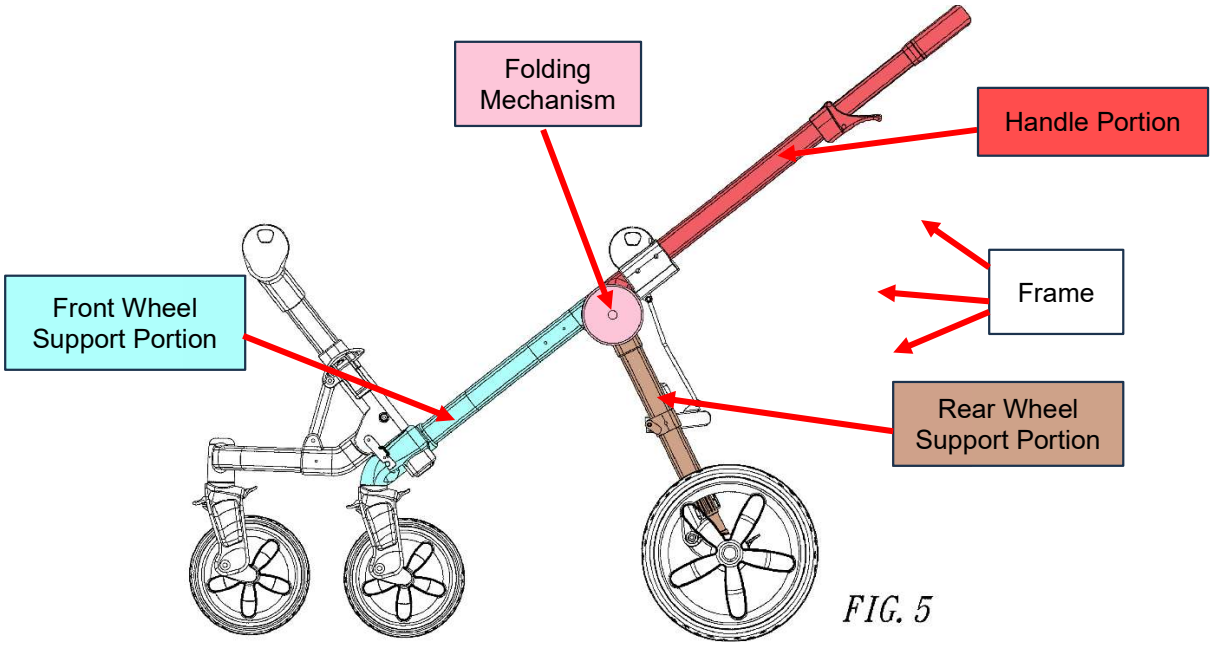
that explicitly states the stroller frame folds. In section 5 in the first paragraph under "Features of the Invention," D129800 states, "a circular articulation is provided between the middle of the main frame and the rear wheel stand for unfolding and folding." (EX1053, D129800, 17.)

449. Additionally, the U.S. Patent and Trademark Office shares my opinion that Liao discloses a folding mechanism that allows the frame to be adjusted between a folded configuration and an unfolded configuration. (EX1024, File History of U.S. App. No. 18/448,417, 1203.) Patent Owner acquiesced to this finding by the Examiner. (EX1024, 1393-1394.)

450. Therefore, it is my opinion that Liao discloses limitation [1.c.i].

… ***[1.c.ii] wherein the folding mechanism connects the rear wheel support portion to the front wheel support portion and the handle portion,***

451. As shown in Fig. 5 of Liao below, the folding mechanism (pink) connects the rear wheel support portion (brown) to the front wheel support portion (blue) and the handle portion (red).

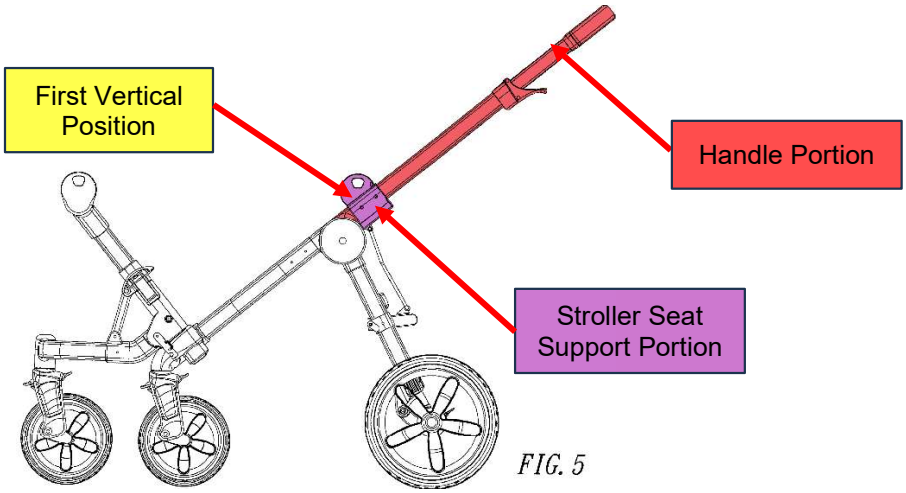


EX1051, Liao, Fig. 5

452. Therefore, it is my opinion that Liao discloses limitation [1.c.ii].

… ***[1.c.iii] wherein the frame includes a stroller seat support portion positioned at a first vertical position adjacent the handle portion, and***

453. As shown below, the frame in Liao includes a stroller seat support portion (purple). The stroller seat support portion (purple) is located adjacent the handle portion (red) at the first vertical position (*i.e.*, height) identified below.



EX1051, Liao, Fig. 5

454. Therefore, it is my opinion that Liao discloses limitation [1.c.iii].

… ***[1.c.iv] wherein the front wheel support portion and the handle portion are substantially parallel when the frame is in the unfolded configuration; and***

455. The front wheel support portion (blue) and handle portion (red) of Liao have the same relationship that is illustrated in the ’231 Patent and the applications to which it claims priority. The front wheel support portion (blue) and handle portion (red) lie in the same common plane (purple dashed line), which is what is illustrated in the ’231 Patent and the applications to which the ’231 Patent claims priority.

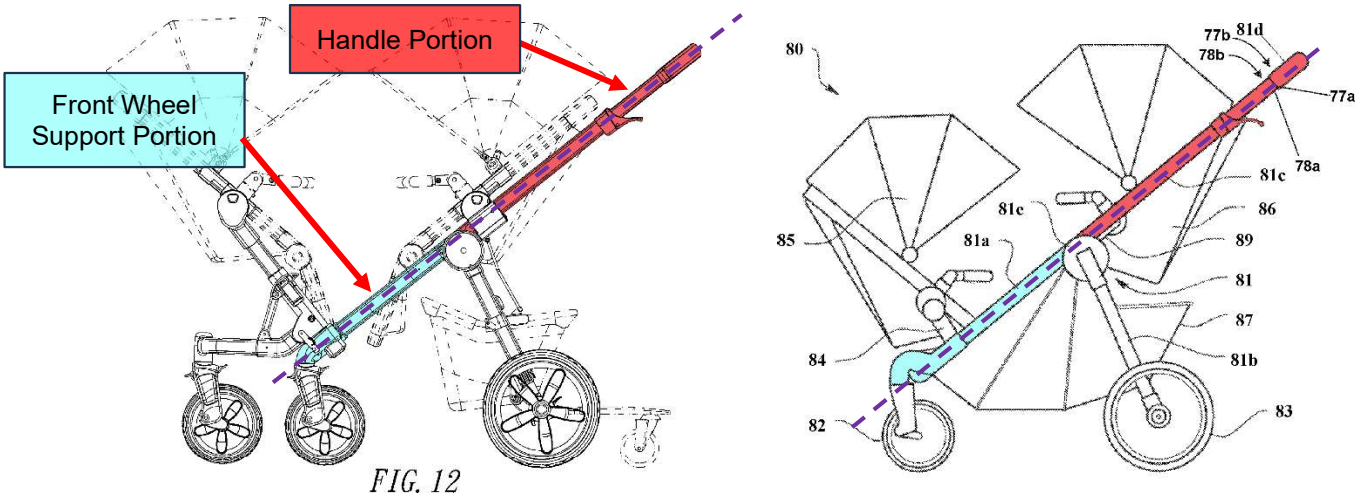


FIGURE 8A

EX1051, Liao, Fig. 12 and EX1020, '292 Application, Fig. 8A

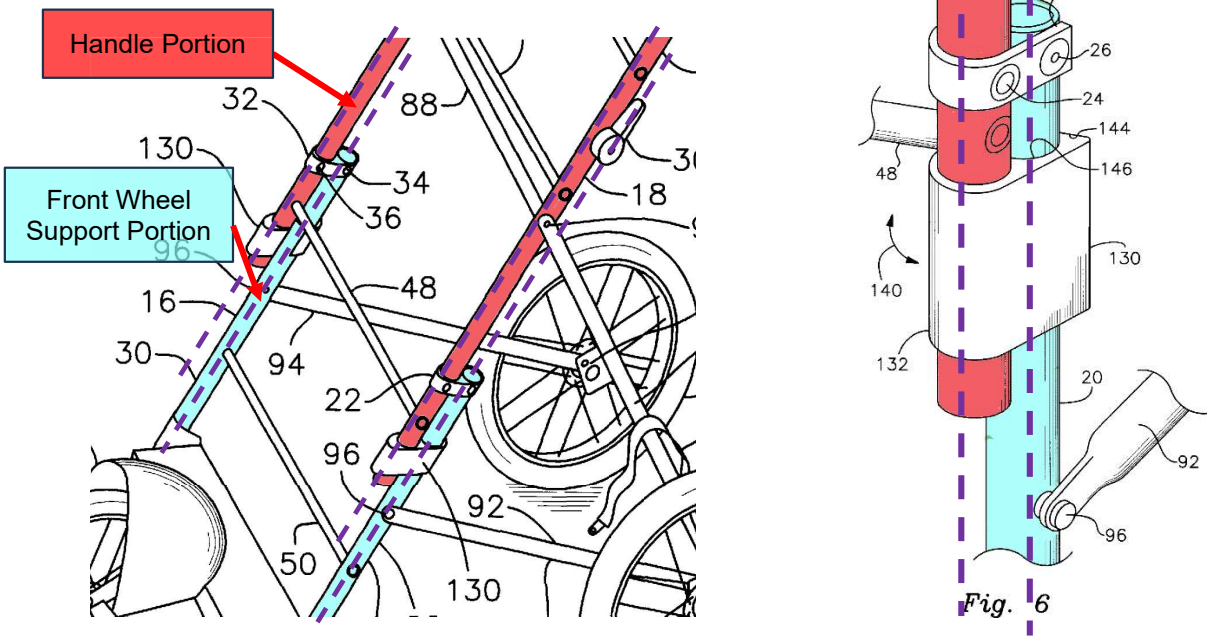
456. Therefore, if the Board determines that the applications to which the '231 Patent claims priority disclose a front wheel support portion and handle portion that are substantially parallel when the frame is in the unfolded configuration, then Liao also discloses a front wheel support portion and handle portion that are substantially parallel when the frame is in the unfolded configuration.

457. Otherwise, Liao in view of Schaaf renders this limitation (1.c.iv) obvious. Schaaf discloses a front wheel support portion (blue) and handle portion (red) that are substantially parallel when the frame is in the unfolded configuration. Specifically, Schaaf describes that when the frame 12 is unfolded, the upper portion 80 (handle portion) (red) and lower portion 82 (front wheel support portion) (blue) are "not in perfect alignment" such that they are "at least axially parallel to one another."

> **In the open condition, the upper and lower portions 80 and 82 are substantially aligned.** More particularly, upper segments 18 and 28 are orientated relative to respective lower segments 20 and 30 in the manner best depicted in FIGS. 6 and 7. Therein, the upper and lower segments 18 and 20 of side section 14 are illustrated. An analogous construction is employed for the segments of opposite side section 16. **When the stroller is fully opened and operable, the lower end of each upper side segment overlaps the upper end of its associated lower segment. Although the upper and lower segments are not in perfect alignment, they are generally axially aligned (or at least axially parallel to one another).**

(EX1040, Schaaf, 7:40-51.)

458. The front wheel support portion (blue) and handle portion (red) being substantially parallel is shown in Figs. 1 and 6 of Schaaf below. The front wheel support portion (blue) and handle portion (red) lie in two planes (represented by the dashed purple lines) that are separated by a distance between them. Additionally, the planes on which the front wheel support portion (blue) and handle portion (red) lie do not intersect. Therefore, the front wheel support portion (blue) and handle portion (red) in Schaaf are substantially parallel when in the unfolded configuration.



EX1040, Schaaf, Fig. 1 and Fig. 6

459. A POSITA would have been motivated to make Liao's front wheel support portion (blue) and handle portion (red) substantially parallel as disclosed in Schaaf. First, a POSITA would understand that making these frame portions substantially parallel results in the handle portion (red) being higher, which provides some additional space for the two seats or stroller accessories, such as a basket below the handle portion (red) and above the rear wheels. Since there may be limited space for multiple seats on a stroller frame, the additional space may allow seats of different types and sizes to fit more comfortably. Making the handle portion higher would also make the rear seat higher, which would provide the rear child a better view. Additionally, this modification is a simple substitution of one known type of frame arrangement (one in which the frame portions extend in a common plane) with

another known frame arrangement (one with substantially parallel frame portion) to achieve a predicable result (a collapsible stroller frame).

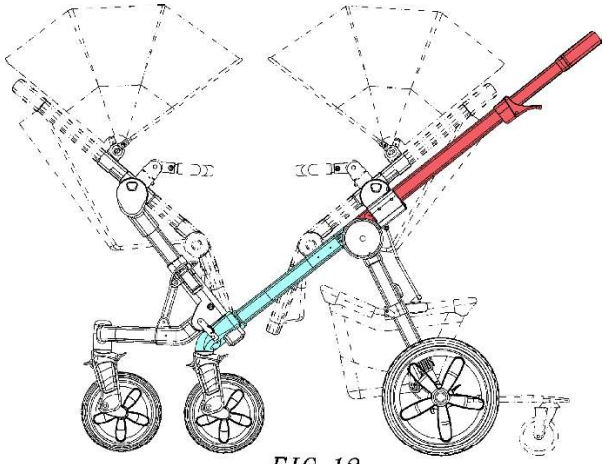


FIG. 12

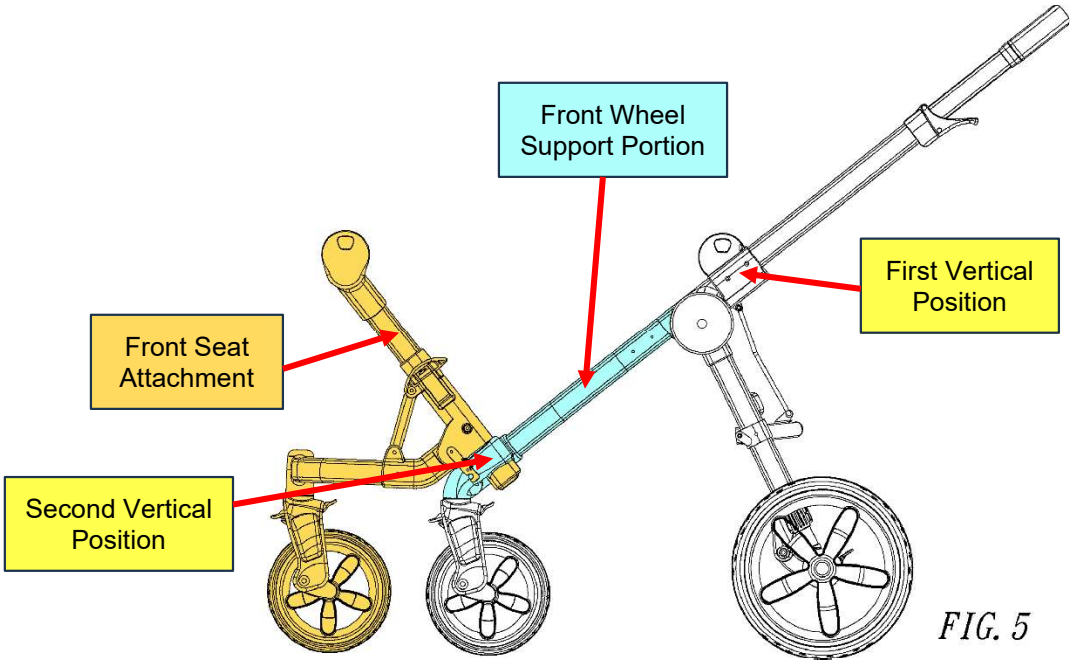
EX1051, Liao, Fig. 12

460. A POSITA would have reasonably expected success when combining Liao and Schaaf. The strollers disclosed in Liao and Schaaf use conventional design components that were well-known in the industry. Combining the teachings of Liao and Schaaf would have been a straightforward integration of well-known design components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

461. Therefore, it is my opinion that Liao and Schaaf render obvious limitation [1.c.iv].

… ***[1.d] a front seat attachment configured for attachment to the front wheel support portion at a second vertical position substantially lower than the first vertical position,***

462. Liao discloses a front seat attachment (gold) configured to support a front stroller seat. As shown below, the front seat attachment (gold) is also configured for attachment to the front wheel support portion (blue) of the stroller frame. As also shown below, the location where the front seat attachment (gold) attaches to the front wheel support portion (blue) is at a second vertical position that is substantially lower than the first vertical position.



EX1051, Liao, Fig. 5

463. Therefore, it is my opinion that Liao discloses limitation [1.d].

… ***[1.e] wherein the front seat attachment is configured to releasably connect to and support the front stroller seat in either a forward-facing configuration or a backward -facing configuration,***

464. The upper ends of the seat support posts (gold) of Liao's front seat attachment include stroller seat connectors. A POSITA would understand that these connectors are conventional seat connectors, and they are designed to allow stroller seats to be easily connected to and removed from the seat support posts (gold) without using tools or special skills.

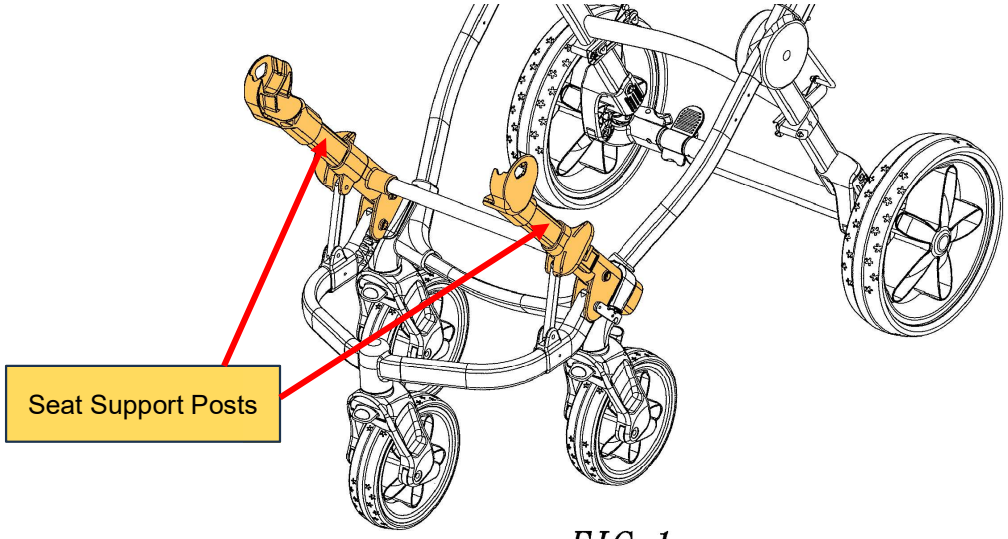


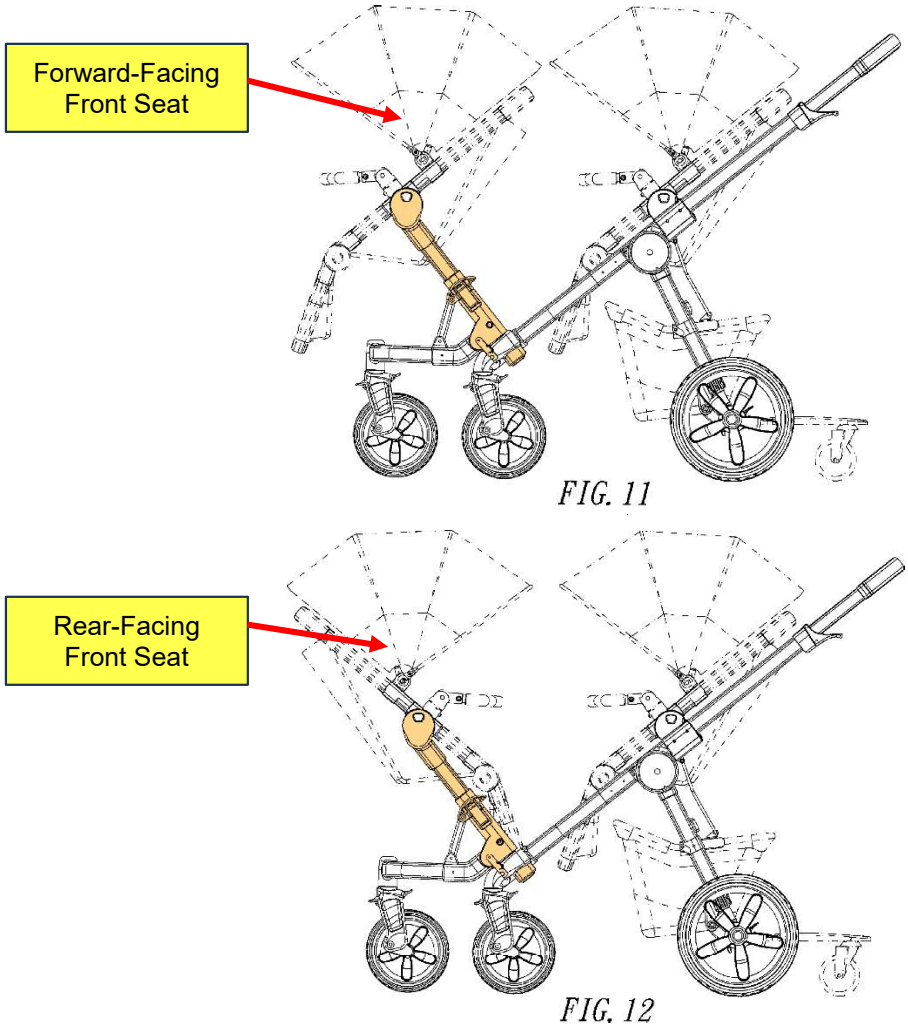
FIG. 1

EX1051, Liao, Fig. 1

465. Figs. 8-13 of Liao illustrate different types of stroller seats being connected to and supported by the seat support posts. This confirms that Liao's front seat attachment is configured to releasably connect to and support front stroller seats.

466. Liao also illustrates stroller seats being supported by the seat support posts (gold) of the front seat attachment in forward-facing and rear-facing

configurations.



EX1051, Liao, Figs. 11 and 12.

467. Therefore, it is my opinion that Liao discloses limitation [1.e].

… ***[1.f] wherein the front seat attachment is configured to support the front stroller seat substantially over the front wheels so that a center of gravity of the stroller system is between the front wheels and the rear wheels;***

468. As I discussed above, Schaaf discloses a stroller with the front stroller seat supported substantially over the front wheel. This is illustrated in Fig. 10 of

Schaaf.

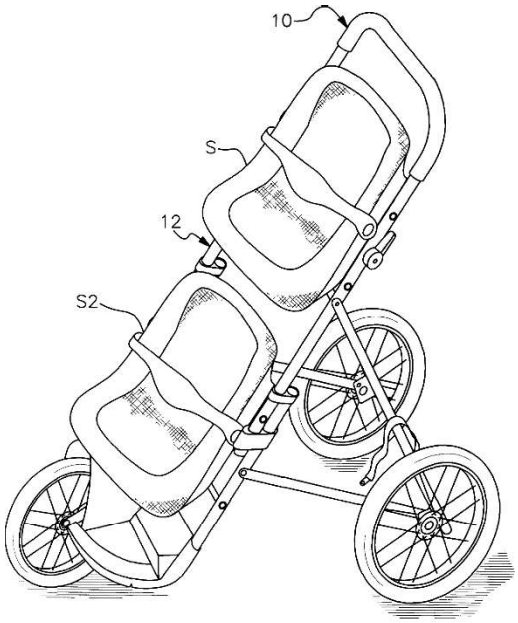
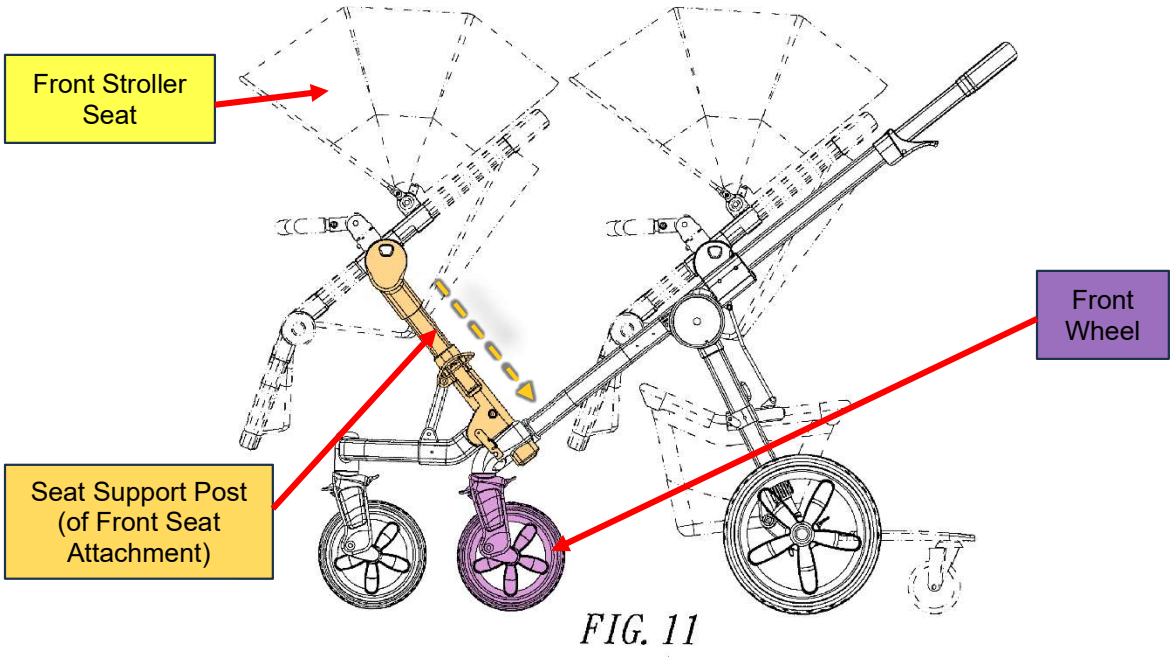


Fig. 10

EX1040, Schaaf, Fig. 10

469. As I discussed above, a POSITA would understand from the locations of the stroller system components that the center of gravity of Schaaf's stroller is located between the front wheel and rear wheels.

470. When Liao's stroller is modified in view of Schaaf as discussed above, Liao's modified front seat attachment (gold) is also configured to support the front stroller seat substantially over the front wheels. When the seat support posts (gold) are modified as discussed above, the front seat would be moved lower and backwards, and the front stroller seat would be substantially over the front wheels (purple) of the stroller.



EX1051, Liao, Fig. 11.

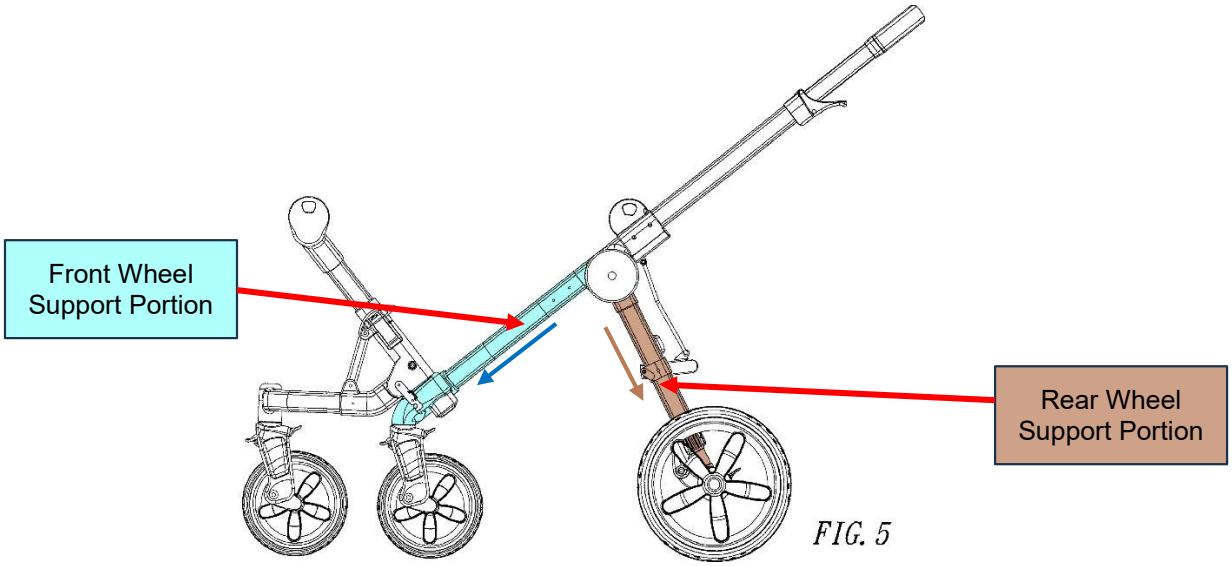
471. As I discussed above, a POSITA would have known that **all** stroller systems should be designed such that the center of gravity is located between the front and rear wheels of the stroller system to avoid tipping and to facilitate maneuvering the stroller. As I discussed above, a POSITA would have known that a stroller would risk tipping over and injuring a child if the center of gravity was not between the front and rear wheels. Therefore, any stroller system designed by a POSITA should ideally have its center of gravity located between the front and rear wheels. (*See, e.g.*, paragraphs [0023] and [0028] of U.S. Pub. No. 2007/0126206 (EX1052) (discussing desirability of a stroller system's center of gravity being between the wheels).) Therefore, to the extent the Liao modified in view of Schaaf does not already have its center of gravity located between the front wheels and the

rear wheels, it would have been obvious to make this modification. Making this modification would have been straight forward for a POSITA and involved merely selecting component materials and positioning stroller components based on their relative masses.

472. Therefore, it is my opinion that Liao and Schaaf render obvious limitation [1.f].

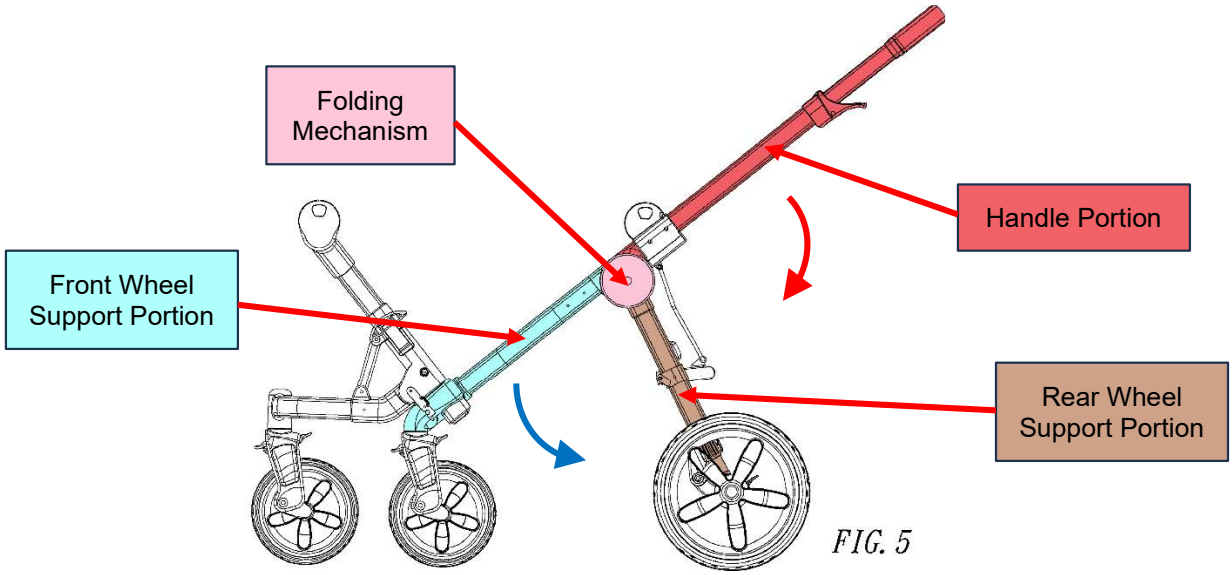
> … ***[1.g] wherein the rear wheel support portion extends diagonally from the front wheel support portion when the frame is in the unfolded configuration, and the rear wheel support portion is disposed adjacent to both the front wheel support portion and the handle portion when the frame is in the folded configuration; and***

473. Fig. 5 of Liao below illustrates the stroller frame in an unfolded configuration. As indicated by the arrows, the rear wheel support portion (brown) extends diagonally from the front wheel support portion when the frame is in the unfolded configuration.



EX1051, Liao, Fig. 5

474. As discussed above, Liao's stroller folds by the handle portion (red) and front wheel support portion (blue) rotating downward about a pivot axis of the folding mechanism (pink), as shown below. Therefore, when the stroller is in a folded configuration, the rear wheel support portion (brown) would be disposed adjacent to both the front wheel support portion (blue) and the handle portion (red).

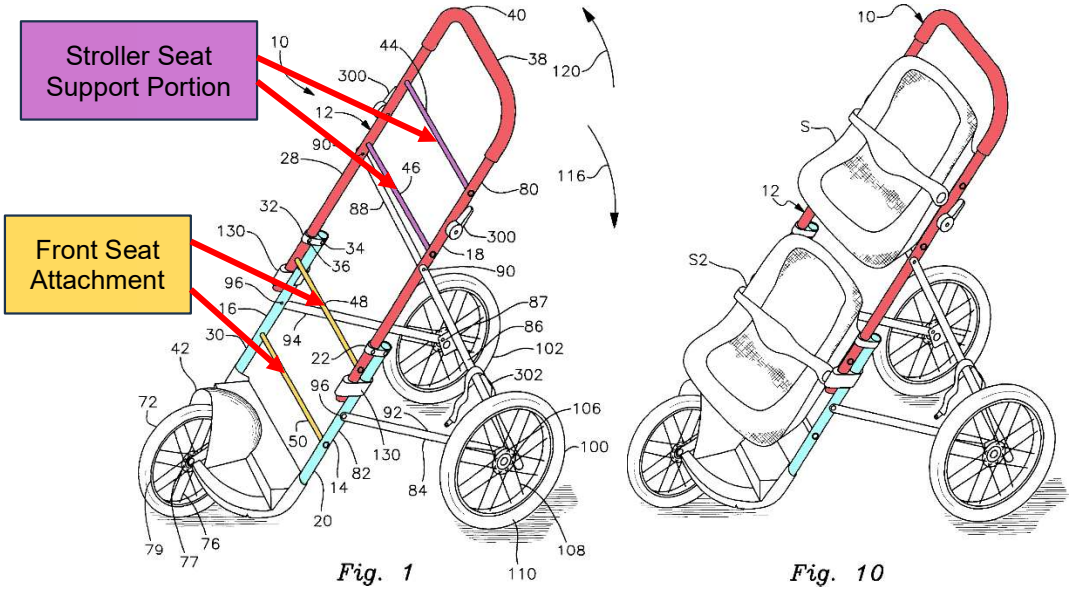


EX1051, Liao, Fig. 5

475. Therefore, it is my opinion that Liao discloses limitation [1.g].

… ***[1.h] wherein the stroller seat support portion positioned at the first vertical position and the front seat attachment at the second vertical position create an inline descending configuration of the rear stroller seat and the front stroller seat.***

476. As shown below, Schaaf discloses a stroller seat support portion (purple) positioned at a first vertical position and a front seat attachment (gold) positioned at a second vertical position that is substantially lower than the first vertical position to create an inline descending configuration of the rear stroller seat and the front stroller seat. In other words, the rear seat is higher than the front seat.



EX1040, Schaaf, Fig. 1 and Fig. 10

477. When Liao is modified in view of Schaaf, the same seating arrangement is achieved. In particular, when Liao's front seat attachment (gold) is modified in view of Schaaf, the front seat would be in front of and lower than the rear seat.

Therefore, the stroller seat support portion being positioned at the first vertical position and the front seat attachment at the second vertical position create an inline descending configuration of the rear stroller seat and the front stroller seat.

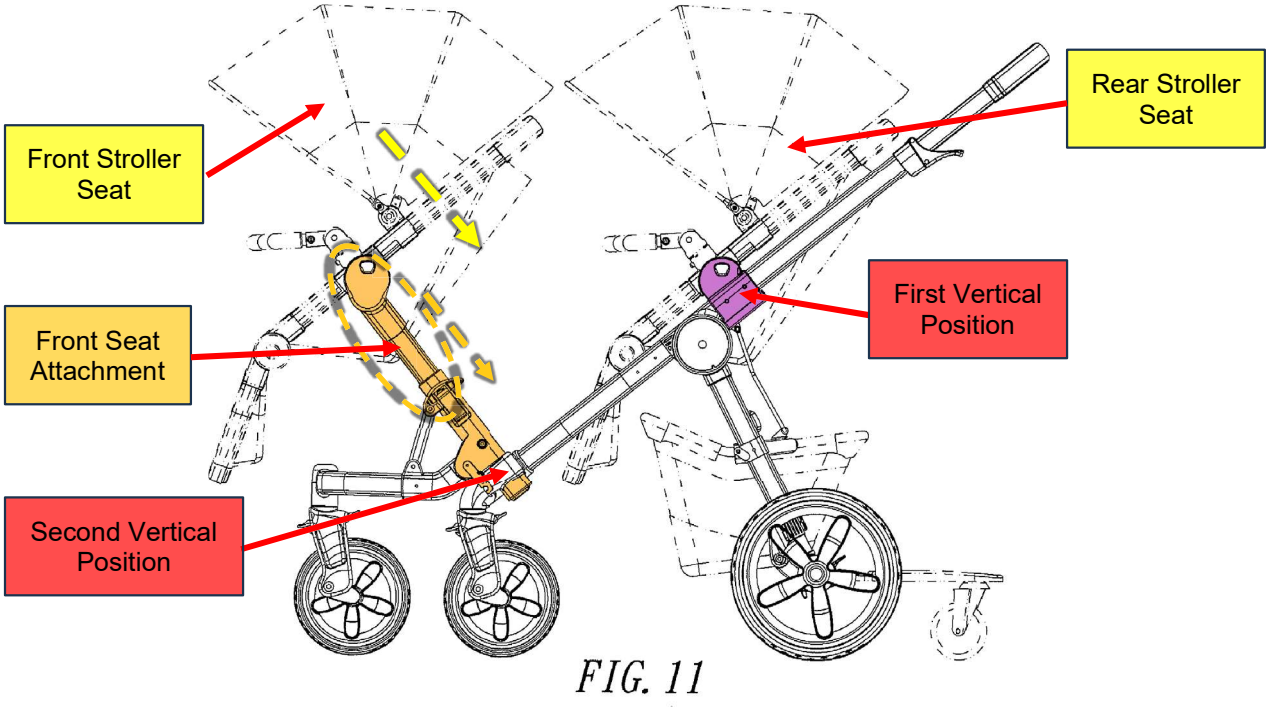


FIG. 11

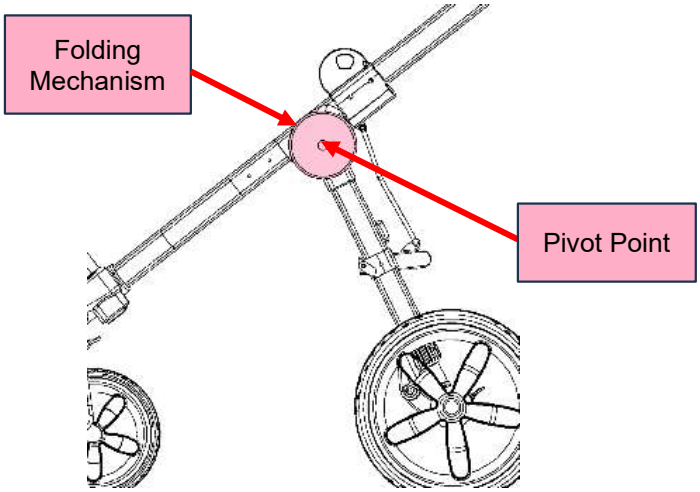
EX1051, Liao, Fig. 11

478. Therefore, it is my opinion that Liao and Schaaf render obvious limitation [1.h] and that claim 1 is obvious.

… ***[2] The stroller system of claim 1, wherein the folding mechanism includes at least one pivot point.***

479. As discussed above, all folding mechanisms include at least one pivot point (*i.e.*, the point at which one or more components pivot). In Liao, the pivot points are located at the center of the hub of the folding mechanism (pink). The left pivot point of the folding mechanism (pink) is shown in Fig. 5 below. The front

wheel support portion and handle portion fold about an axis defined by this pivot point and the other corresponding pivot point on the other side of the stroller.

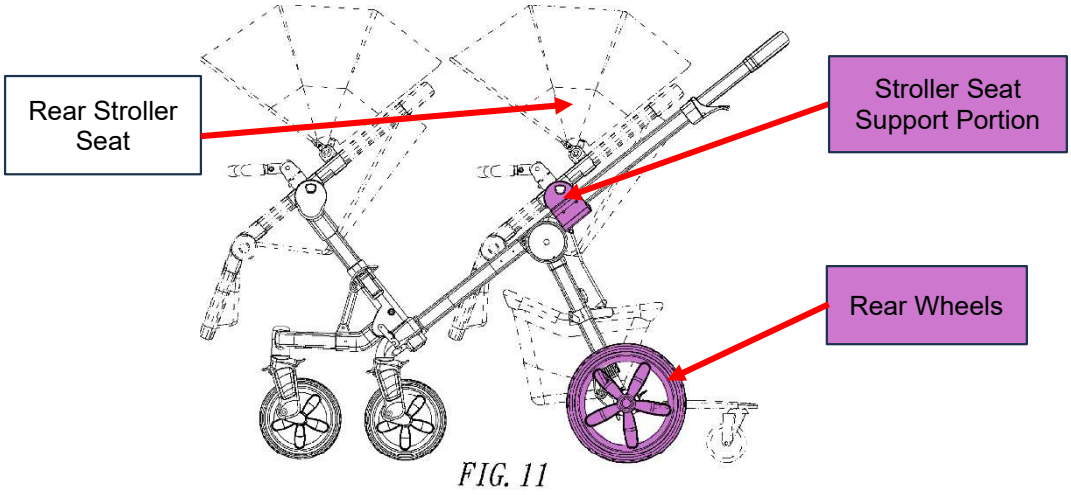


EX1051, Liao, Fig. 5

480. Therefore, it is my opinion that Liao discloses the additional limitation of claim 2 and that this claim is obvious.

> … ***[3] The stroller system of claim 1, wherein the stroller seat support portion is configured to support the rear stroller seat substantially over the rear wheels.***

481. As shown below, the stroller support portion (purple) of Liao's frame supports the rear stroller seat substantially over the rear wheels (purple).



EX1051, Liao, Fig. 5

482. Therefore, it is my opinion that Liao discloses this additional limitation of claim 3 and that this claim is obvious.

> … ***[4] The stroller system of claim 1, wherein the front seat attachment includes a first connector portion and a second connector portion, the first connector portion configured to removably attach to a left side of the front wheel support portion, and the second connector portion configured to removably attach to a right side of the front wheel support portion.***

483. The two seat support posts (front seat attachment) (gold) of Liao include respective connector portions (*i.e.*, the portions of the front seat attachment that connect to the front wheel support portion). These connector portions are the bottom portions of the seat support posts (front seat attachment) (gold), labeled below. As shown, the first connector portion is configured to attach to the left side of the front wheel support portion (blue), and the second connector portion is configured to attach to the right side of the front wheel support portion (blue).

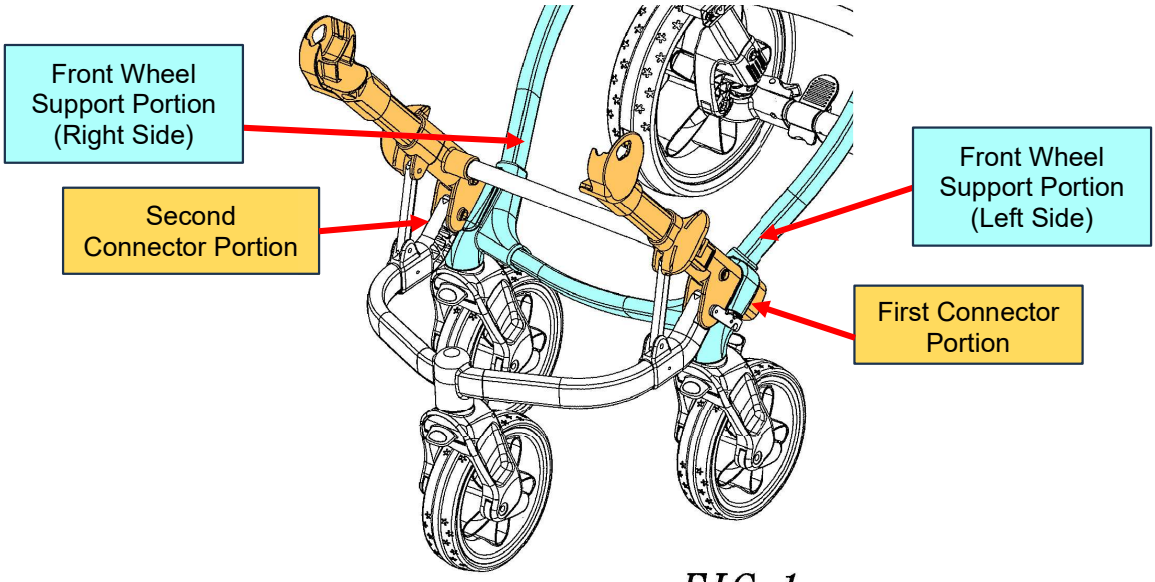
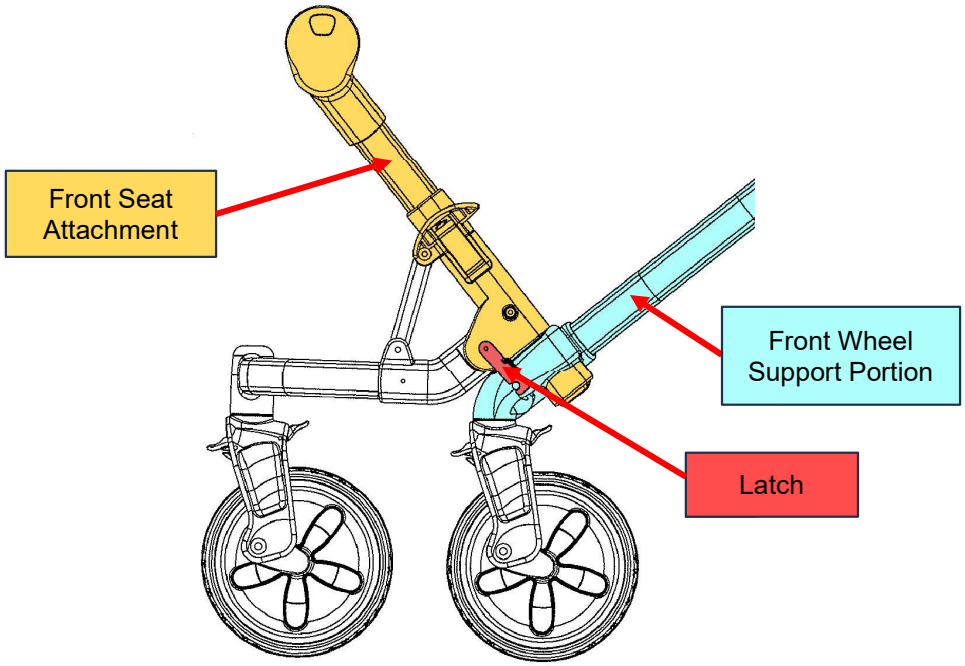


FIG. 1

EX1051, Liao, Fig. 1

484. As shown below, Liao's seat support posts (front seat attachment) (gold) are secured to the front wheel support portion using a latch (red). This latch allows the front seat attachment (gold) to be attached and removed from the front wheel support portion without using special tools or skills. Therefore, the connector portions are configured to removably attach to the sides of the front wheel support portion (blue).



EX1051, Liao, Fig. 5

485. Therefore, it is my opinion that Liao discloses the additional limitations of claim 4 and that this claim is obvious.

> … ***[5] The stroller system of claim 4, wherein the front seat attachment includes a pair of seat attachment elements configured to releasably support the front stroller seat in either the forward-facing configuration or in the backward-facing configuration.***

486. The upper portions of Liao's seat support posts (front seat attachment) (gold) include a pair of seat attachment elements. The seat attachment elements are generic seat connectors that connect to and support stroller seats. As discussed above (for limitation [1.e]), these seat attachment elements releasably connect to and support the front stroller seat in either a forward-facing or backward-facing

configuration.

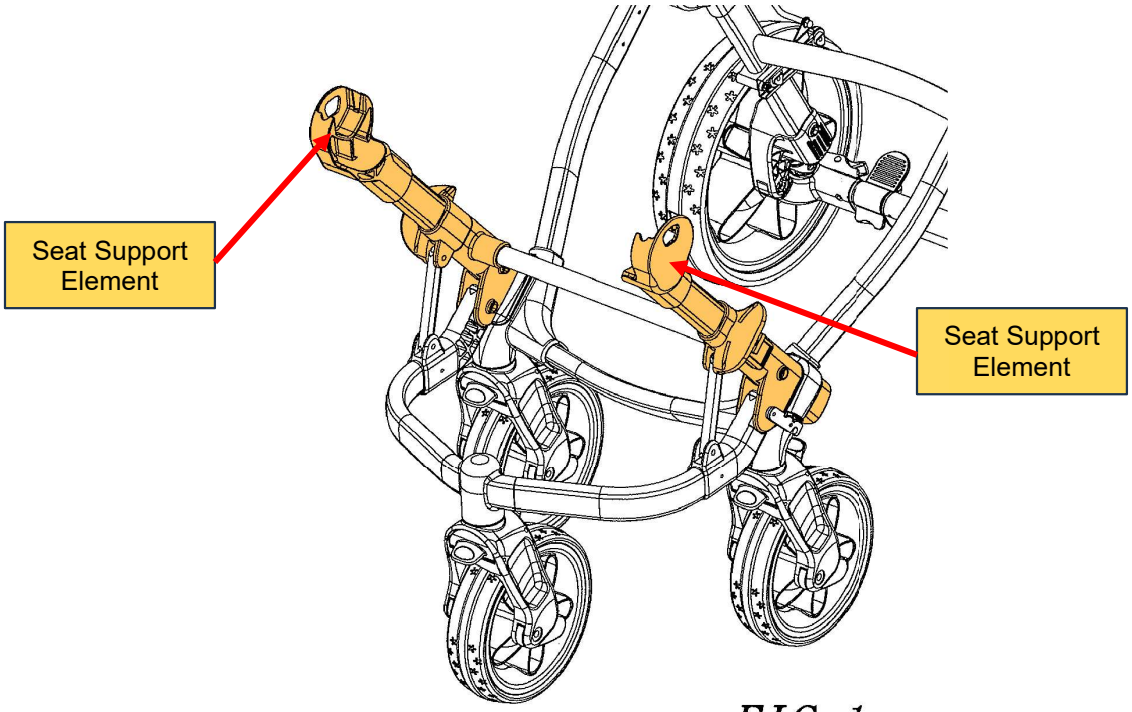


FIG. 1

EX1051, Liao, Fig. 1

487. Therefore, it is my opinion that Liao discloses the additional limitations of claim 5 and that this claim is obvious.

> … ***[6] The stroller system of claim 5, wherein the front wheel support portion includes a first attachment portion and a second attachment portion, the first attachment portion on the left side and configured to support the first connector portion, and the second attachment portion on the right side and configured to support the second connector portion.***

488. In the ’231 Patent, the portions of the stroller frame where a seat attachment is attached are called “attachment portions.”

> 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 FIG. 3, to be connected to the stroller.**

(EX1012,'231 Patent, 4:49-60.)

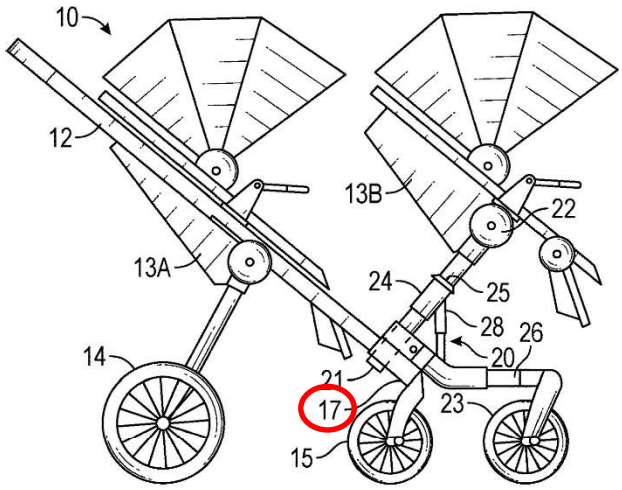


FIG. 3

EX1012, '231 Patent, Fig. 3

489. Liao also discloses that the front wheel support portion (blue) includes seat attachment portions. A first attachment portion is on the left side of the front wheel support portion (blue) and supports the first connector portion of the front seat attachment (orange). A second attachment portion is on the right side of the front

wheel support portion (blue) and supports the second connector portion of the front seat attachment (orange).

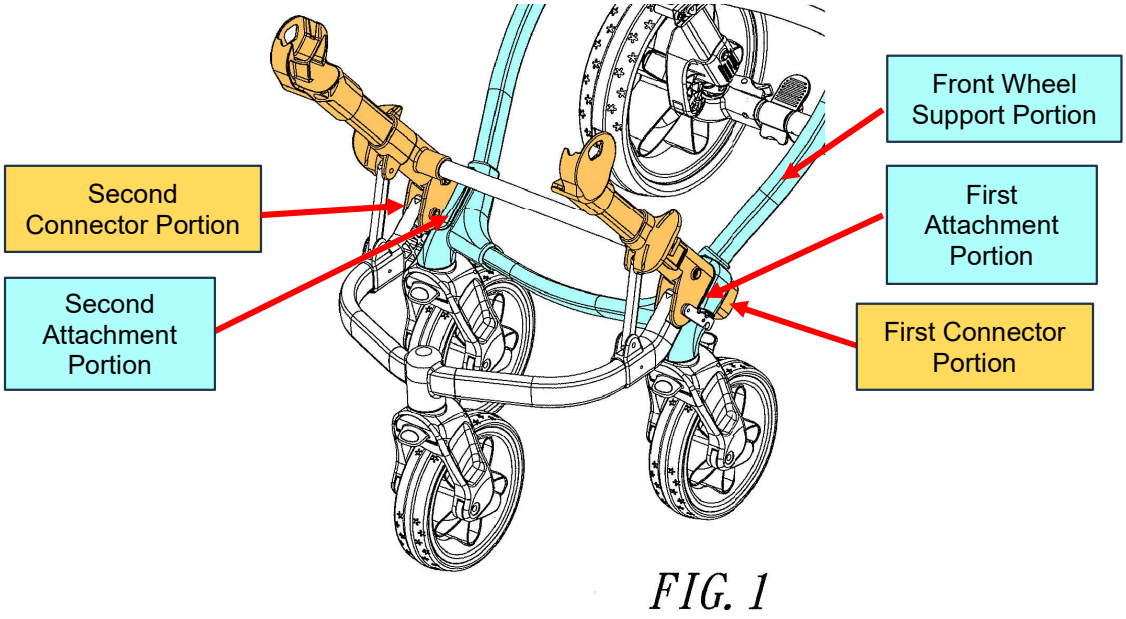


FIG. 1

EX1051, Liao, Fig. 1

490. Therefore, it is my opinion that Liao discloses the additional limitations of claim 6 and that this claim is obvious.

> … ***[7] The stroller system of claim 6, wherein the front seat attachment includes at least one attachment frame member.***

491. The ’231 Patent describes that the seat attachment 20 in Fig. 3 includes attachment frame members 24.

> 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 FIG. 2, the seat attachment 20 can include a wheel support frame 26 that is pivotally connected to two attachment frame members 24.

(EX1012, '231 Patent, 5:25-33)

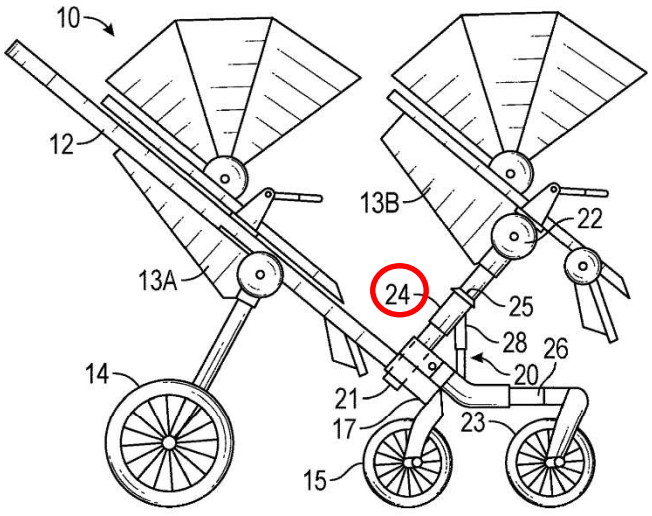


FIG. 3

EX1012, '231 Patent, Fig. 3

492. Liao's front seat attachment (gold) also includes an attachment frame member, shown below.

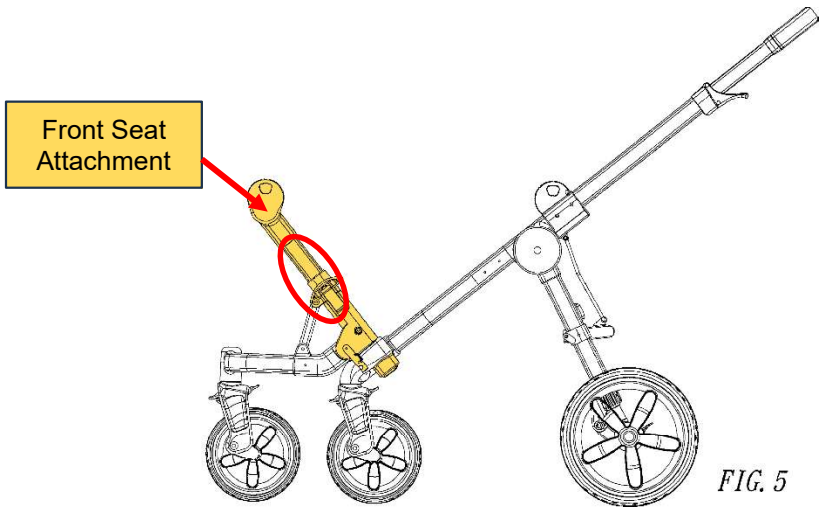


FIG. 5

EX1051, Liao, Fig. 5

493. Therefore, it is my opinion that Liao discloses the additional limitation of claim 7 and that this claim is obvious.

… ***[8] The stroller system of claim 4, wherein the front wheel support portion includes a pair of parallel support members.***

494. Schaaf discloses that its front wheel support portion includes lower side segments 20 and 30 (blue). The side segments 20 and 30 are opposite portions of the side sections 14 and 16, which Schaaf describes as "generally parallel." A POSITA would understand Fig. 1 of Schaaf to show that the lower side segments 20 and 30 (blue) are parallel. The side segments 20 and 30 (blue) correspond to the "pair of parallel support members" in the claim.

> As best shown in FIG. 1, frame 12 comprises a pair of elongate, **generally parallel side sections 14 and 16. Side section 14 includes a tubular upper segment 18 and a tubular lower segment 20** that is pivotably or foldably connected to segment 18 by a generally U-shaped bracket 22. Bracket 22 is wrapped about and fixedly connected to segment 18 by a pin 24. FIGS. 2 and 3. Segment 20 extends through and is pivotably connected to bracket 22 by a second pin 26. The opposite side section 16 includes a similar pair of upper and lower segments 28 and 30, respectively.

(EX1040, Schaaf, 4:49-58.)

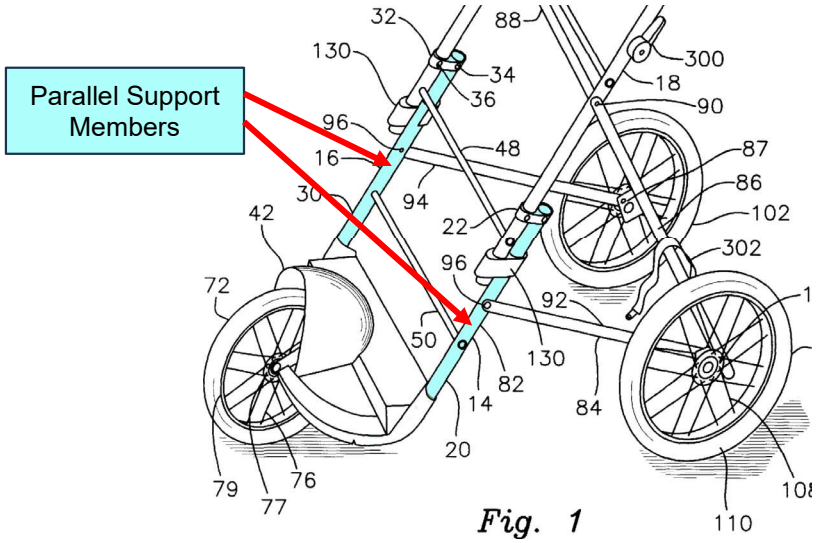


Fig. 1

EX1040, Schaaf, Fig. 1

495. A POSITA would have been motivated to modify Liao's front wheel support portion to incorporate Schaaf's pair of parallel support members. A POSITA would understand that it would involve simply substituting the curved portions of Schaaf's front wheel support portion with the parallel members to achieve a predicable result (a stroller frame) without changing the functionality of the frame. Additionally, a POSITA would understand that it would likely be easier and less expensive to develop and manufacture a frame with the straight, parallel support members than it would to develop and manufacture the curved portions of Liao's front wheel support portion.

496. A POSITA would have reasonably expected success when combining Liao and Schaaf. The strollers disclosed in Liao and Schaaf use conventional design components that were well-known in the industry. Combining the teachings of Liao and Schaaf would have been a straightforward integration of well-known design

components and easily accomplished by a POSITA. If any adjustments (*e.g.*, resizing or repositioning of components) would be necessary, a POSITA would have known how to make such adjustments.

497. Therefore, it is my opinion that Schaaf discloses the additional limitations of claim 8 and that this claim is obvious.

> … ***[9] The stroller system of claim 8, wherein the parallel support members include a pair of attachment portions configured to support the first connector portion and the second connector portion.***

498. As discussed above, Liao's front wheel support portion (blue) includes a pair of attachment portions configured to support the first connector portion and the second connector portion of the front seat attachment (gold).

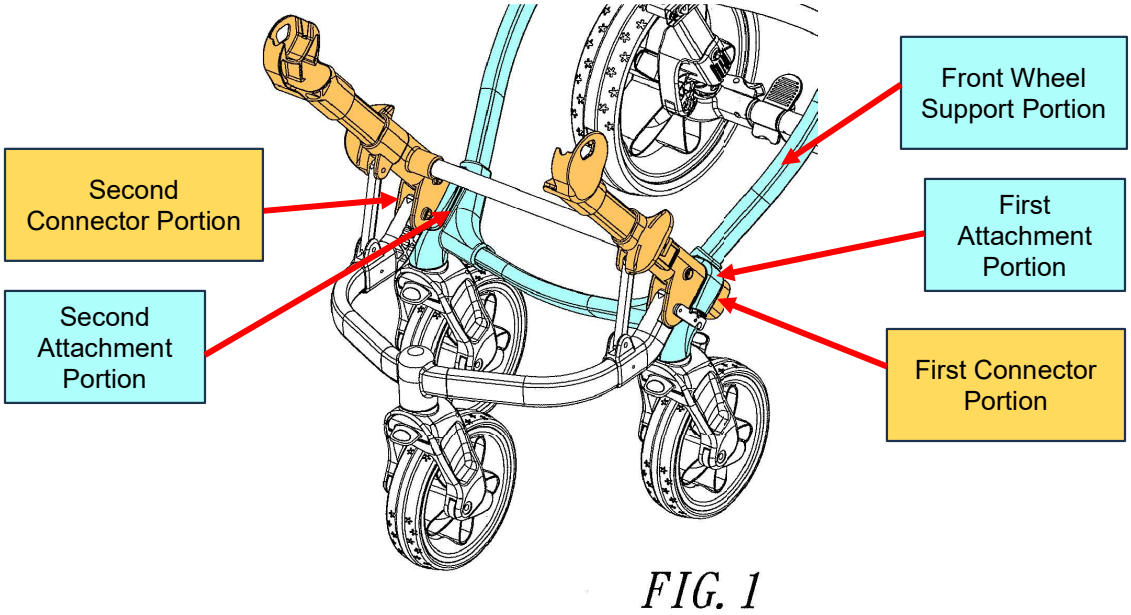


FIG. 1

EX1051, Liao, Fig. 1

499. Additionally, as discussed above, it would have been obvious to make

Liao's front wheel support portion (blue) include a pair of parallel support members as disclosed in Schaaf. When this modification is implemented, the parallel support members of the front wheel support portion would include a pair of attachment portions configured to support the first connector portion and the second connector portion.

500. Therefore, it is my opinion that Liao and Schaaf render obvious the additional limitations of claim 9 and that this claim is obvious.

… ***[10] The stroller system of claim 9, wherein the attachment portions include left and right slots in the parallel support members configured to receive the first connector portion and the second connector portion.***

501. Liao discloses attachment portions that include left and right slots configured to receive the first connector portion and the second connector portion of the front seat attachment. As shown below, the connector portions of the front seat attachment (gold) insert into the slots in the attachment portions (blue).

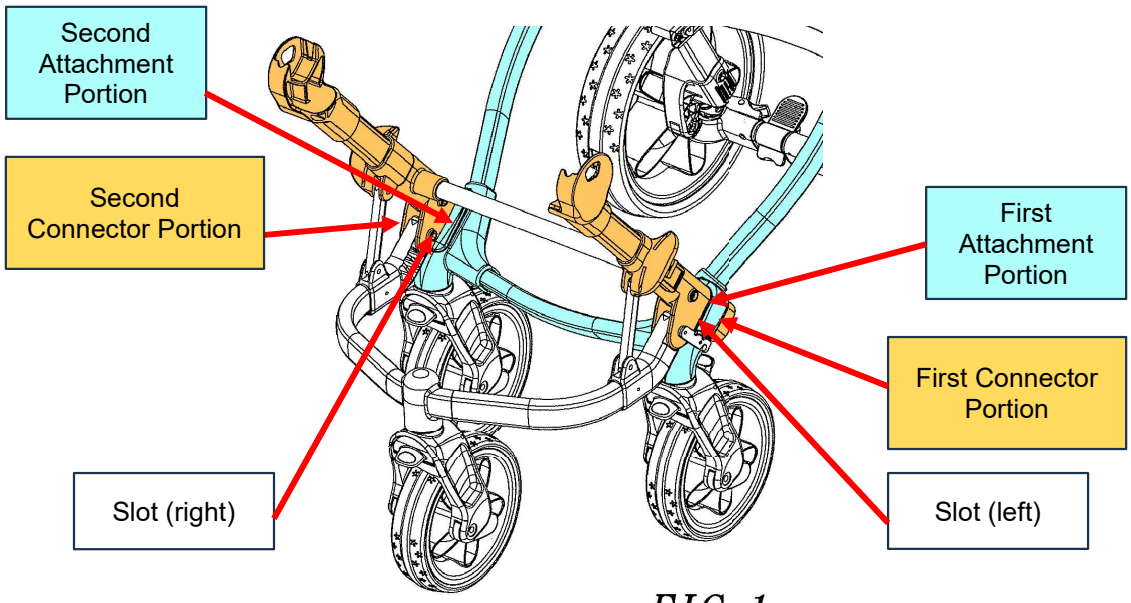


FIG. 1

EX1051, Liao, Fig. 1

502. As discussed above (for claim 9), it would have been obvious for Liao's front wheel support portion to include parallel support members that have left and right attachment portions. When this modification is implemented, the attachment portions would include left and right slots in the parallel support members configured to receive the first connector portion and the second connector portion.

503. Therefore, it is my opinion that Liao and Schaaf render obvious the additional limitations of claim 10 and that this claim is obvious.

… ***[11] The stroller system of claim 8, wherein the parallel support members include a pair of tubular structures, each of the tubular structures having a rounded cross-section.***

504. Schaaf discloses that the lower side segments 20 and 30 (parallel support members) (blue) include a pair of tubular structures and that each of the

tubular structures have a rounded cross-section. The tubular structures and rounded cross-section are also visible in Fig. 1 below.

> Side section 14 includes a tubular upper segment 18 and **a tubular lower segment 20** that is pivotably or foldably connected to segment 18 by a generally U-shaped bracket 22. Bracket 22 is wrapped about and fixedly connected to segment 18 by a pin 24. FIGS. 2 and 3. Segment 20 extends through and is pivotably connected to bracket 22 by a second pin 26. **The opposite side section 16 includes a similar pair of upper and lower segments 28 and 30, respectively.** (See FIGS. 1 and 3) These segments are pivotably interconnected by a second U-shaped bracket 32 that is wrapped about upper segment 28 and fixed thereto by a pin 34. Lower segment 30 extends through bracket 32 and is hingedly connected thereto by a pivot pin 36.

(EX1040, Schaaf, 4:51-63.)

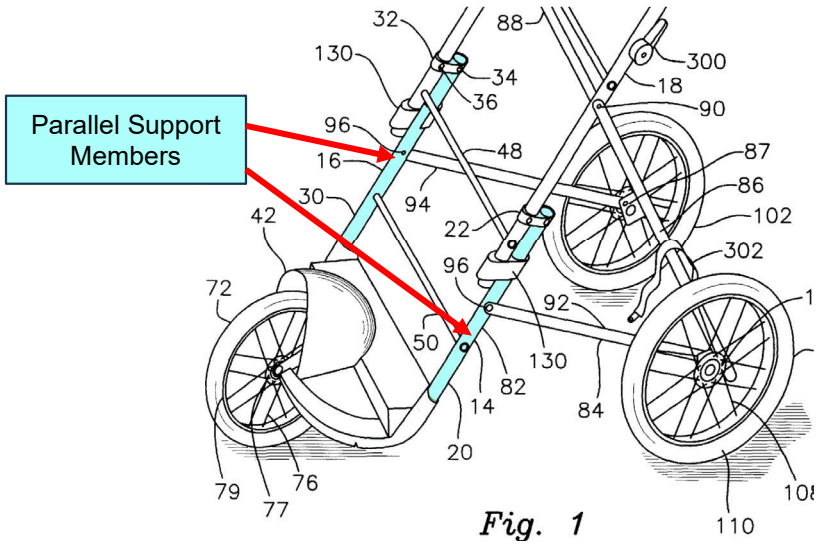


Fig. 1

EX1040, Schaaf, Fig. 1

505. As discussed above, it would have been obvious to incorporate Schaaf's

parallel support members into Liao's frame design.

506. Therefore, it is my opinion that Schaaf discloses the additional limitations of claim 11 and that this claim is obvious.

> … ***[12] The stroller system of claim 8, wherein the rear wheel support portion includes a pair of parallel support members connected by the folding mechanism to the parallel support members of the front wheel support portion.***

507. Liao illustrates that the rear wheel support portion of its frame includes a pair of parallel support members (brown). As shown in Fig. 1, these components are separated by a constant distance and do not intersect even when extended axially.

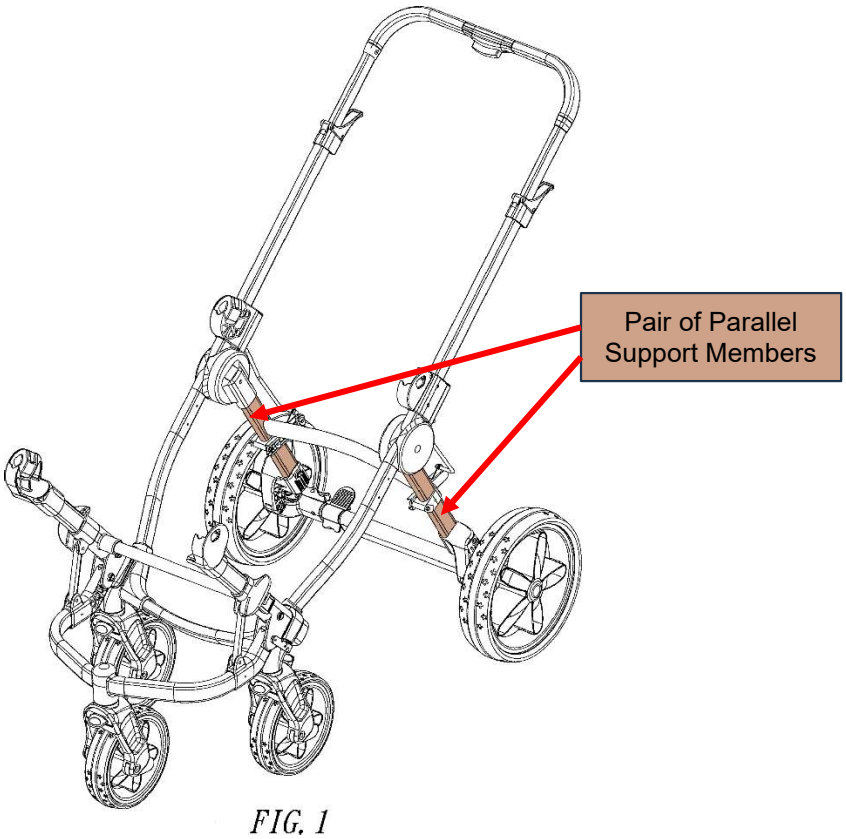


FIG. 1

EX1051, Liao, Fig. 1

508. The parallel support members (brown) of the rear wheel support portion are connected by the folding mechanism (pink) to the front wheel support portion (blue), as shown below. As discussed above, it would have been obvious to make Liao's non-parallel front wheel support portion (blue) parallel, as disclosed in Schaaf. When this change is implemented, Liao's parallel support members (brown) of the rear wheel support portion would be connected by the folding mechanism (pink) to the parallel support members of the front wheel support portion (blue).

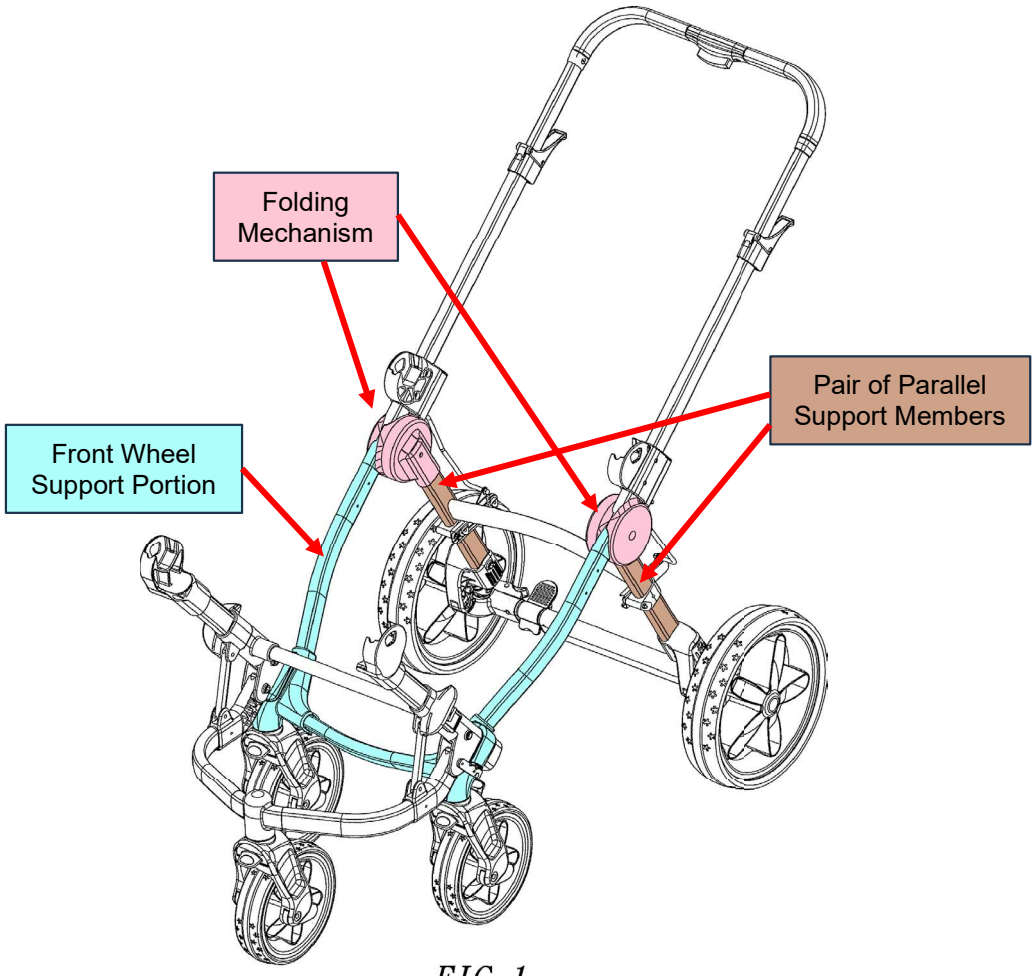


FIG. 1

EX1051, Liao, Fig. 1

509. Therefore, it is my opinion that Liao and Schaaf render obvious the additional limitations of claim 12 and that this claim is obvious.

> … ***[13] The stroller system of claim 12, wherein the folding mechanism includes a pair of pivots spaced apart and configured to connect corresponding ones of the parallel support members of the rear and front wheel support portions.***

510. Liao's folding mechanism (pink) includes pivots that are spaced apart on opposite sides of the stroller frame. The pivots are the two hubs that form the Liao's folding mechanism and allow the frame to fold.

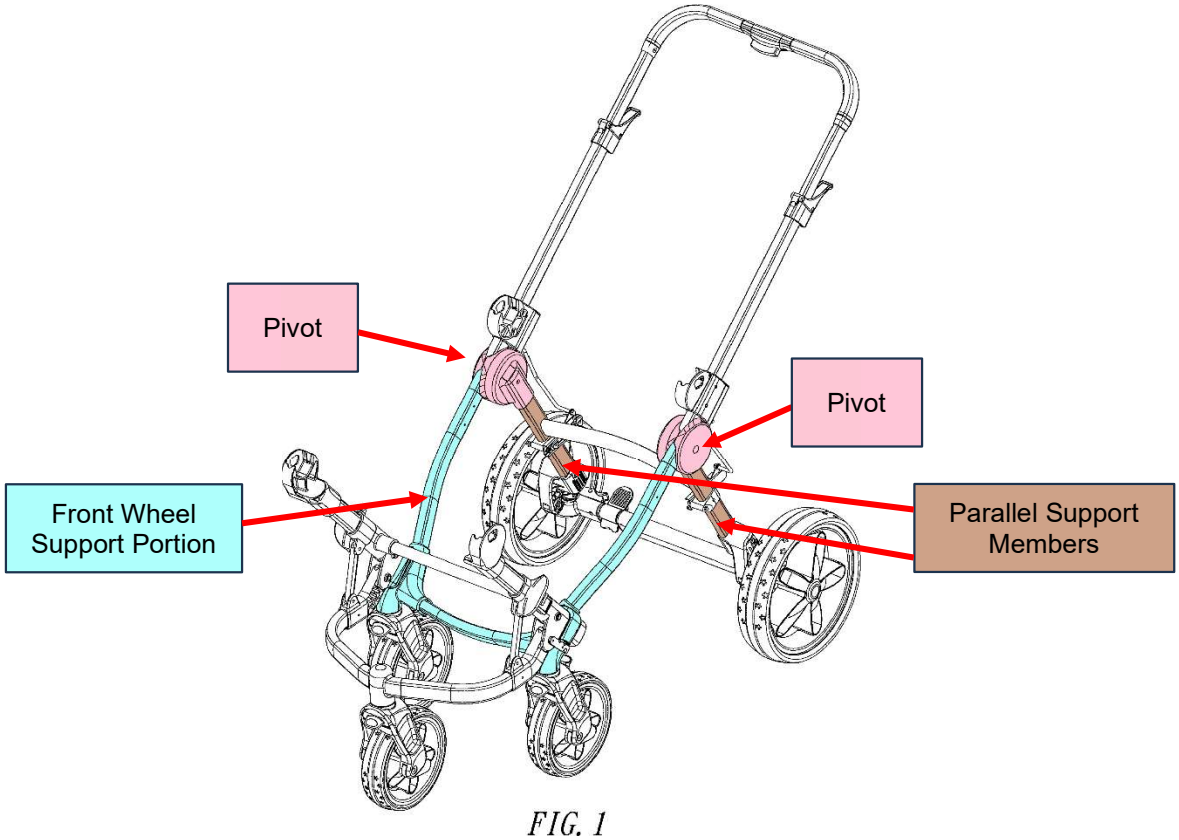


FIG. 1

EX1051, Liao, Fig. 1

511. As discussed above (for claim 12), the folding mechanism of Liao

connects the parallel portions of the rear wheel support portion and the front wheel support portion of the modified frame of Liao/Schaaf. Because the folding mechanism of Liao is formed of the two pivots (pink) identified above, the pivots connect corresponding ones of the parallel support members of the rear and front wheel support portions.

512. Therefore, it is my opinion that Liao and Schaaf render obvious the additional limitations of claim 13 and that this claim is obvious.

> … ***[14] The stroller system of claim 13, wherein the handle portion includes a pair of parallel support members and a crossbar, wherein the parallel support members of the handle portion connect to the parallel support members of the front wheel support portion via the folding mechanism, and wherein the parallel support members of the handle portion and of the front wheel support portion extend diagonally downwards from the crossbar of the handle portion.***

513. As shown below, the handle portion of Liao's frame includes a pair of parallel support members (dark red) and a crossbar (light red).

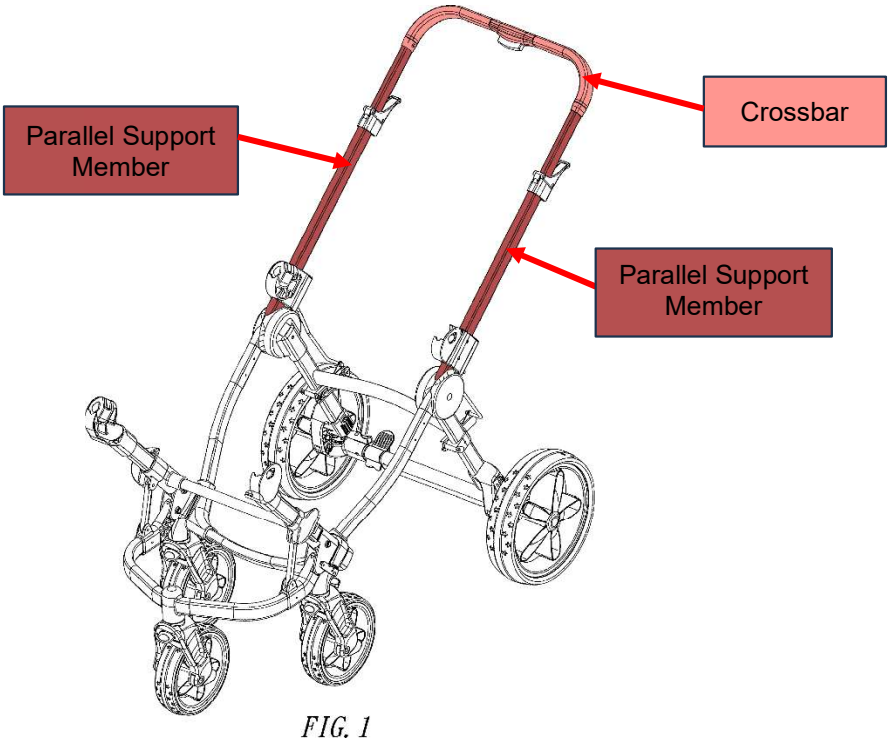


FIG. 1

EX1051, Liao, Fig. 1

514. As shown below, the parallel support members (dark red) of the handle portion connect to the parallel support members of the front wheel support portion (blue) via the folding mechanism (pink).

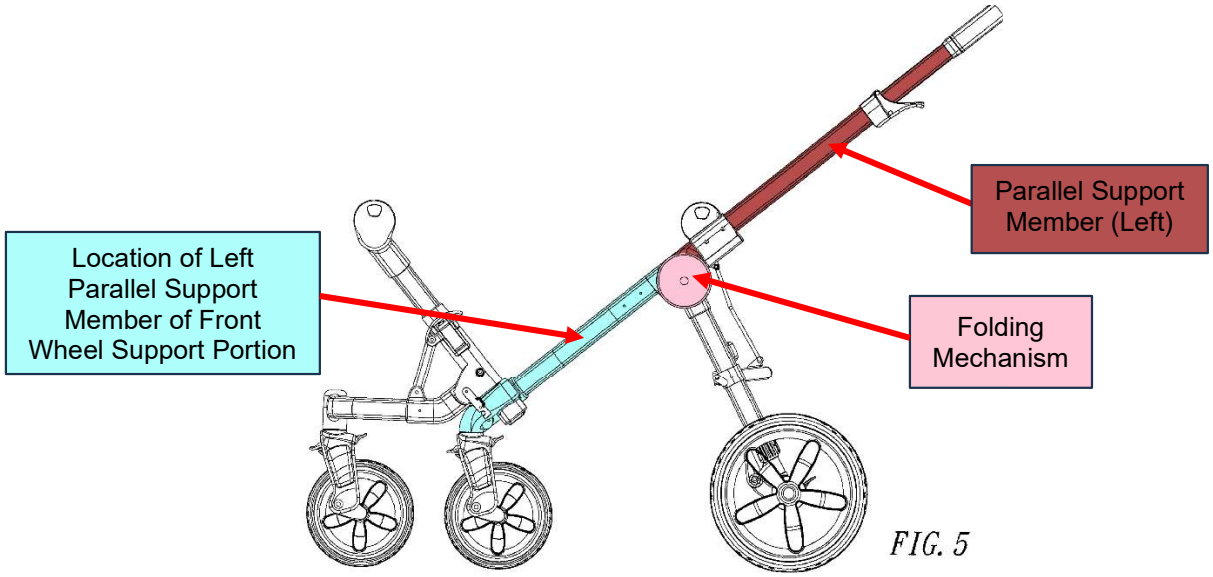
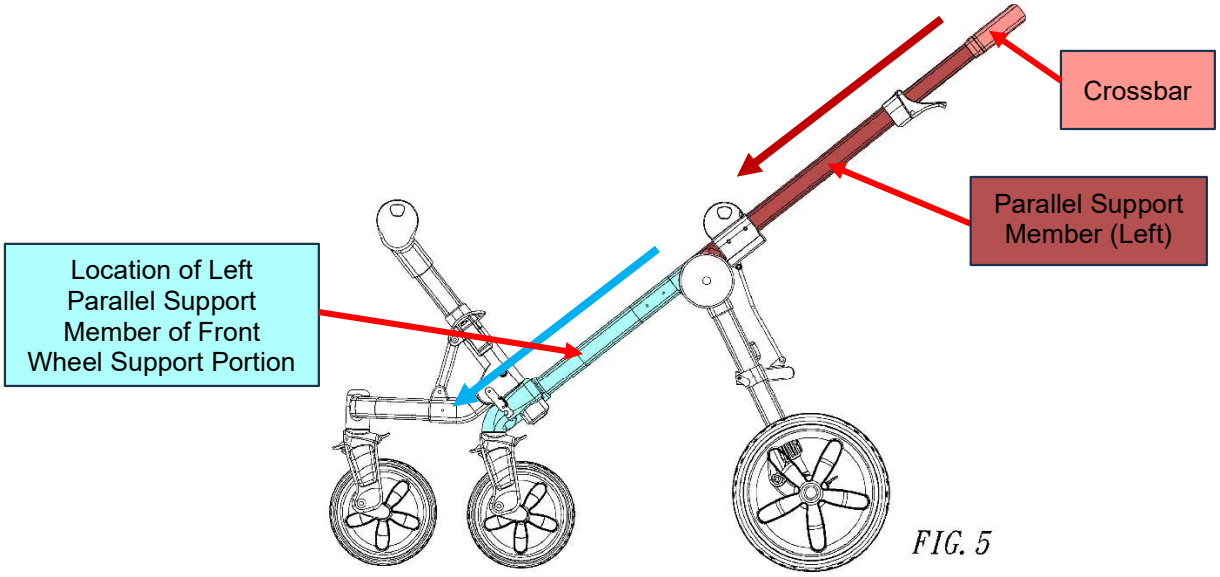


FIG. 5

EX1051, Liao, Fig. 5

515. As shown below, the parallel support members (dark red) of the handle portion and the parallel support members of the front wheel support portion extend diagonally downwards from the crossbar of the handle portion. This is true even when Liao's frame is modified in view of Schaaf so that the front wheel support portion (blue) and handle portion (red) are substantially parallel. (See discussion for claim 14 of Ground 1).



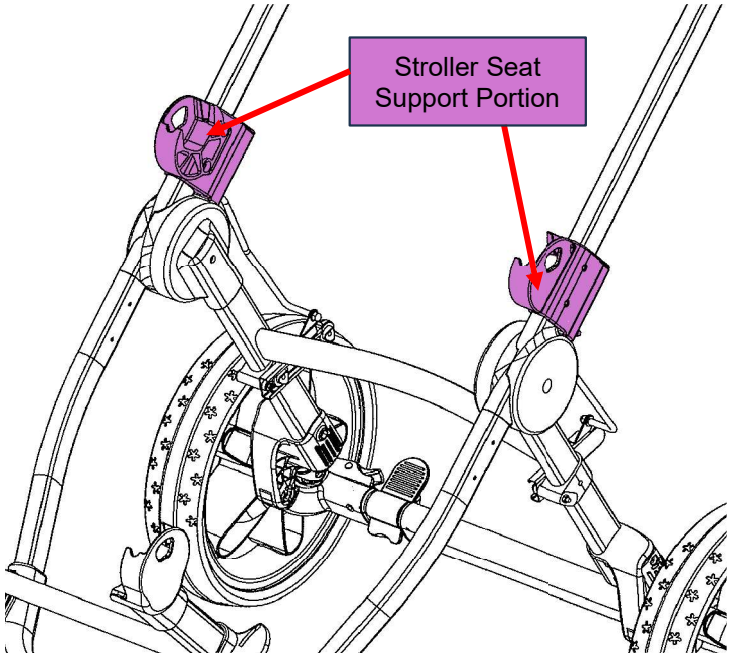
EX1051, Liao, Fig. 5

516. Therefore, it is my opinion that Liao and Schaaf render obvious the additional limitations of claim 14 and that this claim is obvious.

… ***[15] The stroller system of claim 1, wherein the stroller seat support portion is configured to releasably support the rear stroller seat.***

517. The stroller seat support portion of Liao (purple) is shown below. The top parts of the stroller seat support portion is a generic stroller seat connector

(similar to the one for the front wheel support portion discussed above). They are designed so that a stroller seat can be connected to and removed without using special tools or skills. Additionally, Figs. 8-13 show the stroller seat support portion (purple) being used to support various kinds of stroller seats, which confirms that the seats can be easily connected to and removed from the stroller seat support portion (purple).

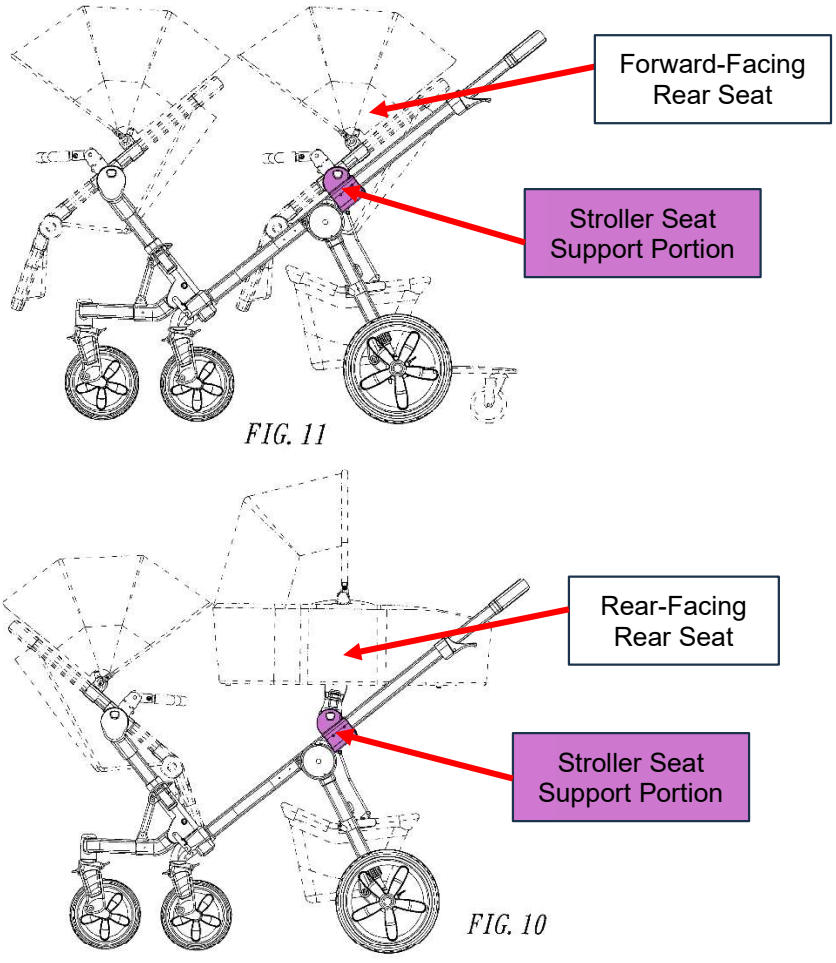


EX1051, Liao, Fig. 1

518. Therefore, it is my opinion that Liao discloses the additional limitation of claim 15 and that this claim is obvious.

… ***[16] The stroller system of claim 1, wherein the stroller seat support portion is configured to support the rear stroller seat in either a forward-facing configuration or a backward-facing configuration.***

519. Liao illustrates the stroller seat support portion (purple) being used to support rear stroller seats in either a forward-facing or back-ward facing configuration.



EX1051, Liao, Fig.11 and Fig. 10

520. Therefore, it is my opinion that Liao discloses the additional limitation of claim 16 and that this claim is obvious.

… ***[17] The stroller system of claim 1, wherein the front seat attachment is further configured to connect to one or more sides of the front stroller seat.***

521. Liao illustrates its front seat attachment connecting to one or more sides of the front stroller seat. Fig. 11 below shows the left seat support post (gold) connecting to the left side of the front stroller seat. A POSITA would understand that the right seat support post (not visible) similarly connects to the right side of the front stroller seat.

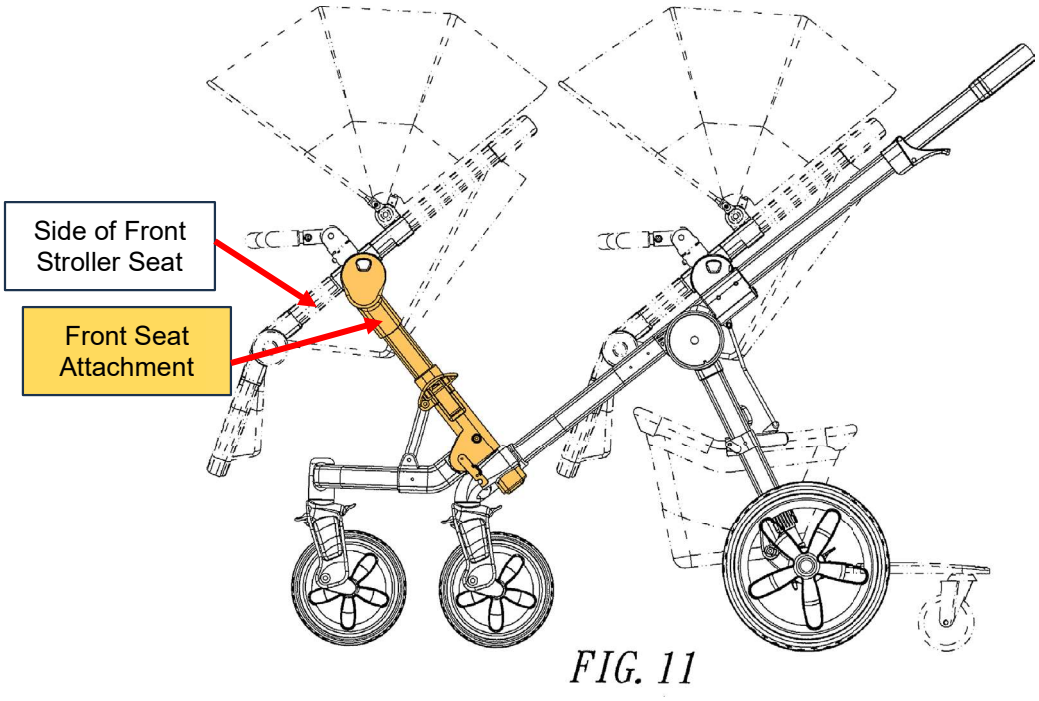


FIG. 11

EX1051, Liao, Fig. 11

522. Therefore, it is my opinion that Liao discloses the additional limitation of claim 17 and that this claim is obvious.

… ***[19] The stroller system of claim 1, wherein the pair of front wheels includes only two front wheels.***

523. The pair of front wheels in Liao includes only two front wheels, as shown below.

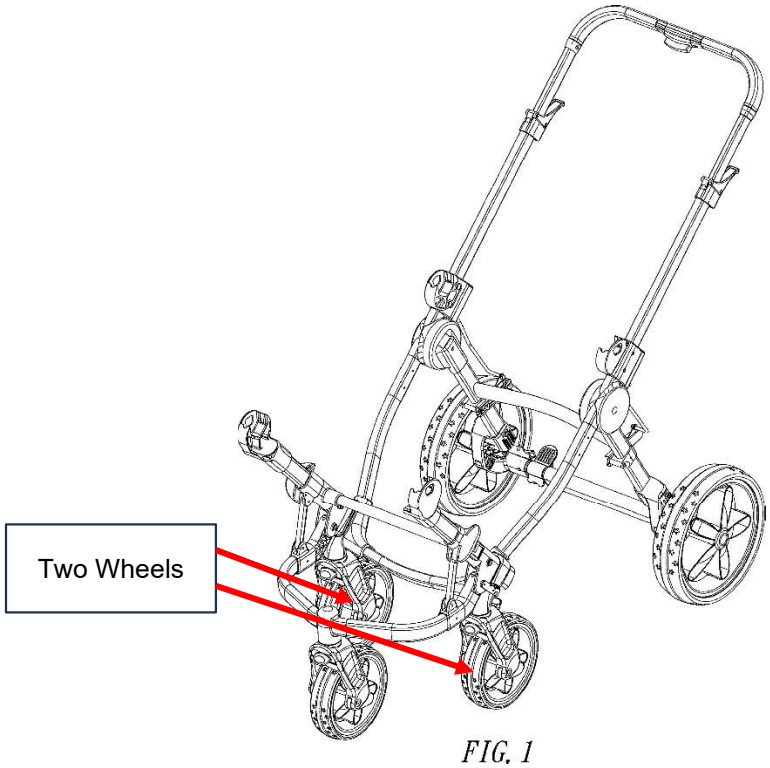


FIG. 1

EX1051, Liao, Fig. 1

524. Therefore, it is my opinion that Liao discloses the additional limitation of claim 19 and that this claim is obvious.

… ***[20] The stroller system of claim 19, wherein the only two front wheels are laterally spaced apart from each other on a left side and a right side of the front wheel support portion.***

525. As shown below, the two front wheels of Liao's stroller frame are laterally spaced apart from each other. Additionally, the left wheel is on the left side

of the front wheel support portion, and the right wheel is on the right side of the front wheel support portion.

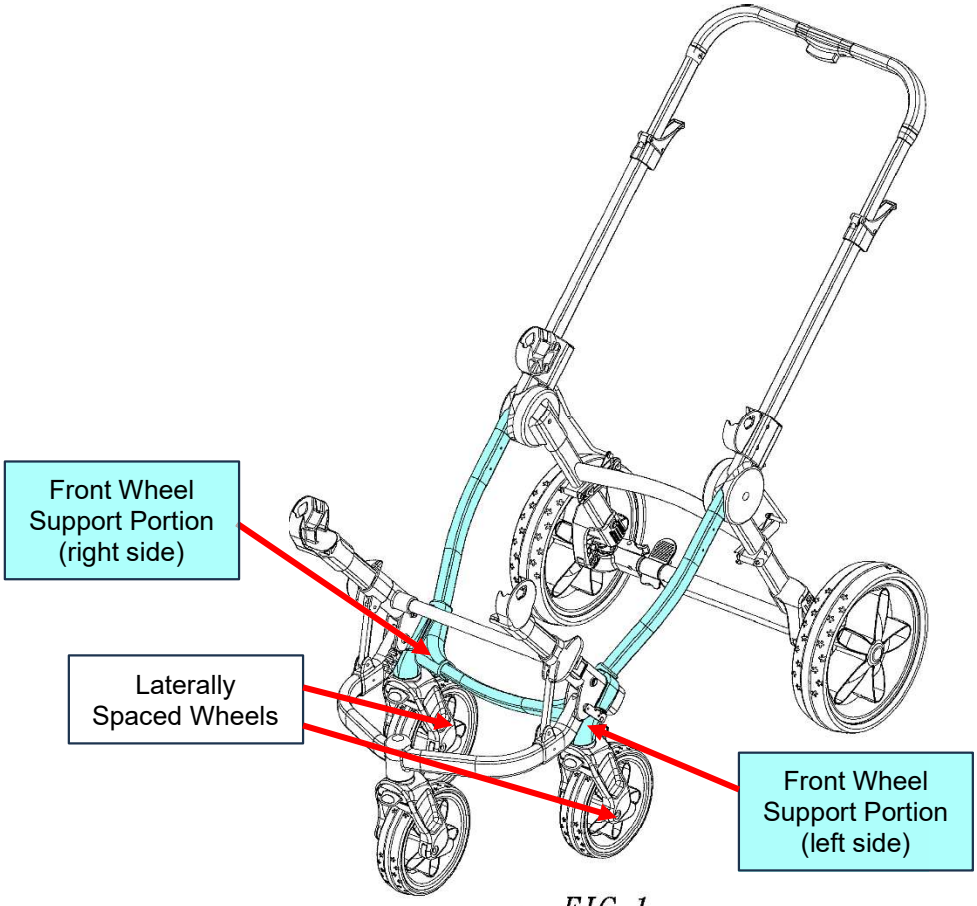


FIG. 1

EX1051, Liao, Fig. 1

526. Therefore, it is my opinion that Liao discloses the additional limitations of claim 20 and that this claim is obvious.

> … ***[21] The stroller system of claim 1, wherein the folded configuration includes at [l]east partially overlapping the front wheel support portion and the handle portion.***

527. A comparison of Fig. 3 of the '231 Patent and Fig. 11 of Liao reveal that the two frames are essentially the same. To the extent that the folded

configuration of the ’231 Patent’s frame includes at least partially overlapping the front wheel support portion and the handle portion, Liao’s frame also discloses this feature.

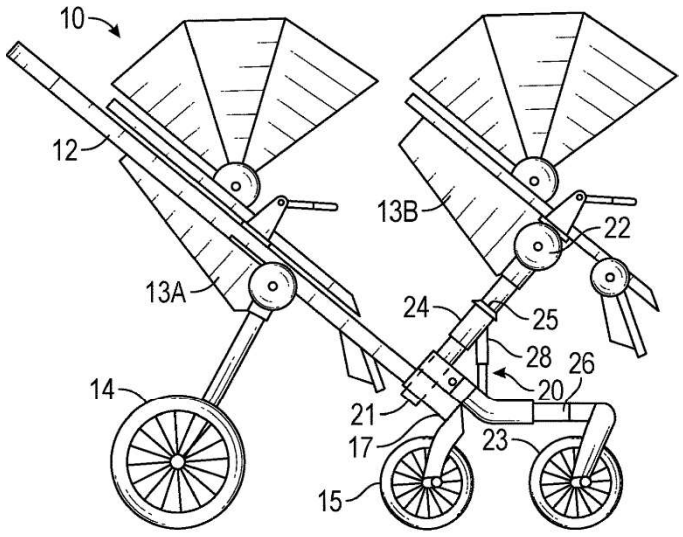
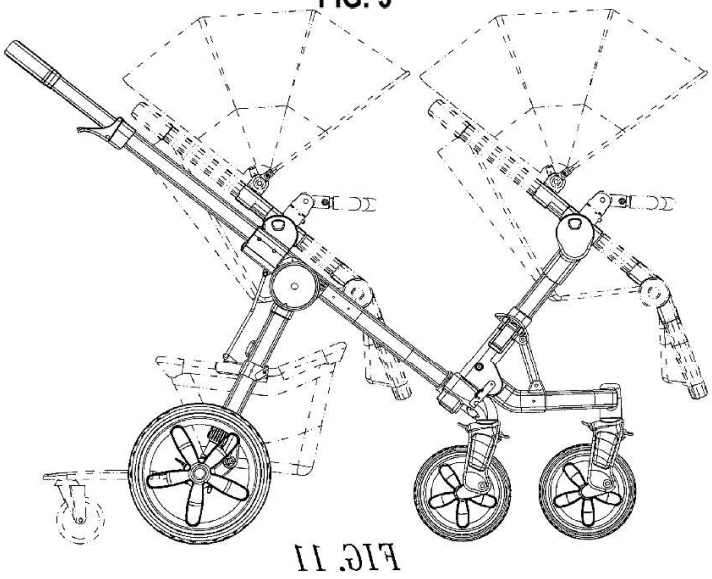


FIG. 3

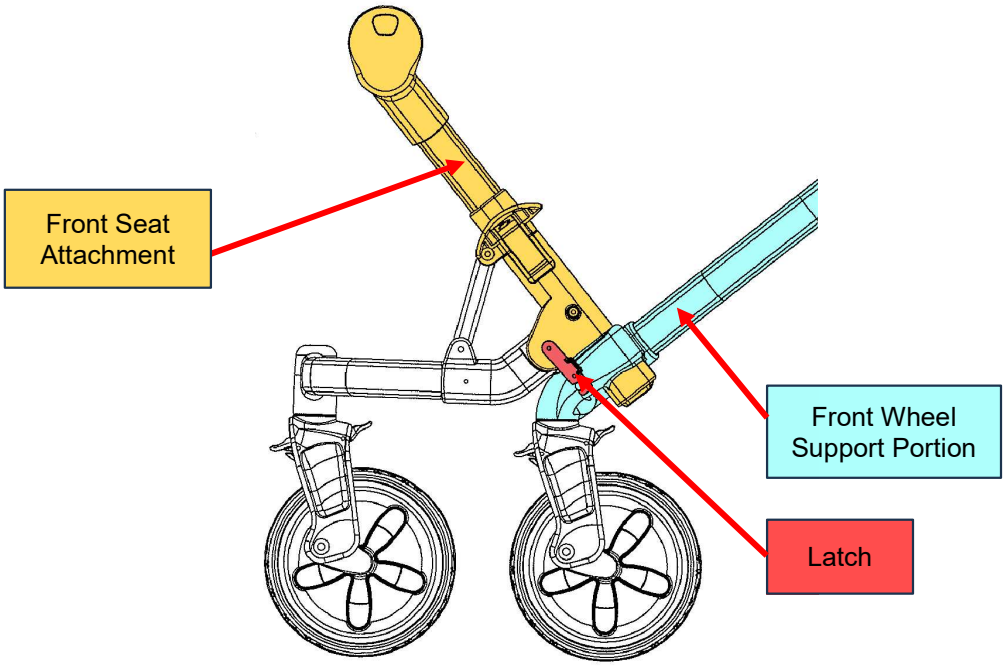


EX1012, ’231 Patent, Fig. 3 and EX1051, Liao, Fig. 11 (mirrored)

528. Therefore, it is my opinion that, to the extent the ’231 Patent discloses the additional limitations in claim 21, Liao does too, and that this claim is obvious.

… ***[22] The stroller system of claim 1 wherein the front seat attachment is configured to releasable attach to the front wheel support portion.***

529. As I discussed above (for claim 4), Liao's seat support posts (front seat attachment) (gold) are configured to releasably attach to the front wheel support portion using latches.



EX1051, Liao, Fig. 5

530. Therefore, it is my opinion that Liao discloses the additional limitation of claim 22 and that this claim is obvious.

XI. Conclusion

531. In my opinion, all the limitations of the challenged claims are disclosed or rendered obvious by the prior art references discussed above and that the claims

are unpatentable in view of these prior art references. In particular, claims 1-17 and 19-22 would have been obvious in view of Dotsey and Zehfuss (Ground 1), Van Dijk and Schaaf (Ground 2), and Liao and Schaaf (Ground 3).

532. I reserve the right to supplement my opinions to address any information obtained, or positions taken, based on any new information that comes to light throughout this proceeding.

Docusign Envelope ID: F64BAF95-5E58-451A-937C-E4B090B9D7BE

I declare that all statements made herein of my own knowledge are true, that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

I declare under penalty of perjury that the foregoing is true and accurate to the best of my ability.

Executed on: 6/5/2025

Signed by:
Douglas S. Prairie
064A32FE169B2415...

Douglas S. Prairie, P.E.

APPENDIX A

DOUGLAS S. PRAIRIE, P.E.

1402 Steamboat Trail • Brookings, SD 57006 • (605) 310-8802 • douglasprairie@yahoo.com

PROFESSIONAL ENGINEER

Registered under number 13315 in the State of Idaho

MISSION STATEMENT

Provide innovative education, business and product development solutions

SKILLS SUMMARY

• Engineering Education	• Product Management	• Engineering Management
• Precision Agriculture	• Business Development	• Contract Negotiations
• Fluid Power Systems	• P&ID Development	• Design for Manufacturing
• Higher Education	• Sales Management	• Stress & Failure Analysis
• Off-Highway Equipment	• Intellectual Property	• Feasibility Cost Studies
• Project Management	• Biofuels	• GD&T
• Product Development	• Industrial Equipment	• Engine Emission Regs
• Lean Manufacturing	• Agricultural Equipment	• Machine Design

EXPERIENCE

South Dakota State University, Brookings, SD; www.sdstate.edu; *August 2016 to present*
Lecturer for Agriculture and Biosystems Engineering Department

- Ag Power and Machinery, Fluid Power Systems, Instrumentation and Controls, ABE Senior Design
- Advisor for International Quarter Scale tractor club; Awarded 3 Championships over the last 9 years
- Advisor for Fluid Power Club; Awarded 2nd place for Fluid Power Bike competition 2023 and 2025

Prairie West LLC, *December 2007 to present*
Freelance Agriculture, Mechanical and Industrial Design Engineer

- Expert legal consultant for multiple cases requiring mechanical and agriculture systems expertise
- Contract designer, developer and test engineer for BOB Strollers
- Contract engineer and CAD designer for AGI Hi Roller belt conveyors

POET Research, Sioux Falls, SD www.poet.com; *June 2015 to June 2016*
Mechanical Research Manager for POET's Research and Innovation Group

- POET Research was responsible for the development and support of novel technologies related to corn ethanol, cellulosic ethanol, and corn derived industrial products and processes.

Raven Industries, Sioux Falls, SD www.ravenprecision.com; *November 2014 to March 2015*
North American Sales Manager of Precision Agriculture Technology

- Sales Leadership for a team of 15 account managers spread across the United States and Canada
- Sales Forecasting and Analysis for hundreds of accounts totaling over $60 million in annual sales
- Contract Negotiations with OEM and after-market distribution partners

Raven Industries, Sioux Falls, SD www.ravenprecision.com; *March 2010 to November 2014*
Product Manager of Planting, Seeding and Harvest Control Product Lines

- Led development and launch of OmniRow Planter Controls, OmniSeed Air Seeder Controls, UHarvest Grain Cart Monitoring System, and SmartYield Pro Yield Monitoring System
- Business Development of an industry leading Multi-Hybrid planter control system
- Team Lead for Raven SmartQuote Guided Sales and Quotation Tool
- Grew product line sales from a few thousand $ into multi-million $ per year business segments
- Recipient of four ASABE AE 50 Product Innovation Awards
- Member of Raven Leadership Council

EXPERIENCE CONTINUED

Bratney Companies, Boise, ID www.bratney.com; *February 2003 to September 2005*
Construction/Mechanical Project Engineer of Industrial Processes

- Developed and Executed proposals for multiple design-build construction projects
- Project Managed the construction and startup of a green field alfalfa cleaning and bagging facility

Multiquip, Boise, ID www.multiquip.com; *Dec 2000 to Feb 2003; Sept 2005 to Dec 2007*
Engineering Department Manager for Light Construction Equipment Manufacturer

- Manage a team of 15 engineers, designers, drafters, and technicians tasked with supporting the safety and technical demands of 200+ plus finished goods.
- Manage a $1.3 million annual budget for engineering product support and product development.
- Coordinate with product managers, manufacturing, quality, purchasing, marketing, and suppliers
- Responsible for designing equipment to latest global safety and homologation standards
- Coordinate intellectual property development with patent attorneys

Case Corporation, Fargo, ND www.cnh.com; *October 1996 to July 2000*
New Product Development Engineer for Planting and Seeding Division

- Developed SDX 30 and SDX 40 single disc planter programs from conception to production

Ag-Chem Equipment Co., Jackson, MN www.agcocorp.com; *May 1996 to September 1996*

- Performed and analyzed engine dynamometer tests, hydraulic tests, and other product tests utilizing data acquisition systems

PATENTS

- Inventor on U.S. Patent # 5,915,312 & 6,047,652: *Pneumatic Seed Delivery System*
- Inventor on U.S. Patent # 6,116,172: *Shank Mounted Row Crop Opener*
- Inventor on U.S. Patent # 6,386,127 6,640,732 & 6,644,223: *Disc Opener for a Seed Planter*
- Inventor on U.S. Patent # 6,454,019: *Ag Implement Down Pressure System*
- Inventor on U.S. Patent # 7,497,522: *Concrete Saw Stay Level Handlebars,*
- Patent Pending: *Multi-Hybrid Planter Controls and Combine Yield Monitor Systems.*

SOFTWARE

SolidWorks CAD and Simulation, LabVIEW, MathCAD, Visio, CREO, AutoCAD, SAP R/3, Visual Basic, Working Model, Microsoft Office and Microsoft Project

EDUCATION

BOISE STATE UNIVERSITY (BSU) Boise, ID www.boisestate.edu
Masters of Mechanical Engineering with Business Emphasis
Graduation Date: December 2004 GPA: 3.5/4.0
Project Paper: *Design of a Conceptual Biodiesel Production Facility*

SOUTH DAKOTA STATE UNIVERSITY (SDSU), Brookings, SD www.sdstate.edu
BS Agricultural Engineering with Power and Machinery Focus
Graduation Date: May 1997 GPA: 3.6/4.0

ASSOCIATIONS

- Certified with Carew International Dimensions of Professional Selling® Program
- Member of FarmHouse Fraternity www.farmhouse.org
- Member of Society of Automotive Engineers www.sae.org
- Member of American Society of Mechanical Engineers www.asme.org
- Member of American Society of Agricultural and Biological Engineers www.asabe.org
- SolidWorks User Group

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PROFESSIONAL ENGINEER

Registered under number 13315 in the State of Idaho

EXPERT WITNESS CASE HISTORY

Testimony and/or Deposition

1. Precision Planting, LLC and AGCO CORP (Petitioners) vs DEERE and COMPANY (Patent owner), Case Numbers: IPR2019-01044; IPR2019-010446; IPR2019-01050; IPR2019-01052; IPR2019-01053; IPR2019-01054; IPR2019-01055 (USPTO Patent Trial and Appeal Board). Multiple reports and approximately 40 hours of deposition.
2. Bazooka Farmstar, LLC (Petitioner) vs Nuhn Industries Ltd. (Patent Owner), IPR2023-01161 (USPTO Patent Trial and Appeal Board). Declaration and deposition testimony on behalf of Patent Owner
3. Bazooka Farmstar, LLC (Petitioner) vs Nuhn Industries Ltd. (Patent Owner), IPR2024-00004 (USPTO Patent Trial and Appeal Board). Declaration testimony on behalf of Patent Owner
4. Bazooka Farmstar, LLC (Petitioner) vs Nuhn Industries Ltd. (Patent Owner), IPR2024-00098 (USPTO Patent Trial and Appeal Board). Declaration and deposition testimony on behalf of Patent Owner
5. Nuhn Industries Ltd. (Plaintiff) v. Bazooka Farmstar, LLC (Defendant), Case No.. 3:22-cv-00015, (S.D. Iowa). Expert reports on behalf of Plaintiff
6. Unverferth Mfg. Co., Inc v Park-Kan Co., LLC (Petitioner). Review Expert of US Patent Numbers: 8,967,940; and 9,745,123. Declarations and testimony on behalf of petitioner.

Patent Infringement and Patent Litigation

1. Wilmer Cutler Pickering Hale and Dorr LLP, Washington D.C. (2018 -2020). Deere and Company (Plaintiff) vs AGCO and Precision Planting (Defendants). Patent Infringement Review Expert for U.S. Patent Numbers: 8,671,856; 8,813,663; 8,850,998; 9,480,199; 9,510,502; 9,661,799; 9,686,906; 9,699,955; 9,807,922; 9,807,924; 9,820,429; 9,861,031; 10,004,173. Working on behalf of the defendant.
2. Harness, Dickey & Pierce, P.L.C. St. Louis, MO (2023-present). Bazooka-Farmstar, LLC (Petitioner) v. Nuhn Industries LTD,. (Patent Owner). Patent validity case. Review Expert of US Patent Numbers: 10,974,557, 11,358,425, 11,491,835, and 11,541,708. Working on behalf of Patent Owner.
3. Fish & Richardson, P.C, Minneapolis, MN (2024 – present). Unverferth Mfg. Co., Inc v Park-Kan Co., LLC (Petitioner). Review Expert of US Patent Numbers: 8,967,940; and 9,745,123. Working on behalf of petitioner.
4. Stara S.A.-Industria De Implementos Agricolas (Petintioner) v AGCO Corporation (Patent Owner), IPR2024-01459. Expert report on behalf of Patent Owner
5. David's Dozer (Patent Owner) v. Deere and Company (Petitioner), Patent analysis of US Patent 10,533,300 Automatic Grade Stabilizer on behalf of Patent Owner.

Product Liability and Safety Litigation

1. Marlow, Woodward & Huff, PLLC, Yankton SD (2023). Dwayne Schmitz (Plaintiff) vs Clark Equipment Co. (Defendants). Product liability and safety review. Working on behalf of the Plaintiff. Work involved a safety test report and declaration report.