

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EVENFLO COMPANY, INC.,
Petitioner,

v.

BABY JOGGER, LLC
Patent Owner.

U.S. Patent No. 11,731,682

Case No.: IPR2025-01122

**PETITION FOR *INTER PARTES* REVIEW
UNDER 35 U.S.C. § 311 *ET SEQ.* AND 37 C.F.R. § 42.100 *ET SEQ.*
(U.S. PATENT NO. 11,731,682)**

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List of Exhibits

Exhibit	Description
EX1001	Declaration of Douglas Prairie
EX1002	U.S. Provisional Patent Application No. 61/119,920
EX1003	U.S. Publication No. 2010/0140902
EX1004	U.S. Patent No. 8,955,869
EX1005	U.S. Patent No. 9,403,550
EX1006	U.S. Provisional Patent Application No. 62/311,224
EX1007	U.S. Patent No. 9,944,305
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
EX1013	U.S. Patent No. 11,878,729
EX1014	Non-certified File History of U.S. Patent Pub. No. 2010/0140902
EX1015	Non-certified File History of U.S. Patent No. 8,955,869
EX1016	Non-certified File History of U.S. Patent No. 9,403,550
EX1017	Non-certified File History of U.S. Patent No. 9,944,305
EX1018	Non-certified File History of U.S. Patent No. 10,730,543

Exhibit	Description
EX1019	Certified File History of U.S. Patent No. 11,192,568
EX1020	Certified File History of U.S. Patent No. 11,731,682
EX1021	Certified File History of U.S. Patent No. 11,577,771
EX1022	Non-certified File History of U.S. Patent No. 11,505,231
EX1023	Non-certified File History of U.S. Patent No. 11,878,729
EX1024	Certified File History of U.S. Patent Application No. 18/448,417
EX1025	Sewell, Samuel J. “The History of Children’s and Invalids’ Carriages.” <i>Journal of the Royal Society of Arts</i> , vol. 71, no. 3694, 1923, pp. 716-728
EX1026	U.S. Patent No. 405,600
EX1027	U.S. Patent No. 510,355
EX1028	Non-certified File History of U.S. Patent Application No. 13/123,550, including certified copy of GB0818605
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
EX1035	U.S. Patent Pub. No. 2008/0238042
EX1036	U.S. Patent No. 5,338,096
EX1037	U.S. Patent No. 6,086,087

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EX1038	Kolcraft Contours Options Tandem Stroller Instruction Sheet, EXA to Affidavit of Christopher Butler
EX1039	French Patent 2,615,155 and Non-certified English Translation
EX1040	U.S. Patent No. 6,209,892
EX1041	EP 0980810 and Certified Translation
EX1042	U.S. Design Patent No. D514,036
EX1043	Evenflo Take Me Too Manual – Double Stroller/Double Travel System (Oct. 2004)
EX1044	U.S. Patent No. 6,045,145
EX1045	U.S. Patent No. 5,794,951
EX1046	Comparison of First Non-Provisional Specification and '305 CIP Specification
EX1047	U.S. Patent No. 8,882,134
EX1048	U.S. Design Patent No. D593,459
EX1049	U.S. Patent Pub. No. 2006/0071451
EX1050	U.S. Patent Pub. No. 2020/0385045
EX1051	U.S. Patent No. 8,672,341
EX1052	Non-certified File History of U.S. Pat. App. No. 29/324,044
EX1053	CN2778636Y and Certified English Translation
EX1054	WO 2008/040797
EX1055	Baby Jogger, LLC's Opening Claim Construction Brief in Civil Action No. 1:24-cv-11582-ADB
EX1056	Baby Jogger, LLC's Responsive Claim Construction Brief in

Exhibit	Description
	Civil Action No. 1:24-cv-11582-ADB
EX1057	EXC to Baby Jogger, LLC's Infringement Contentions in Civil Action No. 1:24-cv-11582-ADB
EX1058	Merriam-Webster, Parallel, https://www.merriam-webster.com/dictionary/parallel (last visited Feb. 21, 2025)
EX1059	<i>McGraw-Hill Dictionary of Scientific and Technical Terms</i> (6th ed. 2003), Definition of "parallel"
EX1060	<i>Barron's Dictionary of Mathematics Terms</i> (3d ed. 2009), Definition of "parallel"

Mandatory Notices under 37 C.F.R. § 42.8

Real Party-In-Interest - 37 C.F.R. § 42.8(b)(1)

Evenflo Company, Inc. (“Petitioner”) is the real party-in-interest.

Related Matters - 37 C.F.R. § 42.8(b)(2)

Petitioner identifies the following related district court matters:

1. *Baby Jogger, LLC v. Evenflo Company, Inc.* 1-24-cv-00723 (DDE),
2. *Baby Jogger, LLC v. Baby Generation, Inc. d/b/a Mockingbird* 1-24-cv-00725 (DDE); and
3. *Baby Jogger, LLC v. Monahan Products LLC d/b/a UPPAbaby* 1-24-cv-11582 (DMA).

In each of the above identified matters, Baby Jogger LLC (“Patent Owner” or “PO”) has asserted U.S.P.N. 11,192,568; 11,505,231; and 11,878,729.

In the *Evenflo* litigation alone, Patent Owner has additionally asserted: U.S.P.N. 11,577,771; and 11,731,682 (“the ’682 Patent”). In the *Baby Generation/Monahan Products* litigations, Patent Owner has additionally asserted: U.S.P.N. 8,955,869; 9,403,550.

Petitioner identifies the following *inter partes* review (“IPR”) petitions which are related:

- IPR2025-01100 regarding U.S.P.N. 11,192,568;
- IPR2025-01095 regarding U.S.P.N. 11,505,231; and

- IPR2025-01120 regarding U.S.P.N. 11,878,729.

Additional IPR petitions pertaining to patents related to the '682 Patent will be filed by Petitioner, or separately by Baby Generation, Inc. d/b/a Mockingbird, or Monahan Products LLC d/b/a/ Uppababy. Petitioner will supplement its mandatory notices pursuant to 37 C.F.R. § 42.8(a)(3) once such petitions are filed.

Petitioner identifies the following pending U.S. Patent Application:

- 18/534,146, titled “Removable Seat Attachments for a Stroller,” filed December 8, 2023.

Lead and Back-Up Counsel - 37 C.F.R. § 42.8(b)(3)

Petitioner identifies the following lead and back-up counsel:

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Pursuant to 37 C.F.R. § 42.10(b), appropriate Powers of Attorney are filed concurrently herewith.

Service Information - 37 C.F.R. § 42.8(b)(4)

Service information for lead and back-up counsel is provided in the designations above. Petitioner also consents to service by email at the following email address:

- GBBL0112IPR@brookskushman.com

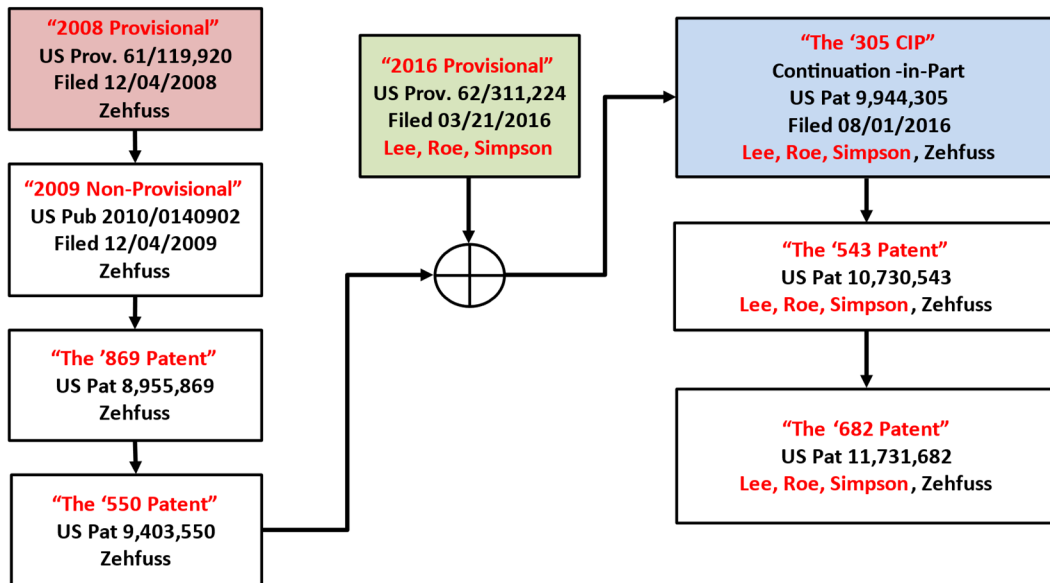
Fees - 37 C.F.R. § 42.15(a)

Filing fees associated with this Petition are being charged to Deposit Account 02-3978. The Board is authorized to charge any additional fees or credit any refunds pertaining to this Petition to Deposit Account 02-3978.

I. INTRODUCTION

Petitioner respectfully challenges claims 1-16 (“Challenged Claims”) of U.S. Patent No. 11,731,682 (“the ’682 Patent”), purportedly assigned to Baby Jogger, LLC (“Patent Owner” or “PO”). Petitioner asserts the Challenged Claims are unpatentable on two independent basis.

First, the ’682 Patent¹ is not entitled to a priority date before 2016 and is unpatentable in view of intervening prior art. The ’682 Patent claims priority to both a 2008 Provisional Application and a 2016 Provisional Application. (EX1010.)



The '682 Patent Family

The 2008 Provisional lists only one inventor, Mark Zehfuss, while the 2016

¹ Petitioner uses the nomenclature provided in red quotes shown by the chart.

Provisional lists three different inventors: Jon Lee, Megan Roe, and Noel Simpson. (EX1002, 16; EX1006, 1.) When PO filed the '305 CIP, it rewrote what is essentially a new specification bearing little resemblance to the original 2009 Non-Provisional specification. (*See* EX1046.)² The most significant revisions included new disclosure added from the 2016 Provisional.

Given the substantial matter added, and the fact that the '682 Patent identifies the three new inventors named from the 2016 Provisional, a dispute exists whether the '682 Patent is entitled to a priority date earlier than March 2016. As discussed below, Petitioner contends independent claims 1-16 are not entitled to a priority date earlier than March 2016. Accordingly, Ground 1 relies on intervening prior art demonstrating the Challenged Claims are unpatentable.

Second, if the Board concludes the Challenged Claims are entitled to a pre-2016 priority date, Petitioner disputes patentability within Grounds 2-4 relying on prior art pre-dating PO's 2008 priority claim.

² EX1046 is a redline comparison between the '305 CIP specification (EX1007) and the 2009 Non-Provisional specification (EX1003). Red underlined material indicates disclosure added to the '305 CIP specification.

II. STANDING REQUIREMENTS UNDER 37 C.F.R. § 42.104

A. Standing – 37 C.F.R. § 42.104(a)

Petitioner certifies the '682 Patent is available for IPR and Petitioner is not barred or estopped from requesting IPR of the Challenged Claims.

B. Challenged Claims – 37 C.F.R. § 42.104(b)(1)

Petitioner requests IPR for claims 1-16 of the '682 Patent and requests the PTAB cancel those claims as being unpatentable.

C. Prior Art

This Petition relies on the following prior art:

Exhibit	Reference	Date	Section ³
EX1047	U.S.P.N. 8,882,134 ("Rolicki")	Filed: 03/14/2013 Issued: 11/11/2014	§ 102(a)(1)/(2)
EX1048	U.S.P.N. D593,459 S ("Liao")	Filed: 09/05/2008 Issued: 6/2/2009	§ 102(a)(2)
EX1049	U.S. Pub. No. 2006/0071451 ("Cheng")	Pub.: 04/06/2006	§ 102 (a)(1)/(2)

³ The Leahy-Smith America Invents Act ("AIA") should apply. *See* § VIII.B. *infra*.

If the Board concludes otherwise, pre-AIA provisions apply.

EX1051	U.S.P.N. 8,672,341 ("Offord '341")	Foreign Priority: 10/10/2008 PCT Filed: 09/24/2009	§ 102(a)(2) ⁴
EX1054	WO 2008/040797 ("Offord '797")	Pub.: 04/10/2008	§ 102(a)(1)/(a)(2)

Rolicki was cited but never relied upon during examination as the PO indicated to the Patent Office all claims had priority back to 2008⁵.

Cheng and Offord '341, and Offord '797 were not cited nor relied upon during examination.

Liao is cited and was relied on as a secondary reference during prosecution of the '682 Patent. As explained in Sections IX.B. and X.B., the Examiner erred in not finding the Challenged Claims unpatentable in view of Liao.

D. Grounds of Challenge – 37 C.F.R. § 42.104(b)(2)

This Petition, supported by the declaration of Douglas Prairie (EX1001), requests cancellation of the Challenged Claims pursuant to the following grounds:

⁴ A certified copy of priority application GB0818605 is included and provides 35 U.S.C. § 112 support. (EX1028, 183-240.) A timely claim to the priority to GB0818605 was made designating one other State than the U.S. (EX1028, 311.)

⁵ See § VIII.A.1. *infra*.

Ground	Basis	Reference	Challenged Claims
1	§ 103	Rolicki	1-16
2	§ 103	Liao	1-9, 13-16
3	§ 103	Liao and Cheng	10-12
4	§ 103	Offord '341 and Offord '797	1-16

Ground 1 depends on finding that the '682 Patent claims are not entitled priority to its earliest effective filing date (“EFD”)—December 4, 2008. *See* § VIII.A. *infra* The prior art relied on for Grounds 2-4 pre-date the EFD and do not rely on a priority challenge. These grounds provide a reasonable likelihood that at least one Challenged Claim is unpatentable.

III. LEVEL OF ORDINARY SKILL

The '682 Patent is directed to children’s strollers. A person of ordinary skill in the art (“POSITA”) 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. (EX1001, ¶¶31-33.)

IV. STATE OF THE ART

By December 2008, a POSITA understood strollers included well-known features like folding mechanisms, rotatable seats, and/or detachable seats.

(EX1001, ¶¶41-61.) A POSITA also understood common stroller configurations included single-seat or double-seat designs. (EX1001, ¶¶62-91.) Numerous commercial strollers were available on the market featuring these features in both removable single-seat and double-seat configurations. (EX1001, ¶¶78-92; EX1031, ¶¶11-74; EX1032, ¶¶7-36.)



EX1038, 15



EX1032, ¶¶22-25, p34; EX1032, ¶¶26-29, pp39-40



EX1032, ¶¶14-17, p19



EX1031, ¶¶14-18

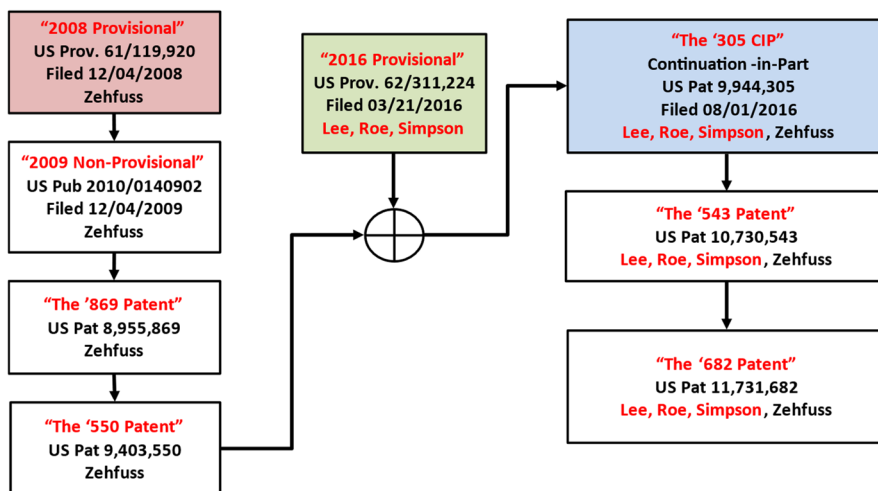


EX1031, ¶¶24-29

V. THE '682 PATENT

A. Overview

The '682 Patent claims priority to a 2008 Provisional (red). The 2008 Provisional identified only Mark Zehfuss (EX1002, 16) as the inventor and disclosed two embodiments relating to a single seat stroller convertible to a double-seat stroller (EX1002, 36-38, 42-43; EX1001, ¶¶95-98.)



The 2016 Provisional lists three new inventors—Lee, Roe, and Simpson—and does not list Zehfuss. (EX1006, 1; EX1001, ¶115.) The 2016 Provisional discloses the new inventors’ novel (relative to the 2008 Provisional) embodiments related to the usage of “seat attachment housings” and “seat attachment adapters.” (EX1006, 8-12, 15-16.) The 2016 Provisional included “claims” reciting the “seat attachment adapters” being coupled to a “seat attachment housing” as new subject matter (relative to the 2008 Provisional). (EX1006, 20.) (EX1001, ¶¶116-122.)

On August 1, 2016, the ’305 CIP (blue) application was filed. (EX1007; EX1001, ¶125.) When filed, PO essentially rewrote the specification to incorporate (1) material disclosed by the 2016 Provisional, and (2) new material not previously disclosed in either the 2008 or 2016 Provisional. (EX1001, ¶¶126-135.) A redline comparison between the specification of the 2009 Non-Provisional and ’305 CIP illustrates the dramatic modifications and alterations. (EX1046; EX1001, ¶127.)

B. The '682 Patent Claims

Diagram illustrating a double stroller with two seats. The stroller features a main frame with two seats, each equipped with a canopy. The front wheel is supported by a front wheel support frame. The rear wheel is supported by a rear wheel support frame. The stroller includes a handle portion and an upper tube support frame. The diagram also shows a seat attachment adapter and a seat attachment housing. Various components are labeled with numbers and letters, including 80, 81, 81a, 81b, 81c, 81d, 81e, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 87

FIGURE 8A

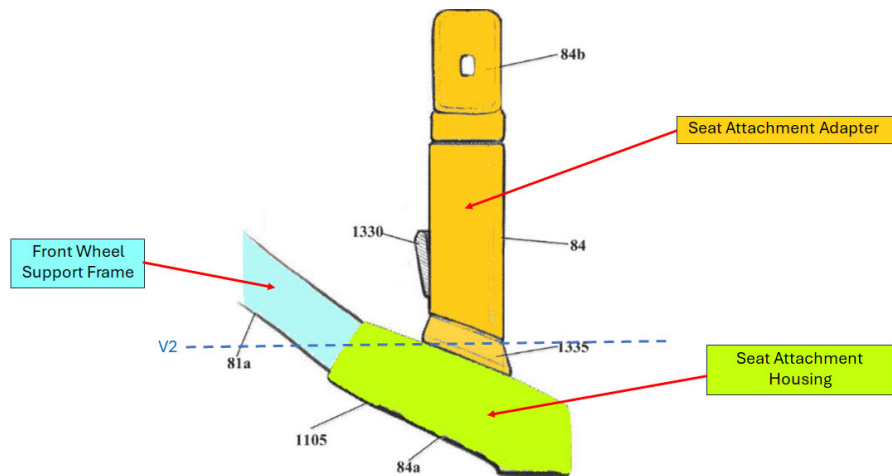


FIGURE 13C

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Claim 1 recites a stroller having “a stroller frame comprising a handle portion and a front end portion[.]” (EX1010, 17:7-8.) A “first seat” is recited as being “coupled to the stroller frame at a first vertical position ... disposed closer to the handle portion than the front end portion[.]” (EX1010, 17:11-14.)

Two “seat attachment housings” are recited as being “coupled to the stroller frame” at “[second/third] vertical position[s]” which are below the “first vertical position.” (EX1010, 17:15-17, 17:20-24.) Two “seat attachment adapters” are “spaced from and coupled to” the respective “seat attachment housings.”⁶ (EX1010, 17:25-29.) Claim 1 concludes by reciting “the first seat and the second seat, when connected to the frame,⁷ are arranged in an inline descending configuration along the stroller frame.” (EX1010, 17:31-33.)

C. Prosecution History

The '682 Patent issued from U.S. Application No. 16/903,292 (“the '292 Application”) and lists four inventors: Lee, Roe, Simpson, and Zehfuss. (EX1020, 45-46.) In response to a restriction requirement issued in August 2021, the Patent

⁶ The dependent claims further recite the placement, structure, and coupling features of the “adapters” and “housings.”

⁷ Claim 1 does not provide antecedent support for the “second seat,” nor does it recite where or how it is “connected along the frame.”

Owner (“PO”) stated it was electing “the embodiment of FIG. 1-3.” (EX1020, 187-189.) However, that election appears problematic for several reasons.

First, the figures identified—Figures 1-3—relate to subject matter purportedly originating in the 2008 Provisional Application and attributed to inventor Mark Zehfuss. (*See* EX1002, 19-21, 35.) But the inventors of the 2016 Provisional—Lee, Roe, and Simpson—are listed as inventors to the ’682 Patent. (EX1006, 1, 4; EX1010.) Lee, Roe, and Simpson would be incorrect inventors if the claimed subject matter of the ’682 Patent only pertained to Figures 1-3.

Second, the Examiner issued an objection to the drawings on the basis that not all claimed elements were shown in the elected embodiment of Figures 1-3—including the claimed “ housings ” and “ adapters. ” (EX1020, 195-196.) PO responded by stating paragraphs [0046] and [0047] of the published application supported the original limitation requiring the “ adapters ” be “ removably coupled ” to the “ housings. ” (EX1020, 328.) But the paragraphs cited pertain to an embodiment disclosed only in the 2016 Provisional, *i.e.*, *not* in Figures 1-3. (*Compare* EX1050, ¶¶0046-0047 to EX1006, 9-10; EX1001, ¶¶158-159.)

For these reasons, and as further discussed in Section VIII.A. *infra*, Petitioner submits the correct written description support for many of the claimed limitations derives from the 2016 Provisional Application that should be attributed to inventors Lee, Roe, and Simpson—not to Zehfuss nor the 2008 Provisional.

VI. LEVEL OF ORDINARY SKILL

The '682 Patent is directed to children's strollers. A POSITA 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. (EX1001, ¶¶31-33.) More education can replace product design experience, and vice versa. *Id.*

VII. CLAIM CONSTRUCTION

Although there are several Section 112 issues with the Challenged Claims, none preclude the Board from evaluating validity based on the grounds asserted herein. *See Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 813 (Fed. Cir. 2021).

This Petition applies constructions that PO has implicitly or explicitly applied in litigation and, in certain instances, alternative constructions. *See* EX1055, EX1056. Petitioner reserves the right to argue different constructions in other actions. *See Western Digital Corp. v. Spex Techs., Inc.*, IPR2018-00082, Paper 11, at *11-12 (PTAB Apr. 25, 2018). Except for the term below, no formal construction currently appears necessary.

A. “Handle Portion” (claim 1)

During prosecution of the '543 Patent (to which the '682 Patent claims priority), the PO amended the specification and Figure 8A below to specify the handle portion (81*d* in pink) is coupled to the left and right upper tube support

members (81c in red) extending toward the front end portion of the frame.⁸ (EX1018, 639; EX1001, ¶171.) The amendments regarding the “handle portion” were included in the issued ’543 Patent. (EX1008, 9:1-7.)

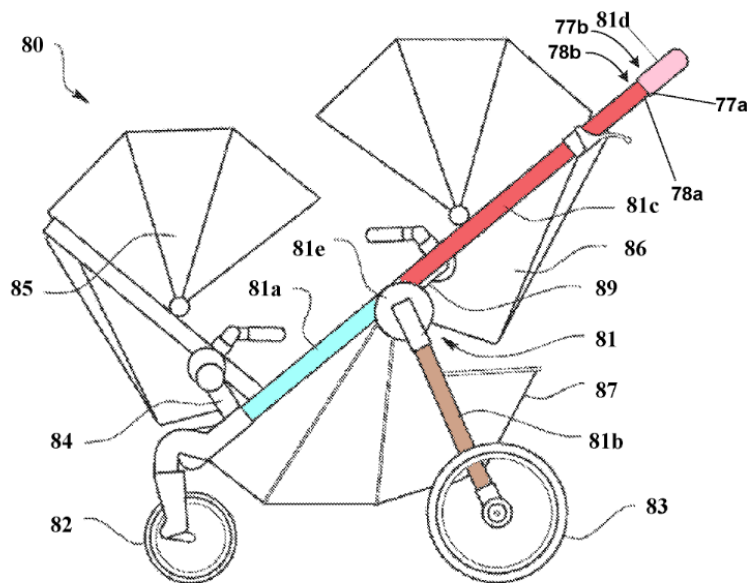


FIGURE 8A
EX1010, Fig. 8A

In district court litigation, PO argues the plain and ordinary meaning of “handle portion” as used in related patents means the “portion of frame coupled to the left and right upper tube support frame.” (EX1055, 14; EX1001, ¶173.) This is

⁸ While the specification was amended in the priority ’543 Patent, the changes were not carried through into the specification of the ’682 Patent. (See EX1008, 9:1-7; EX1018, 639.) But the reference numerals in Figure 8A remain.

consistent with the PO's amendment during prosecution of the '543 Patent clarifying the start and end location of the "handle portion."

This Petition applies PO's assertion and construes "handle portion" as meaning the "portion of frame coupled to the left and right upper tube support frame." (EX1001, ¶¶168-173.) Alternative interpretations are also applied, as explained below.

VIII. PRIORITY AND AIA STATUS

A. The Challenged Claims are not entitled to an EFD prior to March 21, 2016

As explained in § V.A. *supra*, the '682 Patent is a continuation application claiming priority to the '305 CIP. (EX1003, 3.) The '305 CIP specification was rewritten to incorporate the disclosure of the 2016 Provisional and bears little resemblance to the originally filed 2009 Non-Provisional specification. (*see* EX1046.)⁹ The 2016 Provisional lists a new inventive entity (Lee, Roe, Simpson) that is different from the inventive entity of the 2008 Provisional and 2009 Non-Provisional (listing only Zehfuss). No challenge of priority was made by the Examiner during prosecution of the '682 Patent because the "PTO does not make

⁹ EX1046 is a redline comparison between the specification of the 2009 Non-Provisional (EX1003) and the specification of the '305 CIP (EX1007).

such findings as a matter of course in prosecution” unless there is “an interference or rejection which would require the PTO to make a determination of priority.” *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F. 3d 1299, 1305 (Fed. Cir. 2008).

Because Ground 1 introduces intervening prior art *and* the Examiner never addressed priority during prosecution, the “burden of production” shifts to PO who now “must ... show ... how the written description in the earlier application(s) support(s) the claim in order to rely on that earlier filing date.” *Google LLC v. AGIS Software Development, LLC*, IPR2018-01082, Paper 10, 19 (PTAB Nov. 20, 2018) (citation omitted). But Petitioner doubts PO can satisfy its burden and dispute the claims of the ’682 Patent are entitled to the claimed priority date of December 4, 2008 (or any other date before 2016) for reasons stated below.

1. Failure to Disclose

When filed, the ’292 Application for the ’682 Patent identified four inventors: Lee, Roe, Simpson, and Zehfuss. (EX1020, 45-46.) But Lee, Roe, and Simpson are the inventive entity for the subject matter disclosed in the 2016 Provisional—*not the 2008 Provisional*. (EX1006, 1.) Because these individuals were identified as the only inventors, PO necessarily understood the ’682 Patent had claims supported by the 2016 Provisional with a priority date after March 16, 2013.

Despite this, PO failed to inform the Examiner in its statement under 37

C.F.R. §§ 1.55/1.78 that the '292 Application included claims with a post-March 16, 2013 effective filing date. (EX1020, 49.) As a result, the application was improperly examined under pre-AIA law, and the Examiner never challenged the 2008 priority claim nor issued a rejection based on intervening prior art. (*See e.g.*, EX1020, 83.)

2. The 2016 Provisional distinctly claims the subject matter belonging to inventors Lee, Roe, and Simpson

Claim 1 recites the use and interaction between “seat attachment adapters” and “seat attachment housings.” (EX1010, Claim 1.) The dependent claims further recite the structure, placement, and interaction of these components. (EX1010, Claims 2-6, 8, 11, 13, 15.) A simple comparison between the specification before 2016 (no disclosure of “adapters” and “housings”) and after 2016 (extensive disclosure of “adapters” and “housings”) confirms the support for the claimed “adapters” and “housings” was added to the '305 CIP. (EX1046.) This alone should end the priority dispute.

But the 2016 Provisional further establishes the correct support for priority. Specifically, pursuant to 35 U.S.C. § 111(b)(2) the 2016 Provisional concludes with claims. Because only inventors Lee, Roe, and Simpson are named, the included claims are directed to subject matter PO regarded as *their* invention in 2016. (*See* EX1006, 20-23); *see also* 35 U.S.C. § 111(b)(2); 37 C.F.R. § 1.75(a);

Manual of Patent Examining Procedure (“MPEP”), § 608.01(i), (k), (9th ed. Rev. 10.2019, June 2020)). Because the sole inventor (Zehfuss) of the subject matter in the 2009 Non-Provisional and 2008 Provisional is not included on the 2016 Provisional, he did *not* invent the subject matter claimed in the 2016 Provisional. (EX1002, 16; EX1003, Cover; EX1006, 1.)

A comparison of claim 1 of the ’682 Patent (as issued) and claim 1 of the 2016 Provisional illustrates claim 1 recites subject matter not invented by Zehfuss, and therefore does not have priority to Zehfuss’ 2009 Non-Provisional/2008 Provisional. (*Compare* EX1006, 20 [Claim 1] to EX1010, Claim 1; EX1001, ¶¶194-195.)¹⁰ The 2016 Provisional’s claims confirm the subject matter claimed by the ’682 Patent is only entitled a priority date of March 21, 2016. (EX1001, ¶¶174-217.)

3. Multiple limitations recited in claim 1 are not supported before 2016

A POSITA would have found the issued claims of the ’682 Patent included numerous limitations whose 35 U.S.C. § 112 support was only provided by the

¹⁰ Comparing claim 1 (as filed) with claim 1 of the 2016 Provisional further emphasizes the claimed “adapters” and “ housings” are the inventive subject matter of Lee, Roe, and Simpson. (*Compare* EX1006, 20 to EX1020, 33.)

2016 Provisional.

a. “Seat Attachment Housings/Adapters”

A POSITA would have concluded the PO lacked possession of the recited “seat attachment housings” and “seat attachment adapters,” as nothing prior to the ’305 CIP informs a POSITA the PO had possession of this claimed subject matter. A POSITA would understand “adapters”/“housings” were added by PO to the ’305 CIP based on material found only in the 2016 Provisional. A POSITA would understand “claims” included in the 2016 Provisional confirm this subject matter was not in the possession of Mr. Zehfuss—the *sole* inventor of the 2008 Provisional. (EX1001, ¶¶190-207.)

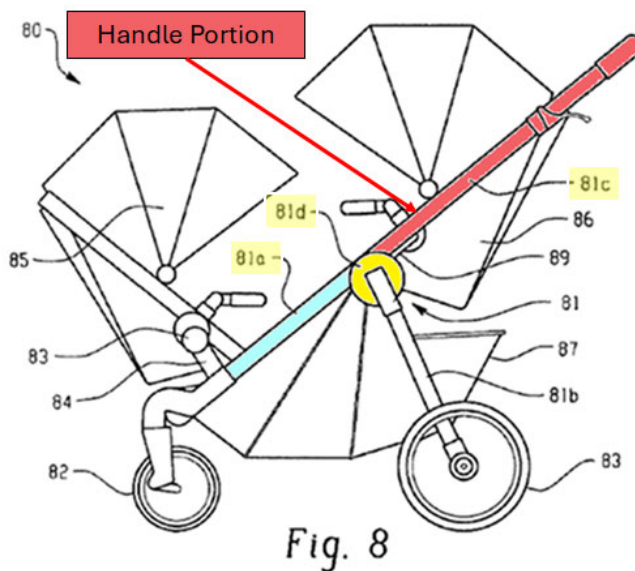
b. “First/Second/Third Vertical Positions”

A POSITA would have concluded PO lacked possession of the recited first–third “vertical positioning” limitations. A POSITA would have understood the disclosure regarding the vertical positioning with regards to the location and coupling of the “adapters” and “housings” was first disclosed in the 2016 Provisional (EX1006, 10-11), which was then added to the disclosure of the ’305 CIP. (*See* EX1007, 10:39-59.) Section 112 support for these limitations is not found prior to 2016. (EX1001, ¶¶188-189.)

c. “Handle Portion”

The pre-2016 specifications stated the stroller frame comprised three

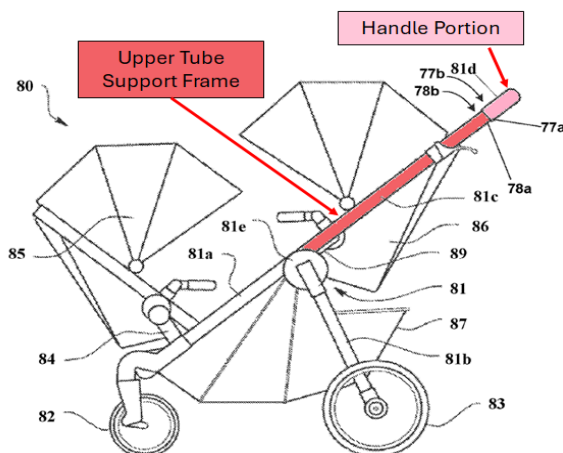
components: (1) a front wheel support portion 81a; (2) “a back wheel support portion 81b”; and (3) a “handle portion 81c.” (EX1003, ¶0043.) The pre-2016 specification clearly stated the “folding mechanism 81d [yellow] that connects front wheel support portion 81a [blue] ... and a handle portion 81c [red].” *Id.* A POSITA would have therefore understood “handle portion”—as denoted by reference numeral “81c”—as being the entire portion of the stroller frame located above the “folding mechanism 81d.” (EX1001, ¶209.)



EX1003, Fig. 8

A POSITA would have understood in 2016 the structure of the stroller frame was redefined as including: (1) “front wheel support frames 11a;” (2) “back wheel support frames 11b;” (3) “upper tube support frames 11c;” and (4) “a handle portion 11d.” The redefined “handle portion 11d” was stated as being coupled to

PO was required to further amend the Figures and Specification during prosecution of the '543 Patent (to which the '682 claims priority) further clarifying the start and end locations of the recited “handle portion.” (EX1008, 9:1-7; EX1018, 636, 639.) The clarifications became part of the issued '543 Patent as shown below. (EX1001, ¶212.)



[A] handle portion 81d **having a first end 77a** coupled to the end 79a of the left upper tube support frame 81c and **a distal second end 77b** ... coupled to the end 79b of the right upper tube support frame 81c....

EX1008, Fig. 8A, 9:1-7

The 2016 Provisional included additional new material disclosing: (1) the “handle portion” may be formed integrally with the “upper tube support frame 81c,” or (2) the “handle portion” may be a separate piece from the upper tube support frame, with the two components coupled together. (EX1006, 8.) This new material became part of the ’305 CIP and is included in the ’682 Patent. (EX1007,

9:1-22; EX1010, 8:64-9:17.) (EX1001, ¶¶213-214.) The refined definition of “handle portion” is also consistent with the construction PO provided during district court litigation. (EX1055, 14.)

A POSITA would have understood the recited claims of the ’682 Patent incorporate the post-2016 definition. For instance, dependent claim 12 recites the redefined starting/ending locations of the “handle portion” added by the ’543 Patent. (EX1010; EX1001, ¶217.) Thus, the term “handle portion” recited by independent claim 1 “must cover” the embodiment of dependent claim 12 or the “dependent claims would have no scope and thus [are] meaningless.” *Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022).

Stated differently, the pre-2016 specification describes the “handle portion” as being coupled directly to the “folding mechanism.” (EX1003, ¶0043.) Under this disclosure, there is no mention of an “upper tube support frame,” effectively reading out the limitations of dependent claims 10 and 11. Likewise, claim 12 would lack meaning, as there would be no “upper tube support” for both ends of the “handle portion” to be coupled to. Section 112 support for “handle portion” is not prior to 2016. (EX1001, ¶¶215-217.)

B. The ’682 Patent Is Subject to the AIA

The ’682 Patent is a “transition application” because it was filed after March 16, 2013 and claims priority to pre-AIA applications. (MPEP, § 2159.04). A

transitional application is subject to AIA law if it or any application to which it claims priority has, or ever had, at least one claim with an EFD on or after March 16, 2013. *Id.*, § 2159.02.

As discussed in § VIII.A. *supra*, the EFD of the Challenged Claims is after March 16, 2013. Additionally, the '682 Patent lists inventors Lee, Roe, and Simpson first added in the '305 CIP (EX1007, cover; EX1017, 47-49) and the 2016 Provisional. (EX1017, 47-49; *see* EX1006, 1; EX1009, cover.) By adding new inventors, PO admits post-2013 matter is claimed. Therefore, the '682 Patent should be subject to AIA law. Regardless, claim 1 of the '305 CIP is directed to an “adapter receiving cavity” and a “door.” (EX1007, Claim 1.) The earliest potential support for these claim limitations is the 2016 Provisional. (*See* EX1006, 14-15.)

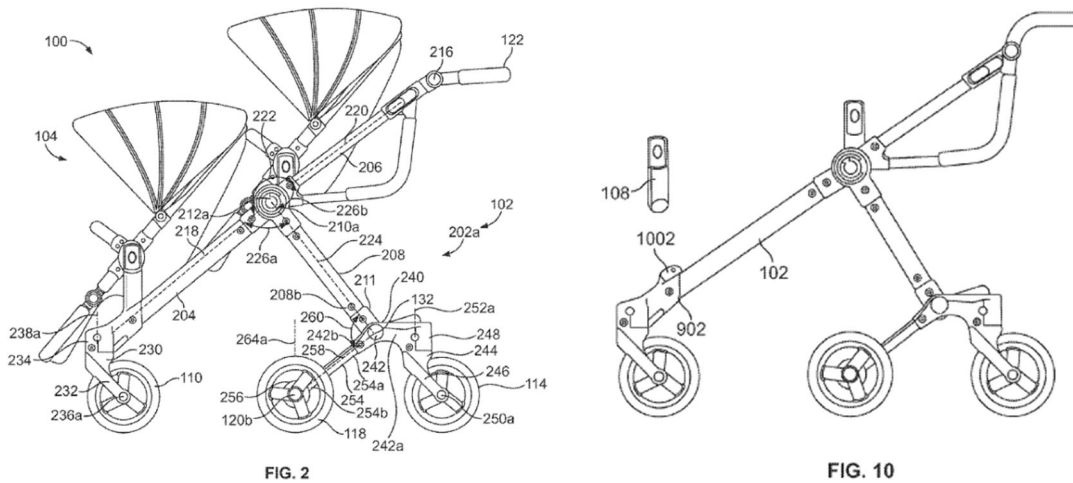
IX. Prior Art Overview

A. Rolicki

Rolicki was filed on March 14, 2013, published on July 10, 2014, and issued on November 11, 2014. (EX1047, Cover.) Rolicki is prior art under § 102(a)(1)-(2) if the '682 Patent claims are not supported by the 2009 Non-Provisional.

Rolicki's stroller includes upper/lower frame members “204/206” that can be rotated between a folded and unfolded configuration. (EX1047, 5:35-6:28.) The stroller includes “seat mounts 108” for removably coupling an upper “seat 106” and lower “seat 106.” (EX1047, 3:49-64.) The “seat mounts” can be permanently

or removably coupled to either “housings 230/902” or the “stroller frame 102.”
(EX1047, 3:53-58, 13:1-9.)

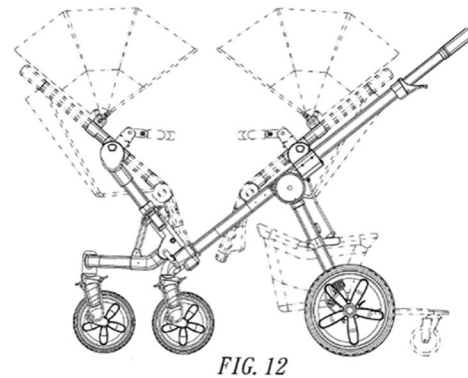
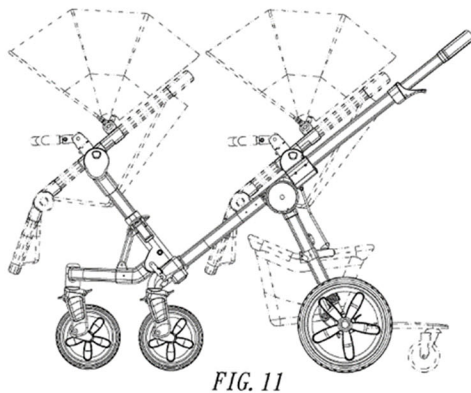
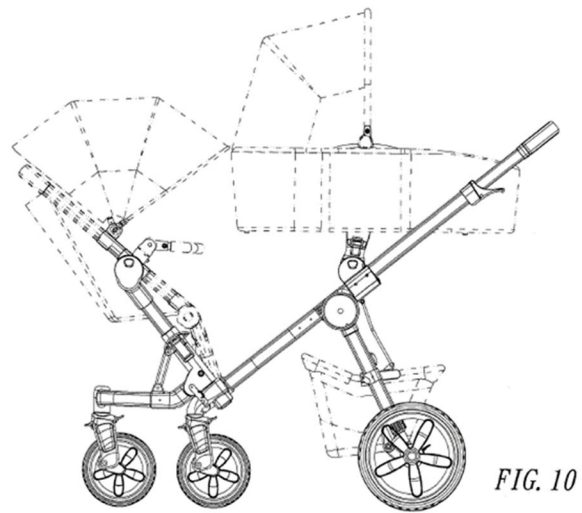
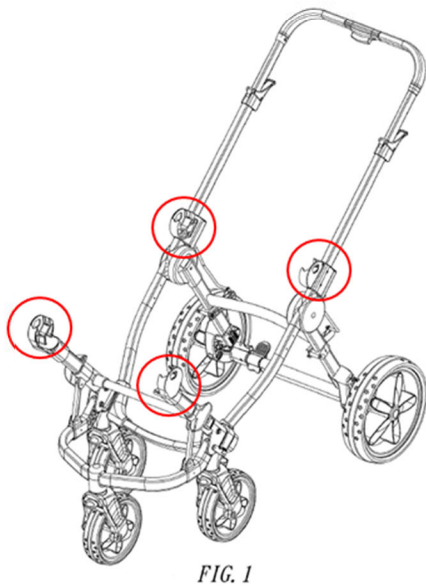


EX1047, Fig. 2, Fig. 10

B. Liao

Liao was filed on September 5, 2008 and issued June 2, 2009. (EX1048, Cover.) Liao qualifies as prior art under § 102(a)(2) if the claims are entitled to the December 4, 2008 priority date and § 102(a)(1)-(2) if not.

Liao teaches a stroller (pushchair) that includes connectors (circled in red) for removably coupling two seats. Liao illustrates various embodiments with different style seats and varying orientations of the seats.

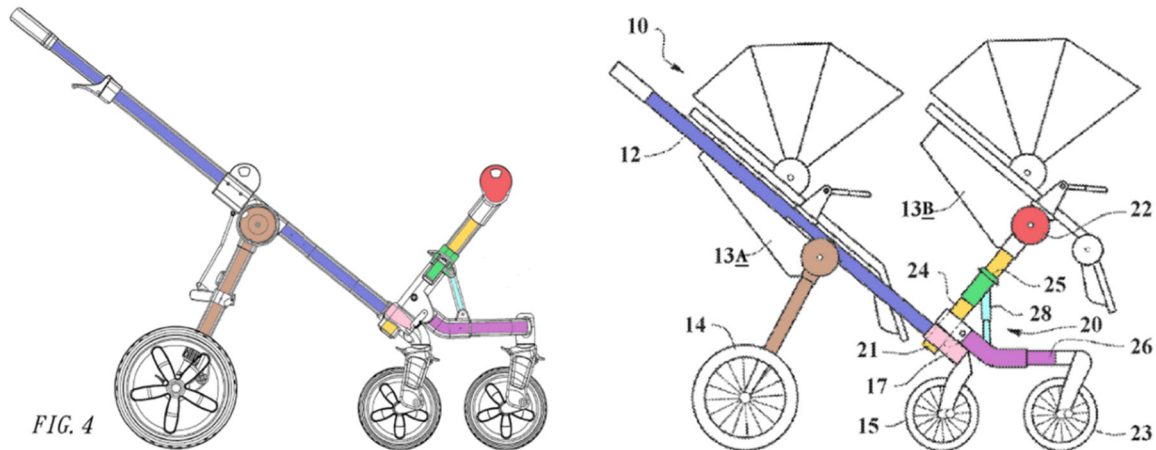


EX1048, Fig. 1¹¹, Figs. 10-12

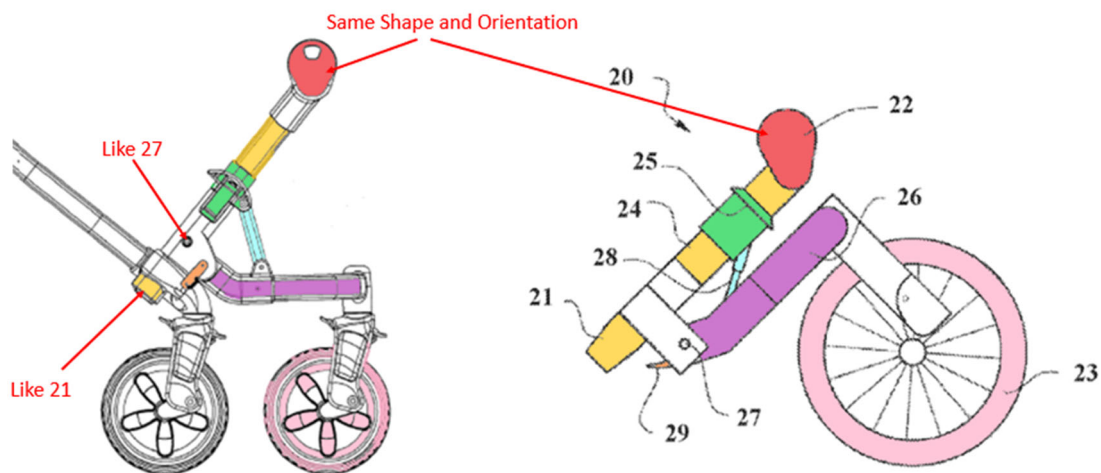
While applied during prosecution of the '682 Patent, Liao was not the primary reference in any rejection. The Examiner simply relied on Liao as teaching a stroller which may comprise “at least one central wheel[.]” (EX1020, 341.)

¹¹ All annotations added unless otherwise noted.

As also shown below, Liao's design illustrates similar features as those shown by the '682 Patent (EX1010).



EX1048, Fig. 4, EX1010, Fig. 3



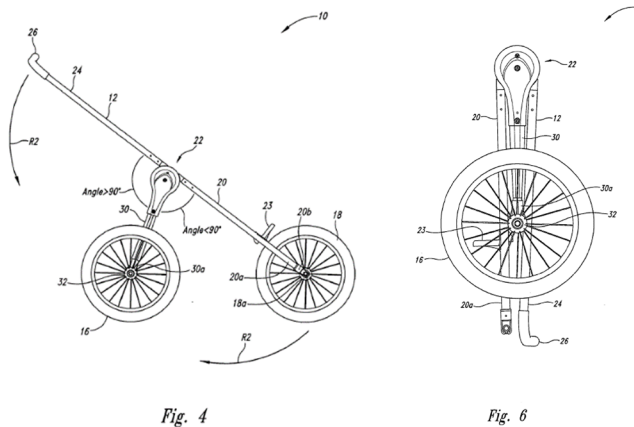
EX1048, Fig. 4, EX1008, Fig. 2

While the Examiner may not have appreciated these similarities during prosecution of the '682 Patent, the Examiner did recognize its significance in a related application filed after the '682 Patent. Specifically, during prosecution of

U.S. Application No. 18/448,417 (“the ’417 Application”), the Examiner rejected claims similar in scope to those of the ’682 Patent as anticipated by Liao alone. (See EX1024, 1203.) The Examiner’s July 2024 rejection in the ’417 Application, and the opinion from Petitioner’s expert, indicates an error occurred during prosecution of the ’682 Patent in not fully considering and appreciating Liao’s disclosed design.

C. Cheng

Cheng published on April 6, 2006 (EX1049, Cover) and is prior art under 102(a)(1). Cheng discloses a stroller with a common frame structure having upper “12,” lower “20,” and rear-wheel “30” frame members joined at a folding assembly “22” that allows the frame to collapse for storage. (EX1049, ¶¶0039, 0042, 0045, 0049-0050.)



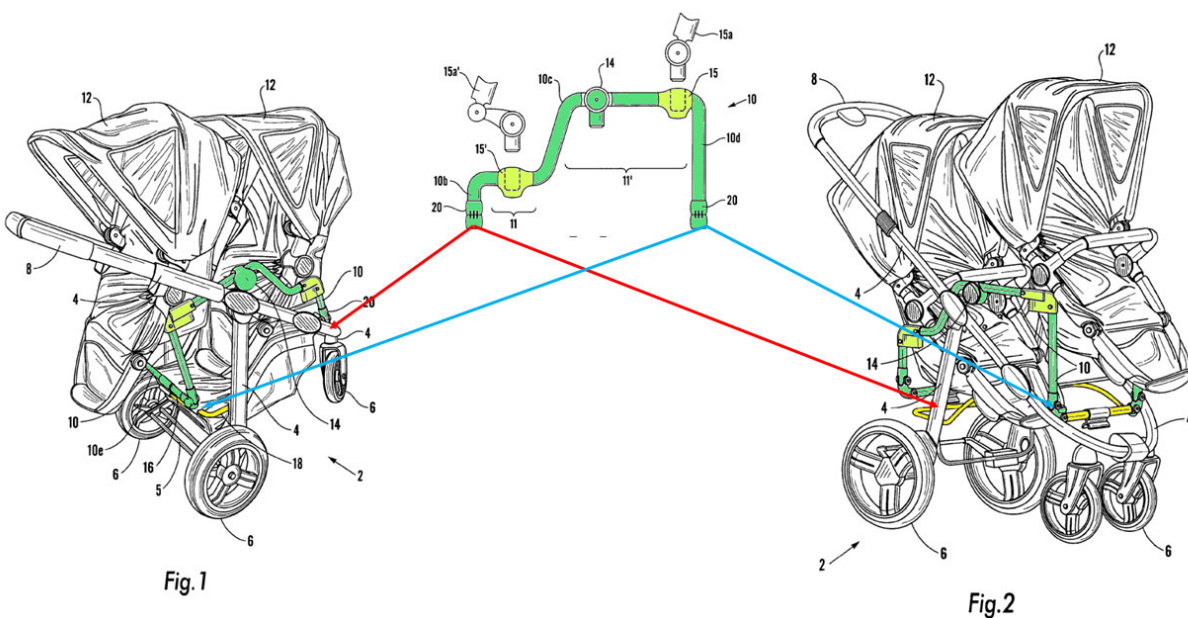
EX1049, Figs. 4, 6

D. Offord ’797

Offord ’797 published on April 10, 2008 and qualifies as prior art under 35

U.S.C. § 102(a)(1).

Offord '797 teaches a similar sub-frame assembly as Offord '341 for providing a “single and dual occupancy configurations *by the addition of the interface portion.*” (EX1054, 1:33-2:2.) The “interface portion 10” (green below) has “sockets 15” (light green) for receiving two removable infant seats. (EX1054, ¶3:33-4:4.) The “interface portion 10” can be “turned through 180° about its central vertical axis” to reverse the orientation (and height) of the front and back seats. (EX1054, 4:24-30.) The rotation of the “interface portion 10” (and rotation of the seats) is shown when reviewing Figures 1 (where the front seat is vertically lower than the rear seat) and Figure 2 (where the front seat is vertically higher than the rear seat).

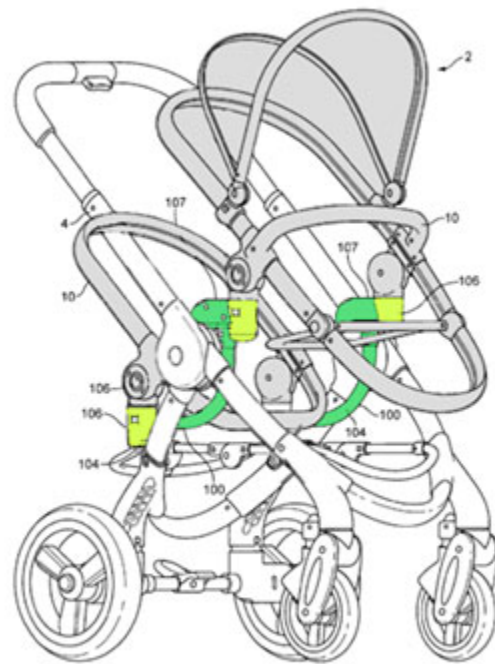
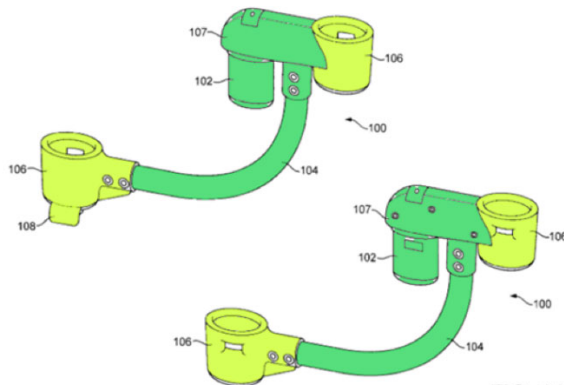


EX1054, Figs. 2-3

E. Offord '341

Offord '341 claims foreign priority to a British patent filed on October 10, 2008 and is prior art under 35 U.S.C. § 102(a)(2) (post-AIA).

Offord '341 teaches a simpler version of the “interface portion 10” shown by Offord '797. Instead of a rectangular “interface portion,” Offord '341 discloses two “interface portion component 100” arms (green below) which operate in a very similar manner for converting a single-seat stroller to a double-seat stroller configuration.



EX1051, Figs. 14-15

Offord '341 discloses a pair of lower and upper “connector sockets 106” (light green) which again are designed to receive infant seats. The “connecting leg

102” fits within the “receptor cups 34” of the original stroller to receive the “interface connections 100.” Once installed on the stroller, Offord ’341 can be configured so one infant seat is raised higher than the other infant seat. While only one configuration is shown, Offord ’341 expressly directs and informs the reader a “*similar sub-frame arrangement is disclosed in WO 2008/040797*”—*i.e.*, Offord ’797.

X. Unpatentability Grounds

The references below render the claimed subject matter unpatentable and Petitioner has a reasonable likelihood of prevailing as to each of the following grounds. 35 U.S.C. § 314(a); 37 C.F.R. § 42.104(b)(4).

A. Ground 1 - Claims 1-16 are obvious over Rolicki

1. Claim 1¹²

a. [1.0] - A stroller, comprising

Rolicki discloses a stroller. (EX1047, 1:13-14, 1:21-61, 3:49-64, Fig. 1; EX1001, ¶265.)

¹² See Appendix A for list of the Challenged Claims as referenced in Grounds 1-4.

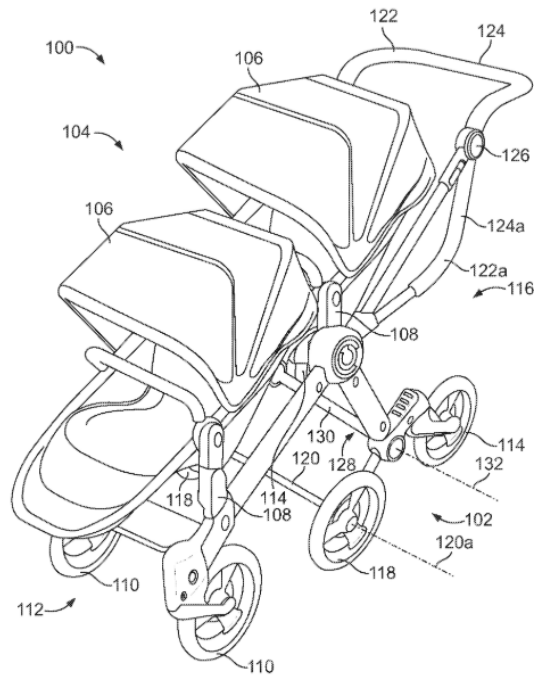
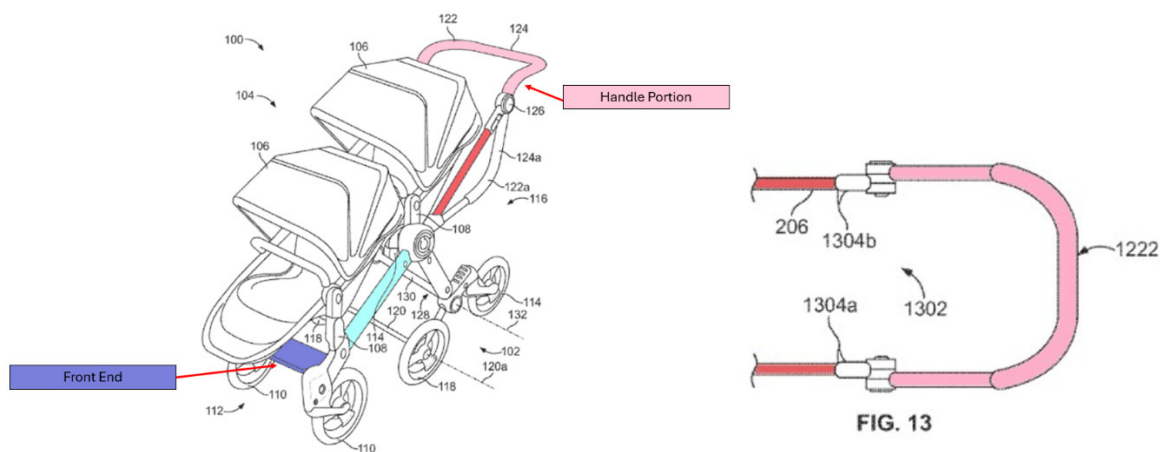


FIG. 1

EX1047, Fig. 1

b. [1.1] - a stroller frame comprising a handle portion and a front end portion

As shown below, Rolicki discloses “handle 122 [that] is coupled to the frame 102 via ... joint 126.” (EX1047, 5:15-17.) Rolicki’s handle is also disclosed as being “coupled to the [frame’s] upper frame support 206” (red). (EX1047, 13:60-61, Figs. 1-3, Fig.13; EX1001, ¶¶267-268.)



EX1047, Figs. 1, 13

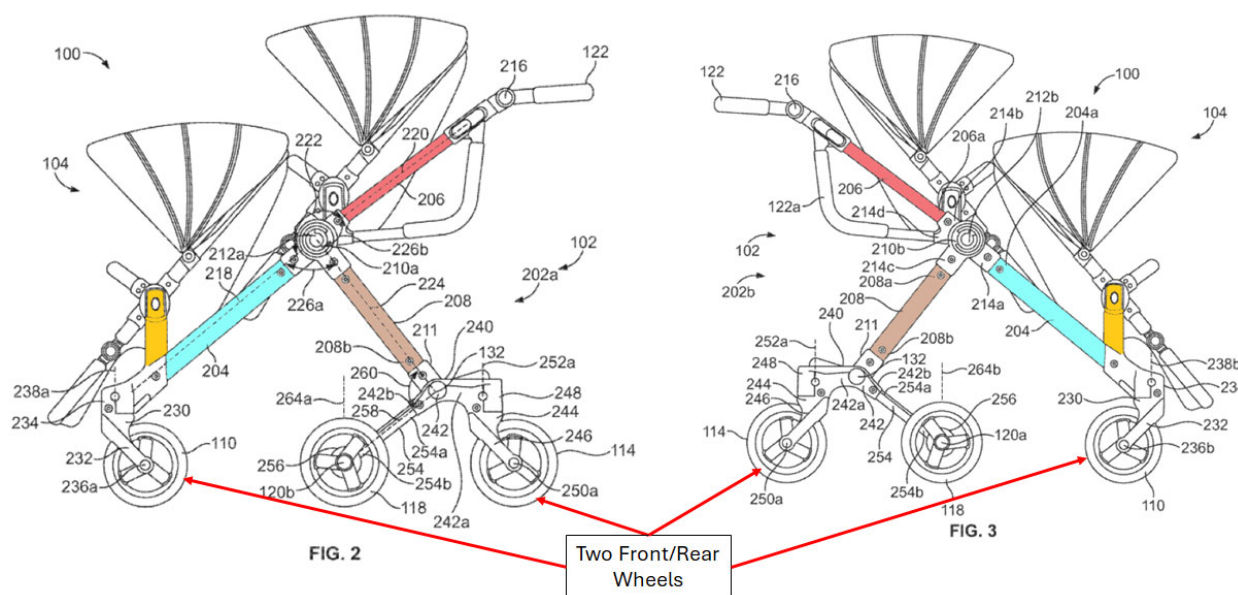
The “handle portion” (pink) would be understood by a POSITA as being a “portion of the frame coupled to the upper ends of the left and right upper tube support frame” (highlighted in red). Alternatively, a POSITA would have understood the “handle portion” could be found as being the portions of Rolicki’s frame that includes the “handle 122,” “upper frame support 206,” and connecting mechanisms. (EX1001, ¶269.)

Rolicki teaches the frame “is supported by one or more front wheels 110 at a *front end 112*”—*i.e.*, “front end portion.” (EX1047, 3:65–66, emphasis added¹³.) A POSITA would understand this “front end portion” could alone or in combination (e.g., Rolicki’s “front wheel housing 230”) be a “front end portion” of the stroller. (EX1001, ¶270.)

¹³ Emphasis added unless otherwise noted.

c. [1.2] - a plurality of wheels comprising a plurality of back wheels

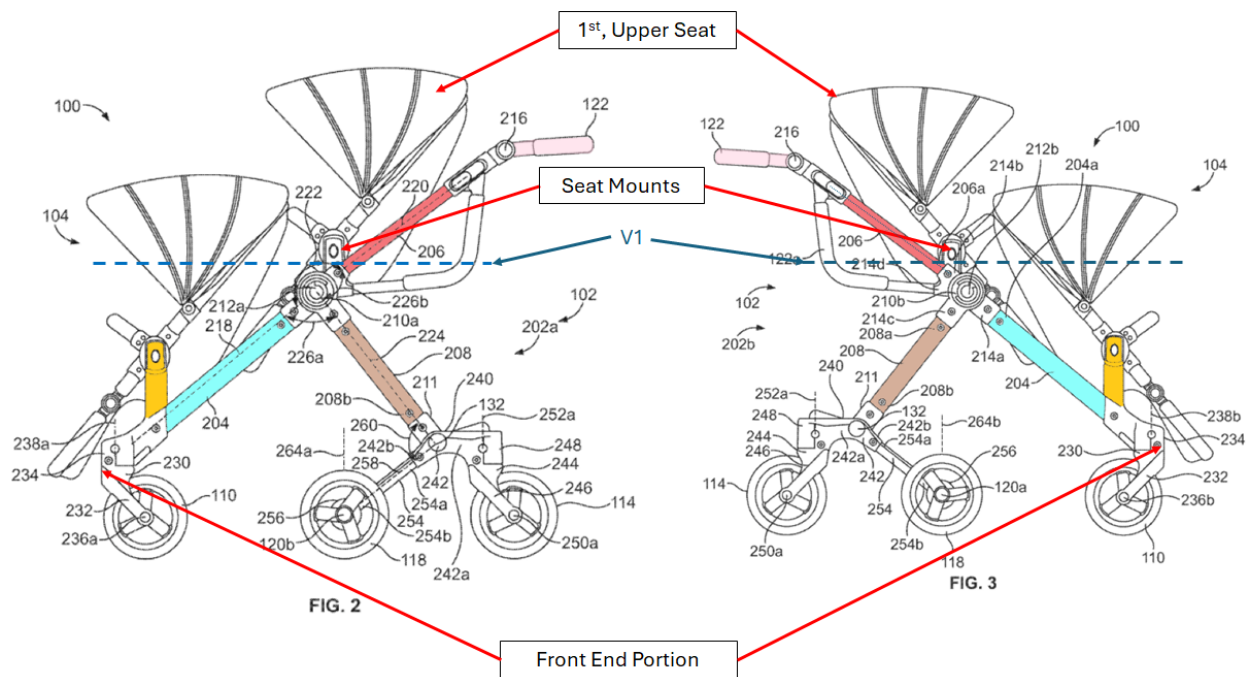
Rolicki discloses “one or more front wheels” and “one or more back wheels.” (EX1047, 3:65-4:1, Figs. 1-3.) As shown below, a POSITA would understand Rolicki teaches “a plurality of wheels comprising a plurality of back wheels.” (EX1001, ¶¶272-273.)



EX1047, Figs. 2-3

d. [1.3] - a first seat coupled to the stroller frame at a first vertical position of the stroller frame, wherein the first seat is disposed closer to the handle portion than the front end portion of the stroller frame;

Rolicki discloses an upper (*i.e.*, first) seat that can be removably coupled to a pair of “seat mounts 108” located on the stroller frame. (EX1047, 3:49-64, 12:46-67, 13:1-9; EX1001, ¶275.)



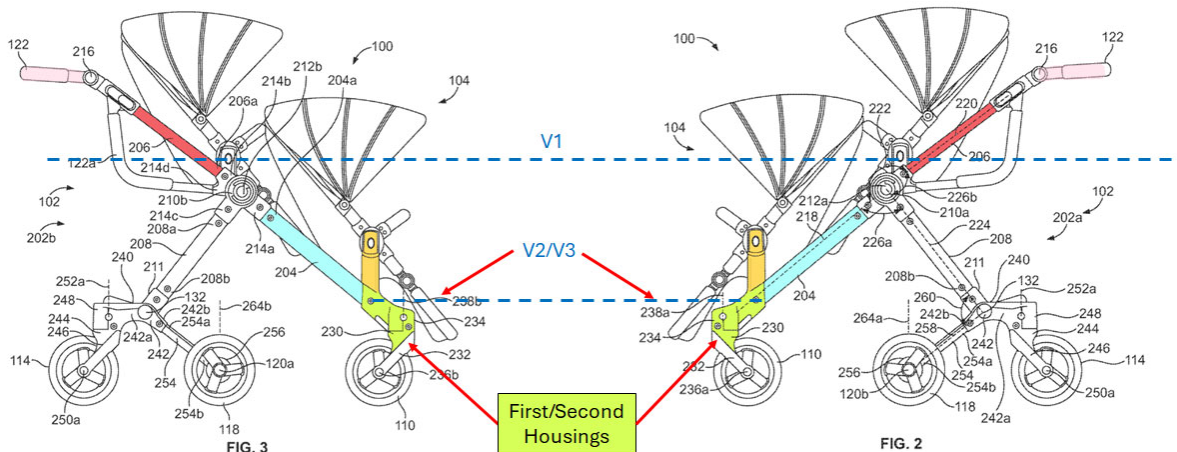
EX1047, Figs. 2-3

A POSITA would have understood the location where the first seat is coupled to the “seat mounts 108” is a “first vertical position” (V1). A POSITA would have also understood the first seat—including the portion of the seat where the infant’s back and buttocks are located—is located closer to the “handle portion” than the “front end portion.” (EX1001, ¶¶276-278.)

- e. [1.4] / [1.5] - a [first/second] seat attachment housing coupled to the stroller frame at a [second/third] vertical position of the stroller frame that is below the first vertical position, wherein a first front wheel and a second front wheel extend from the front end of the stroller ... wherein the third vertical position is closer to the front end portion than the handle portion;

Rolicki discloses first/second “front wheel housings 230” (shaded green

below) located at the front end of the stroller. Rolicki teaches the “housings 230” are coupled to the lower end of the “lower frame support 204” (shaded light blue)—*i.e.*, the “frame.” (EX1047, 7:4-13; EX1001, ¶280.)

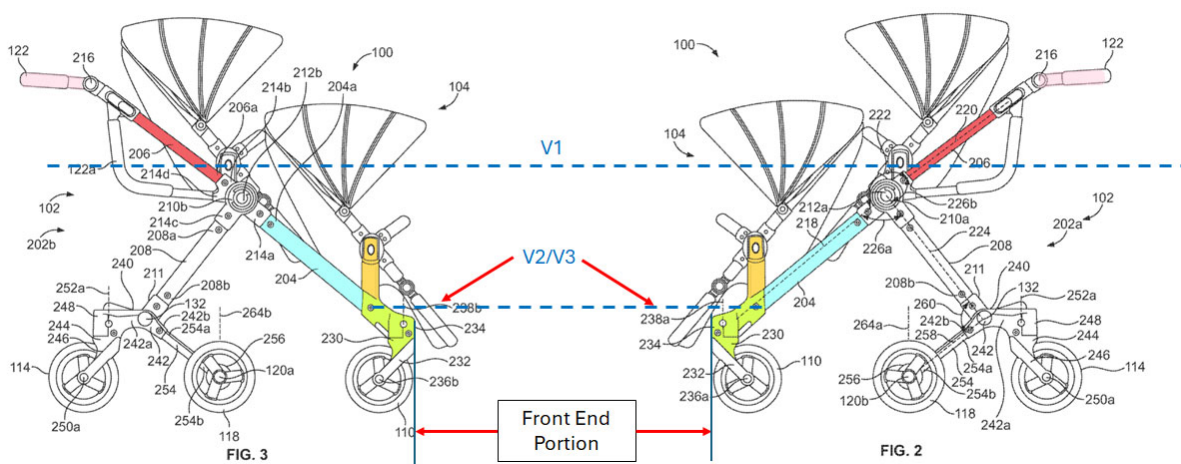


EX1047, Figs. 2-3

Rolicki teaches the lower “seat mounts” (gold) can be permanently coupled (as shown in Figures 2-3), rotatably coupled (e.g., Figure 9B), or removably coupled (e.g., Figure 10) from the “housing.” (EX1047, 3:49-64, 12:50-52, 13:2-5.) The “seat mounts” are used for removably coupling the lower (second) seat. (EX1047, 3:49-64.) A POSITA would therefore understand Rolicki’s “housings” are first/second “seat attachment housings.” (EX1001, ¶¶281-282.)

As shown by dashed lines, Rolicki discloses second/third “vertical positions” (V2/V3) where the housings (green) are “coupled or attached to an end of the lower frame support 204” (shaded light blue). (EX0147, 7:4-9; EX1001, ¶¶283-284.) The second/third vertical positions (V2/V3) are below the “first

vertical position” (V1) and are located closer to the “front end portion” than the “handle portion” (pink). (EX1001, ¶285.) Rolicki also teaches first/second front “wheels 110” coupled to the housings. (EX1047, 3:65-67, 7:4-24.) The first/second front wheels extend downwardly from the “front end of the stroller.” (EX1001, ¶286.)

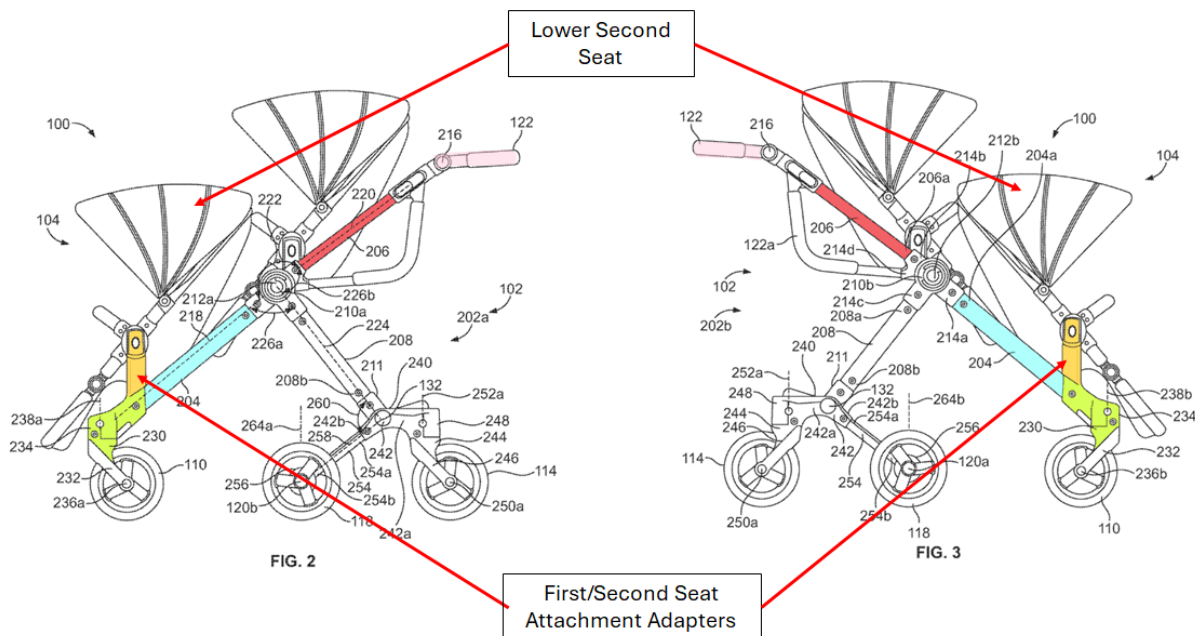


EX1047, Figs. 2-3

- f. [1.6] / [1.7] - a [first/second] seat attachment adapter spaced from and coupled to the [first/second] seat attachment housing by a [first/second] attachment frame member

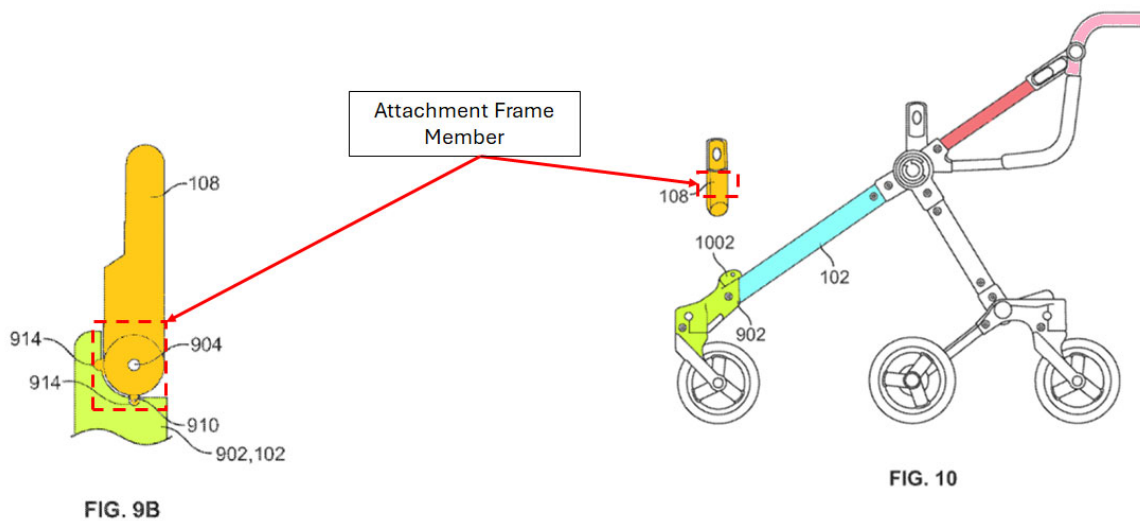
Rolicki discloses that the lower “second” seat is removably coupled to the first and/or second “seat mounts 108.” (EX1047, Rolicki, 3:51-55; EX1001, ¶¶280-286, 288.) The seat mounts 108 may be fixedly coupled to the stroller frame 102 (e.g., Figures 1-3), removably coupled (e.g., Figure 10), or pivotally coupled (e.g., Figure 9B). (EX1047, 3:51-55, 12:46-56, 13:1-9.) In each case, the “seat

mounts”—*i.e.*, first/second “adapters” (gold)—are coupled to the housings (green). (EX1001, ¶¶289-290.)



EX1047, Figs. 2-3

A POSITA would understand the adapters are “spaced from and coupled to the ... housing[s].” For example, Rolicki discloses the removable adapter (Figure 10) would be inserted into an “opening or pocket 1002” of the housing. (EX1047, 13:1-9.) This opening/pocket would include “spacing” to allow insertion of the adapter into the housing. Figure 9B (below left) also illustrates necessary spacing to allow rotation of the adapter with respect to the housing. (EX1001, ¶290.) A POSITA would also understand the fixed connection (Figures 1-3) would include spacing allowing insertion before the adapter is secured within the housing. (EX1001, ¶¶290-291.)



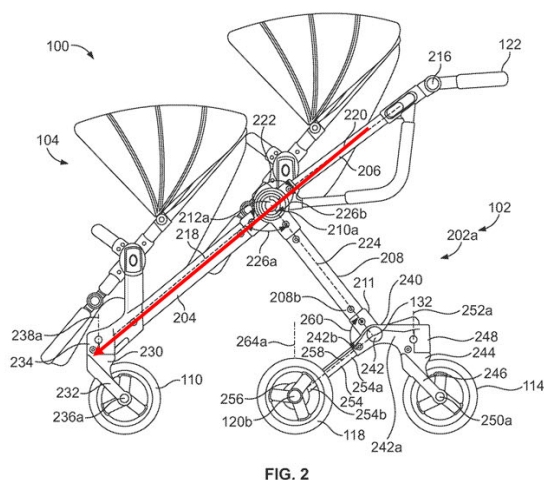
EX1047, Figs. 9B, 10

As also shown above, a POSITA would understand a portion of the adapter functions as the first/second attachment frame members. Figures 9B and 10 illustrate portions of the removable and rotatable adapters, which a POSITA would understand as being the first/second “attachment frame members.” A POSITA would understand that the fixed adapters likewise include first and second attachment frame members that are inserted into and secured within the housings. (EX1001, ¶291.)

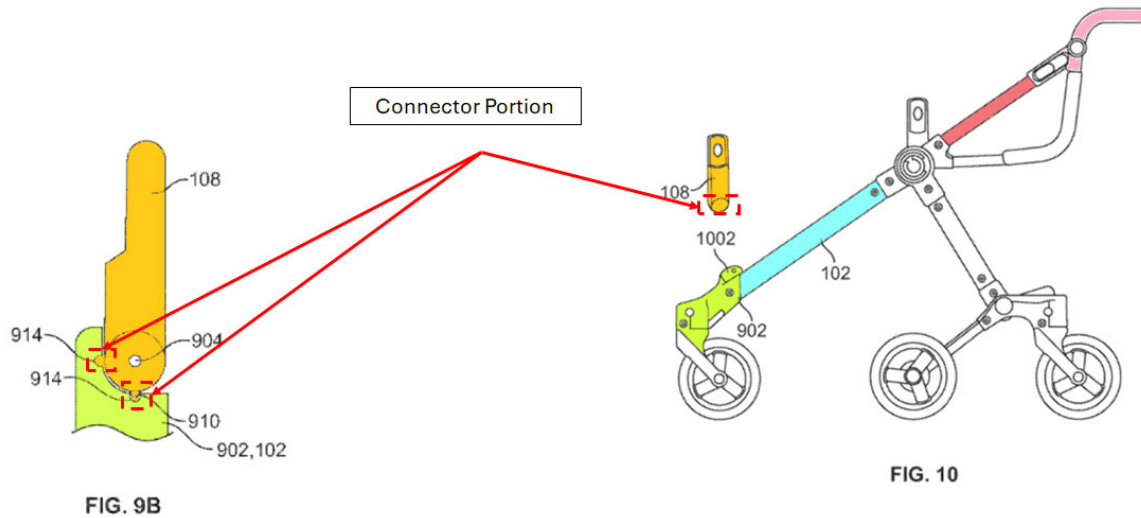
- g. [1.8] - wherein the first seat and the second seat, when connected to the frame, are arranged in an inline descending configuration along the stroller frame**

Rolicki discloses two seats 106 coupled to the frame 102 by seat mounts 108. (EX1047, 3:51-61.) A POSITA would understand that, when connected to the frame, the first and second seats “are arranged in an inline descending

configuration along the stroller frame.” As illustrated, the seats align along the frame in a downward direction—whether tracing the frame itself (left) or the seat portions where an infant’s buttocks would rest (right)—confirming the inline descending arrangement. (EX1001, ¶293.)



understand these connector portions allow the adapter to be removably coupled to the housings. (EX1001, ¶296.)



EX1047, Figs. 9B, 10

3. **Claim 3 - The stroller of claim 2, further comprising a second seat removably coupled to the first seat attachment adapter and the second seat attachment adapter.**

As explained in claim 1, Rolicki discloses a lower (second) seat that is removably coupled to the first/second “adapters” (gold). (EX1047, 3:55-61; EX1001, ¶¶280-292, 298.)



- Rolicki discloses embodiments in which the seat mount 108 (“adapter”) is fixed, rotatably fixed, or removable as discussed in claim 1. In each embodiment, a POSITA would understand the first and second “adapters” (*i.e.*, right and left side adapters) include a “first end” positioned near the bottom and a “distal second end” near the top, where the second seat is coupled. (EX1047, 3:49-64, 12:46-67, 13:1-9; EX1001, ¶¶280-292, 300.)

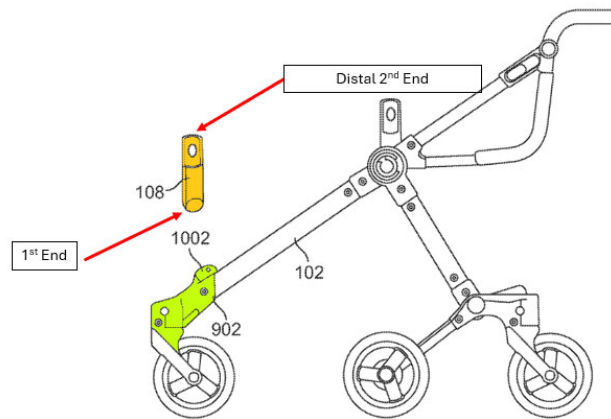


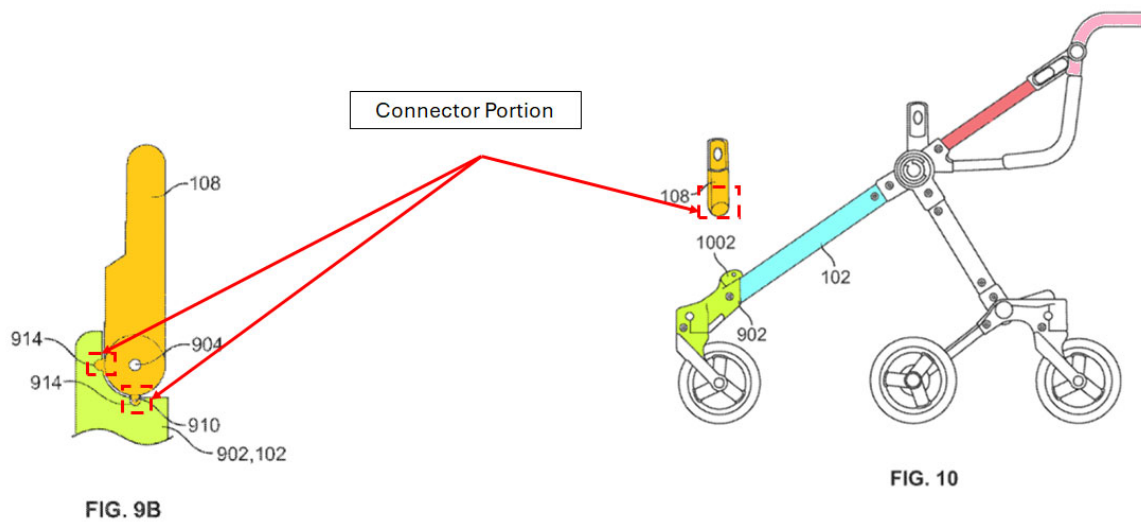
FIG. 10

EX1047, Fig. 10

- 5. Claim 5 - The stroller of claim 4, wherein the first end comprises the respective [first/second] connector portion ... the first end is releasably connected to the respective [first/second] seat attachment housing.**

Referring to claim 2, Rolicki discloses first/second “connector portions” that releasably connect the first/second “adapters” (gold) to each corresponding “housing” (green). (EX1047, 3:49-64, 12:46-67, 13:1-9; EX1001, ¶¶296-297, 302.)

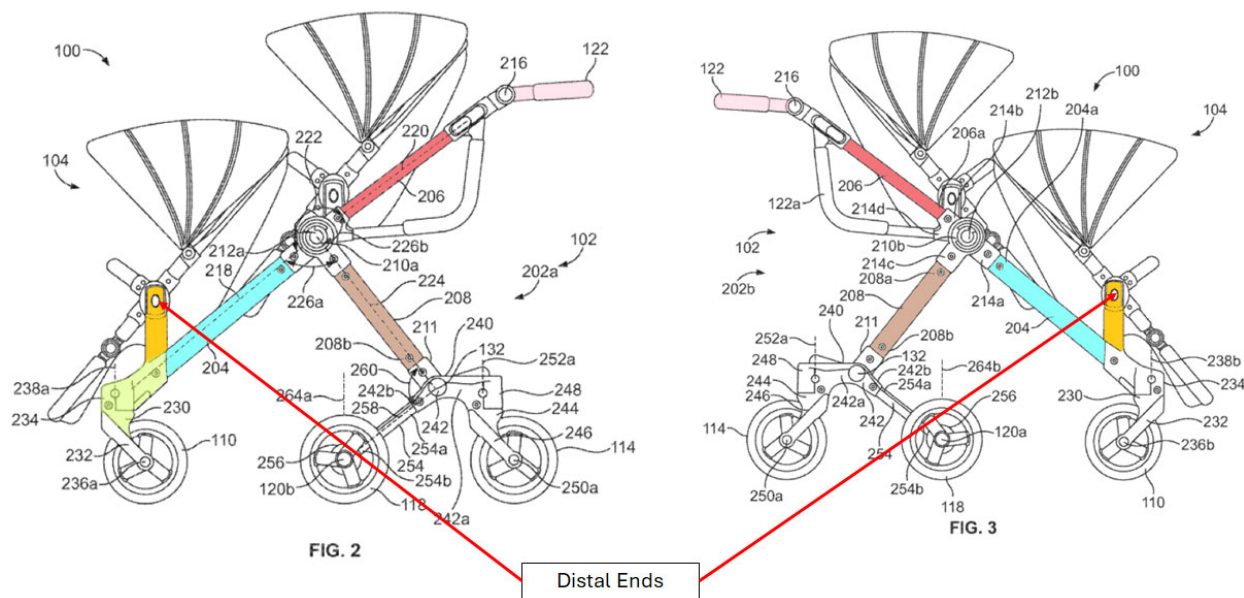
Referring to claim 4, the “first end” refers to the portion of the first/second adapters that is releasably connected to the first/second housings. (EX1001, ¶¶300-303.)



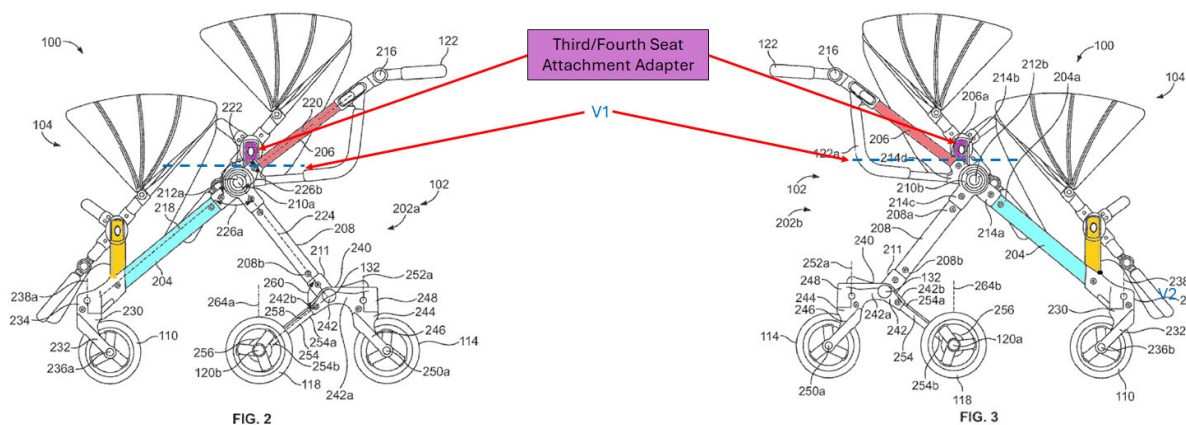
EX1047, Figs. 9B, 10

- 6. Claim 6 - The stroller of claim 4, wherein the distal second end is releasably connected to a second seat.**

Referring to claims 3-4, the first/second “adapters” (gold) include an upper “distal second end” which allows the upper second seat to be removably coupled—*i.e.*, releasably connected. (EX1047, 3:49-64; EX1001, ¶¶298-301, 304.)



third/fourth “upper seat mounts 108,” (purple) located at a first vertical position (V1). (EX1047, Figs. 2-3; EX1001, ¶¶275-279, 308.) A POSITA would understand these seat mounts to be the third/fourth “seat attachment adapters,” to allow the first (upper) seat to be removably coupled to the stroller frame. (EX1047, 3:49-64; EX1001, ¶¶309-311.)

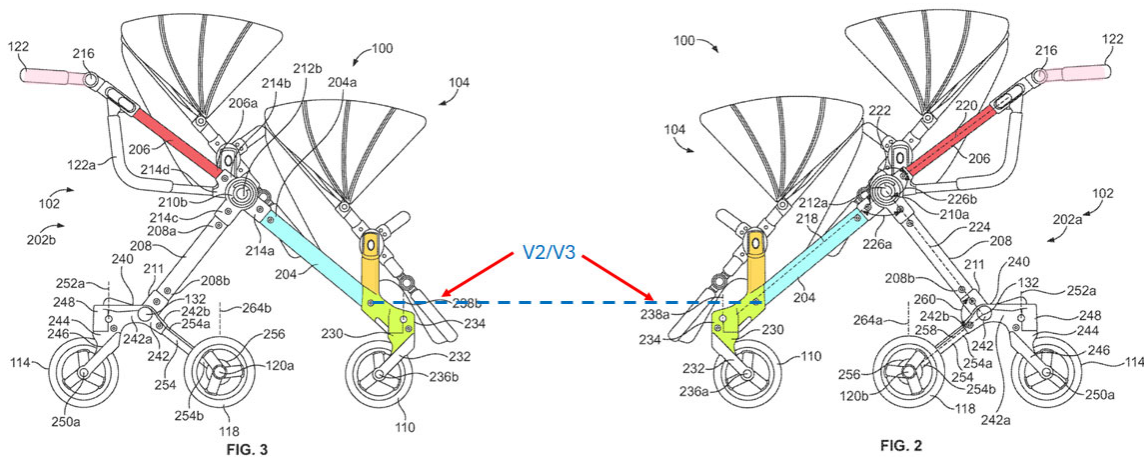
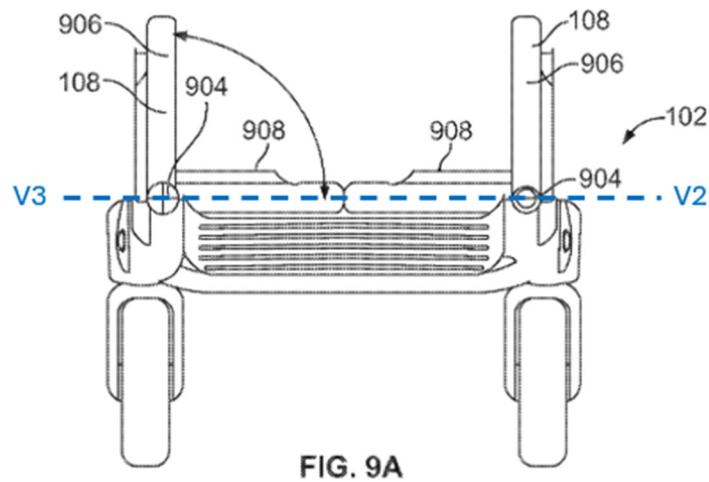


EX1047, Figs. 2-3

9. Claim 9 - The stroller of claim 1, wherein the second vertical position and the third vertical position are at a same vertical height.

As discussed with respect to limitations [1.4]-[1.5], the left and right lower seat mounts 108 (“first” and “second” adapters) are coupled to the stroller frame at second and third vertical positions (V2 and V3), respectively. (EX1001, ¶¶280-286, 312.) Rolicki states the side frame assemblies are symmetrical, and Figures 2 and 3 confirm this. (EX1047, 5:40-43.) Accordingly, a POSITA would understand that V2 and V3 are at the same vertical height along the stroller frame as shown

below. (EX1001, ¶¶313-317.)



EX1047, Fig. 9A, Figs. 2-3

10. Claim 10

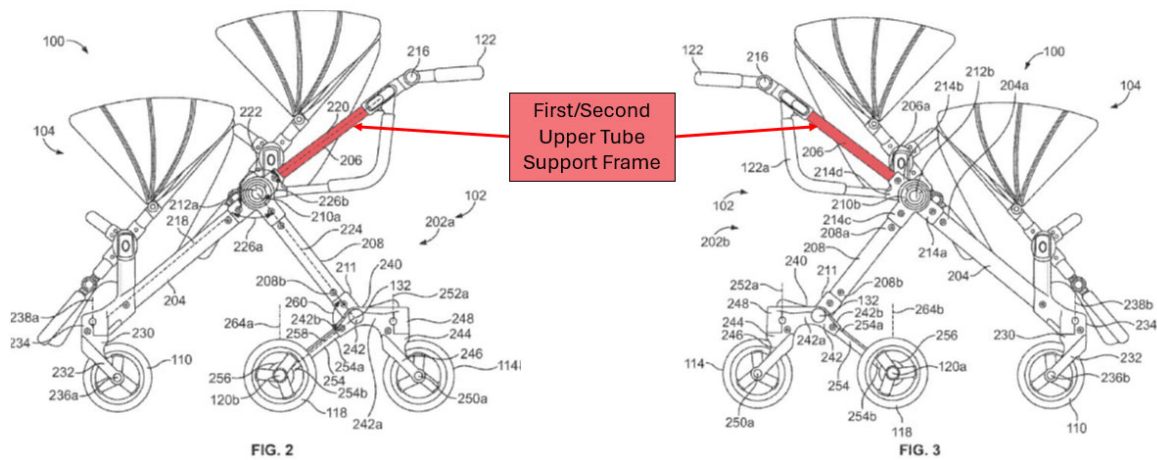
- a. [1.0] The stroller of claim 1, wherein the stroller frame comprises:

See [1.0] above. (EX1001, ¶¶265-266, 319.)

- b. [10.1]/[10.2] - [first/second] upper tube support frame;

Rolicki discloses a stroller frame (“102”) comprising a right/left (red) “upper

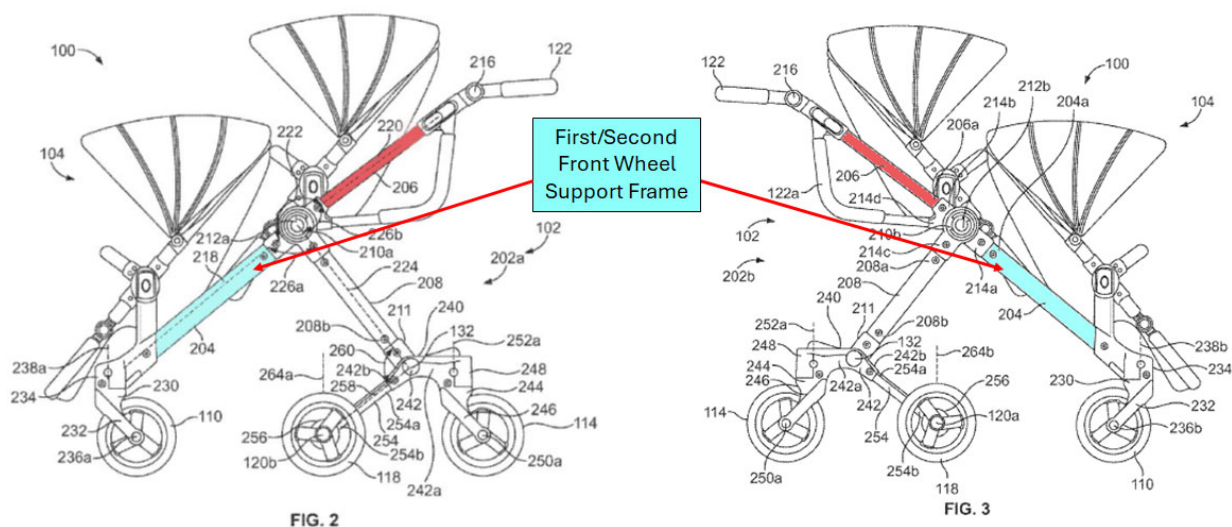
frame [tube] supports 206” satisfying first/second “upper tube support frames.”
(EX1047 5:35-6:28, 13:60-14:4, Figs. 2-3; EX1001, ¶¶320-323.)



EX1047, Figs. 2-3

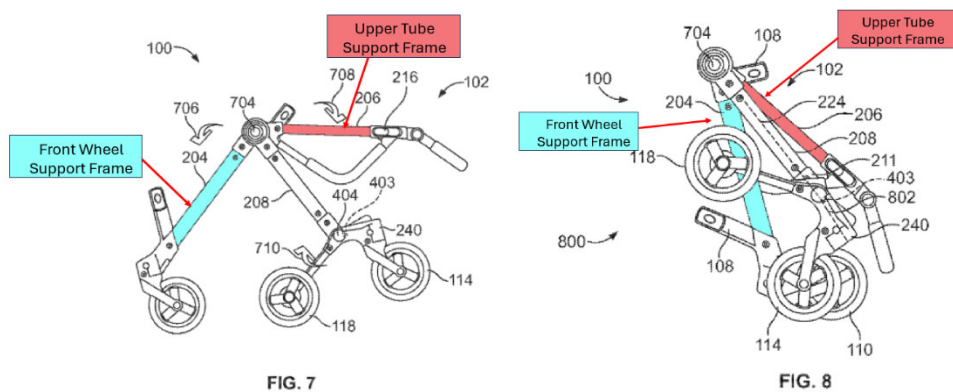
- c. [10.3]/[10.4] - a [first/second] front wheel support frame configured to rotate with respect to the [first/second] upper tube support frame

Rolicki discloses a stroller frame (“102”) comprising left/right “lower frame supports 204” (blue), which a POSITA would understand as being “first/second front wheel support frames.” (EX1047, 5:35-55, 7:4-16, Figs. 2-3; EX1001, ¶¶325-326.)



EX1047, Figs. 2-3

Rolicki teaches that the upper frame supports 206 and lower frame supports 204 are pivotally coupled to rotate by a folding mechanism (“pivot joints 210”). (EX1047, 5:56-6:28, 12:22-33; EX1001, ¶327.)

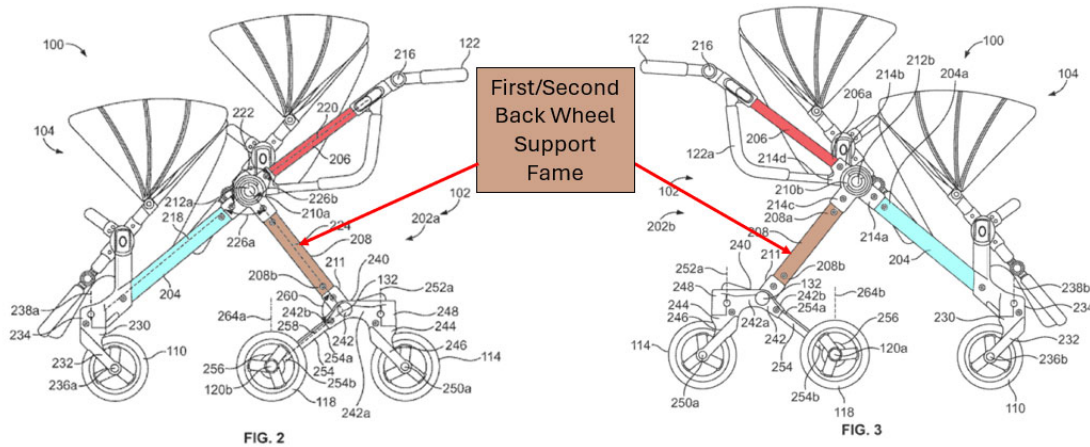


EX1047, Rolicki, Figs. 7-8

- d. [10.5]/[10.6] - a [first/second] back wheel support frame configured to rotate with respect to the [first/second] upper tube support frame

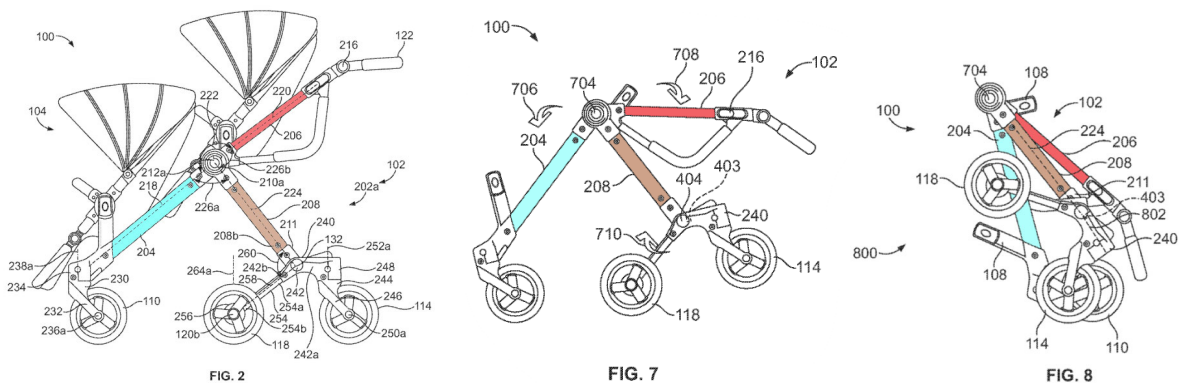
Rolicki discloses “intermediate frame supports 208” (brown), which a

POSITA would understand as the first/second “back wheel support frame.”
(EX1047, 5:35-55, Figs. 2-3; EX1001, ¶¶329, 331.)



EX1047, Figs. 2-3

As shown, a POSITA would understand the “intermediate frame supports 208” (brown) is connected to “pivot joint 210” allowing for rotation of the intermediate frame supports 208 (brown) relative to the upper frame supports 206 (red). (EX1047, 6:41-53, 5:56-6:28, 12:22-33, Figs. 2, 7-8; EX1001, ¶¶330, 332-333.)

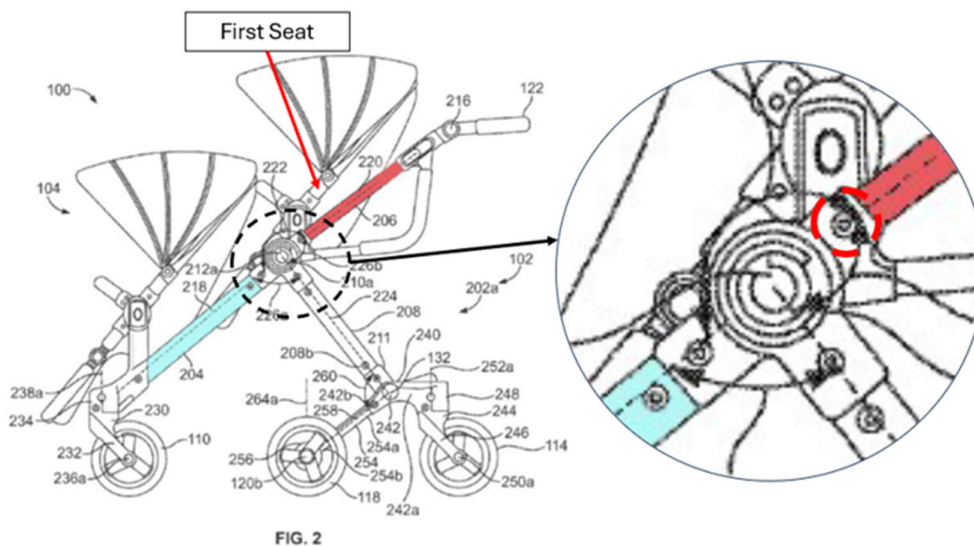


EX1047, Figs. 2, 7-8

11. Claim 11

- a. **[11.0] - The stroller of claim 10, wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame**

The upper (first) seat is coupled to two upper mounts 108 coupled to the left/right upper frame supports 206 (depicted in red)—*i.e.*, first/second “upper tube support frame” (red). (EX1047, 3:51-61, 7:4-9, 12:50-52, 13:1-9.) The “adapters” are configured to removably secure the seats 106 to the stroller frame 100. *Id.* A POSITA would recognize that the upper frame supports 206 and the mounts 108 interface at a common junction—circled red below. (EX1001, ¶¶335-336.)



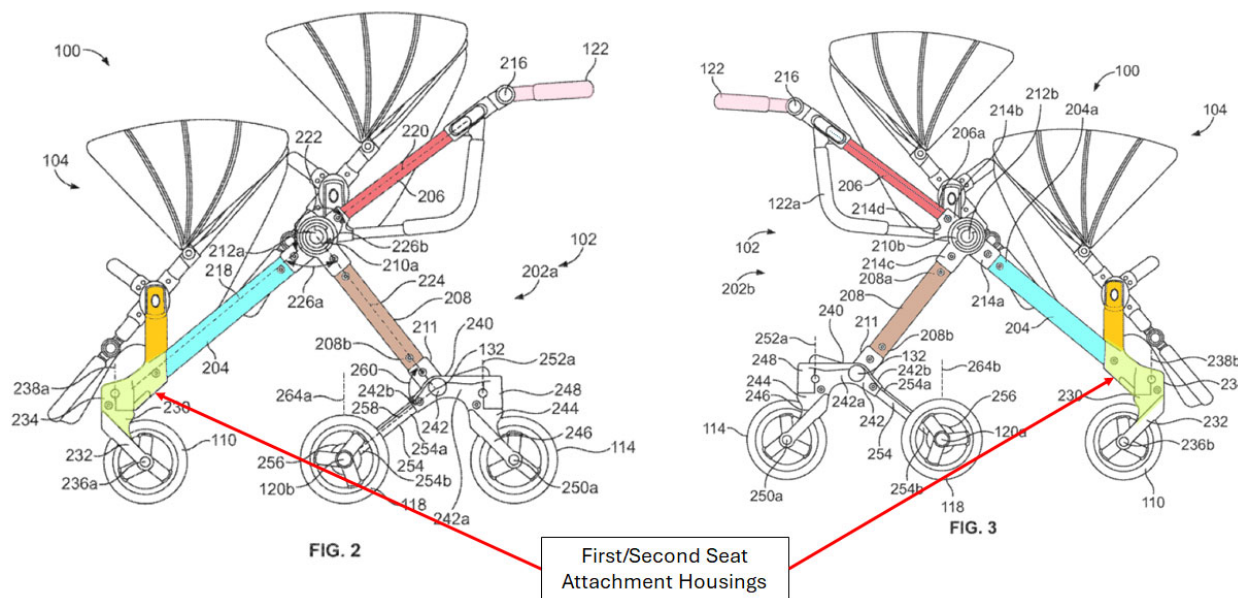
EX1047, Fig. 2

This junction would be understood by a POSITA as the structural location at which the seat mount 108 is mechanically coupled to the upper frame support 206.

(EX1001, ¶¶336-337.) A POSITA would also understand Rolicki teaches adjusting the seat mounts upwards or downwards on the frame further teaching it may be coupled to the upper support frames. (EX1047, 3:61-64; EX1001, ¶338.)

b. [11.1] - wherein the [first/second] seat attachment housing is coupled to the [first/second] front wheel support frame

Rolicki discloses that “the front wheel housing 230 may be coupled or attached to an end of the lower frame support 204.” (EX1047, 7:4-9.) A POSITA would therefore understand the right/left “ housings” (green) are coupled to the corresponding first/second “front wheel support frames” (blue). (EX1001, ¶¶280-287, 340-341.)

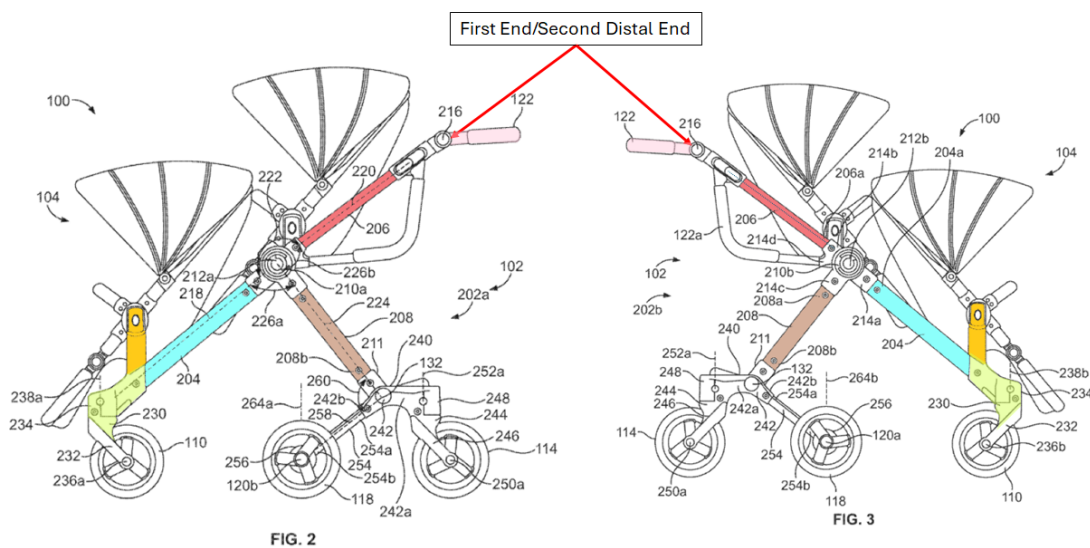


EX1047, Figs. 2-3

12. Claim 12 - The stroller of claim 10, further wherein the handle portion comprises a [first end/second distal end] coupled to the [first/second] upper tube support frame.

See claim limitation [1.1]. (EX1001, ¶¶267-271.)

Rolicki discloses a “handle portion” (pink) having a “first end” and “second distal end” coupled to the first/second “upper tube support frames” (red) via a pair of “frame tilt joints 126.” (EX1047, 5:15-17; EX1001, ¶343.)



EX1047, Figs. 2-3

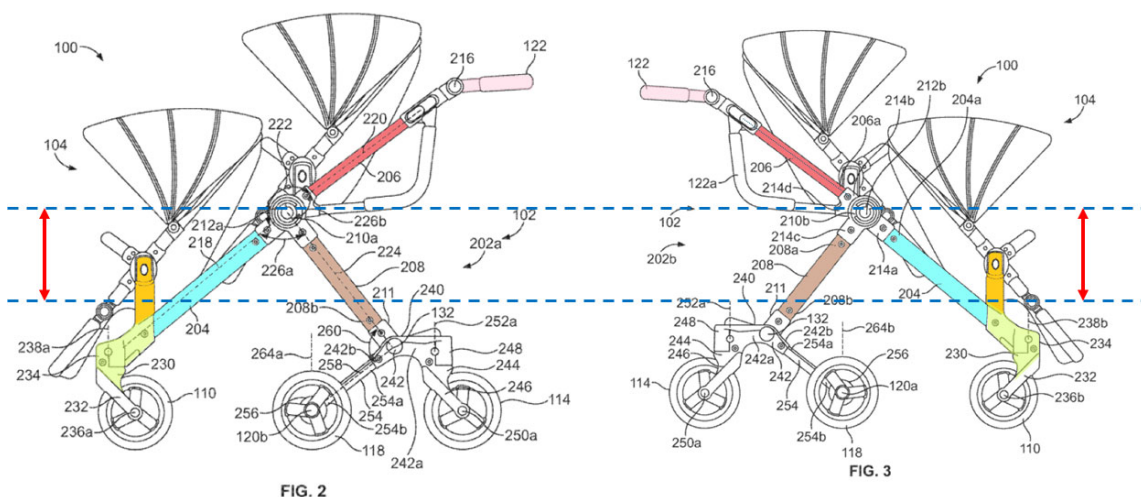
13. Claim 13 - The stroller of claim 1, wherein the [first/second] seat attachment housing ... are part of the stroller frame.

Rolicki discloses the first/second “seat attachment housings” are “coupled or attached to an end” of the corresponding first/second “lower frame supports 204.” (EX1047, 7:4-12.) A POSITA would understand that the “housings”—being coupled to the frame supports and incorporating the front wheels—are part of the

stroller frame structure. (EX1001, ¶¶280-287, 345.)

14. Claim 14 - The stroller of claim 3, wherein the second seat is vertically lower than the first seat.

Rolicki illustrates the lower (second) seat is vertically lower than the upper (first) seat. (EX1047, 3:49-64; EX1001, ¶347.)



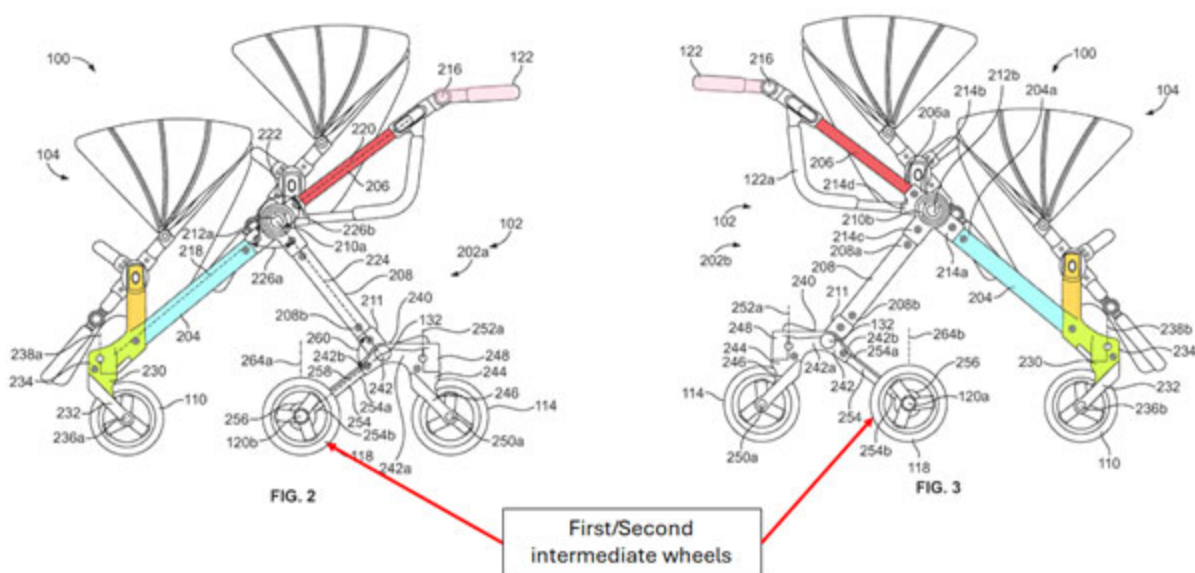
EX1047, Figs. 2-3

15. Claim 15 - The stroller of claim 1, wherein the [first/second] front wheel extends from the [first/second] seat attachment housing.

Rolicki discloses the first/second housings (green) include “wheel supports 232,” to which the front wheels are “rotatably journaled.” (EX1047, 7:4-40.) A POSITA would understand that the front wheels are supported by, and extend from, the wheel supports integrated into the first and second housings—*i.e.*, the wheels extend from the “seat attachment housings.” (EX1001, ¶349.)

16. Claim 16 - The stroller of claim 1, wherein the plurality of wheels comprises at least one central wheel.

Rolicki discloses a “plurality of wheels,” including front, intermediate, and rear wheels. (EX1047, 3:65-4:7.) A POSITA would understand the “intermediate wheels 118” are “at least one central wheel,” given their central longitudinal placement on the stroller. (EX1047, 4:15-19.) (EX1001, ¶351.)



EX1047, Figs. 2-3

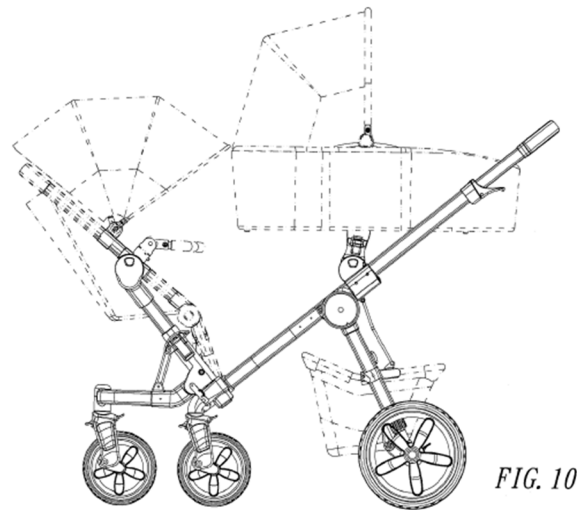
B. Ground 2 – Claims 1-9 and 13-16 are obvious over Liao

1. Claim 1

a. [1.0]

Liao is a design patent with drawings a POSITA would understand to be detailed engineering drawings sufficiently describing details and operation of the stroller shown. (EX1048, Figs. 1-13; EX1001, ¶353.) A POSITA would understand

Liao's drawings disclose "a stroller." (EX1048, FIG.10; EX1001, ¶¶354-356.)



EX1048, Fig. 10

During prosecution of U.S. Application No. 18/448,417 ("the '417 Application"), the *Examiner rejected claims similar in scope* to those of the '682 Patent as *anticipated by Liao alone*. (EX1024¹⁴, 1203.) The Examiner's rejection, which confirms what a POSITA would understand, stated "Liao discloses: A convertible stroller ... configured for being converted from a single stroller to a

¹⁴ Given the size of the file history it needed to be split into multiple files. The pages being cited are within "Part 4" of EX1024.

double stroller[.]”¹⁵ (*Id.*; EX1001, ¶¶356-359.)

b. [1.1]

Liao discloses, “[t]he ornamental design for a combination pushchair frame[.]” (EX1048, Claim.) A POSITA would understand that Figure 1 of Liao discloses a stroller frame with a “handle portion” (pink) and a “front end portion” (dark blue). (EX1001, ¶¶361-362.)

¹⁵ While PO amended the pending ’417 Application claims, PO never disputed the Examiner’s finding regarding what Liao teaches as used in Ground 2. (EX1024, 1394.)

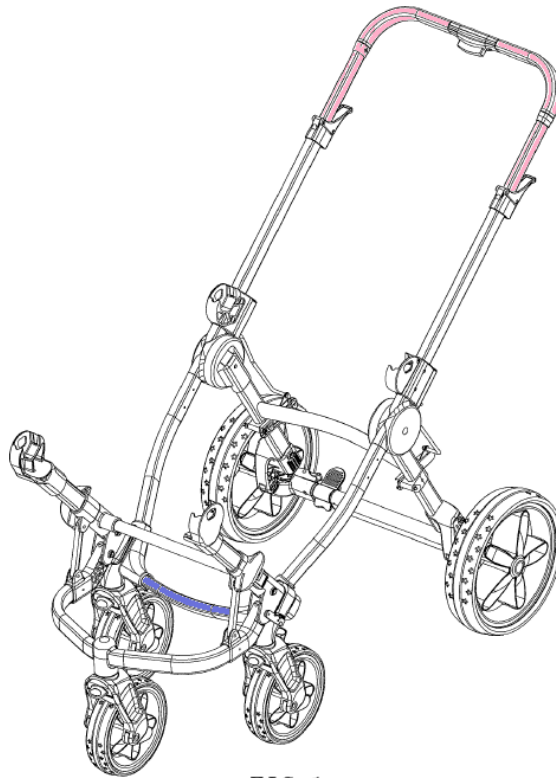


FIG. 1

EX1048, Fig. 1

The Examiner in the '417 Application found that Liao discloses a “stroller frame comprising: a handle portion ... [and] a front wheel support portion.” (EX1024, 1203.) This confirms a POSITA’s understanding that Liao teaches both a handle portion and front end portion. (EX1001, ¶363.)

c. [1.2]

Liao discloses two (“plurality”) back wheels. (EX1001, ¶365.)

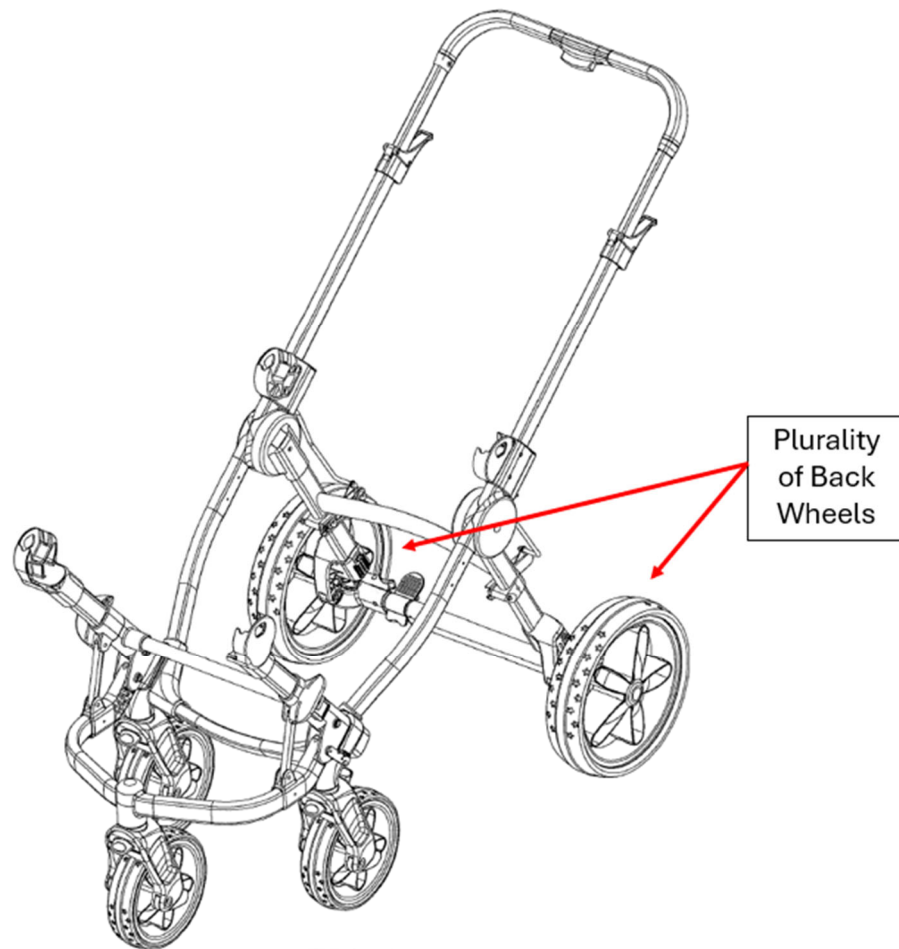


FIG. 1

EX1048, Fig. 1

In the '417 Application the Examiner confirmed a POSITA's understanding that "Liao discloses: ... two rear wheels[.]" (EX1024, 1203; EX1001, ¶366.)

d. [1.3]

Liao teaches two coupling mechanisms (one on each upper support frame) used to attach an upper "first" seat to the stroller frame. (EX1048, Fig.1; EX1001, ¶368.)

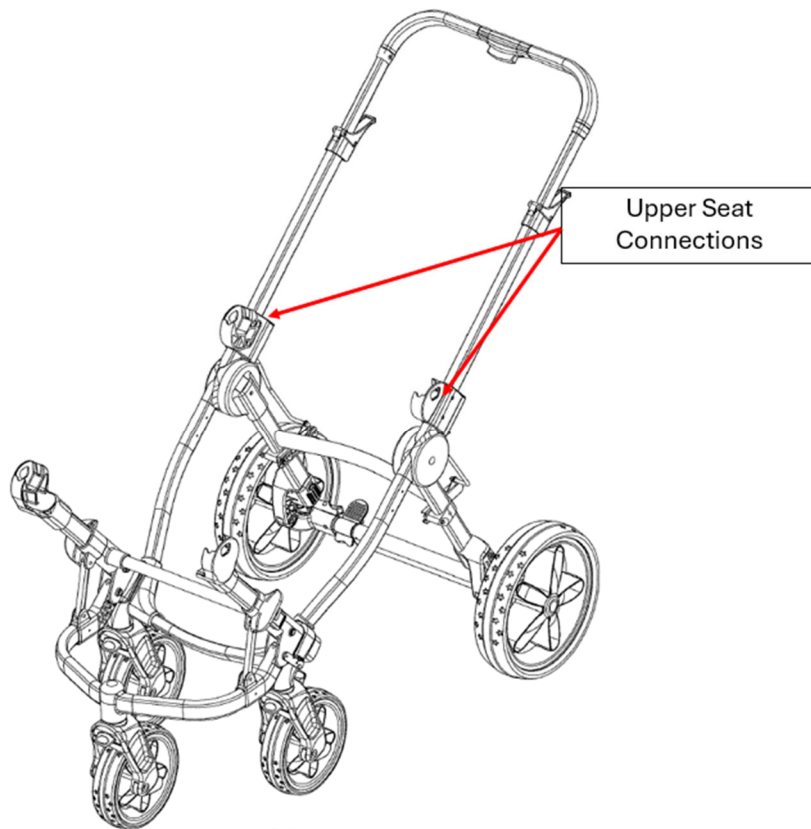
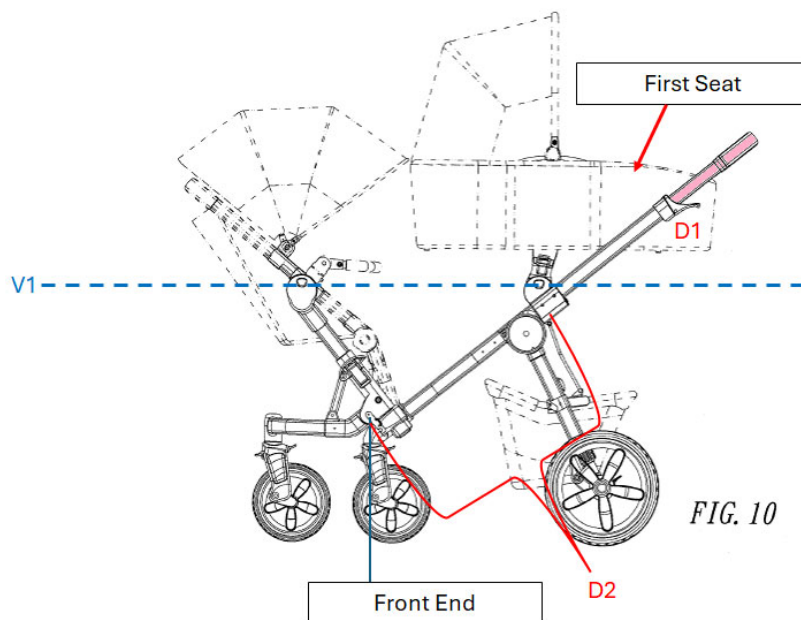


FIG. 1

EX1048, Fig. 1

Figure 10 of Liao shows the upper seat (“first seat”) coupled to the stroller frame at a first vertical position (V1) via upper connection points. The location where the infant would lie in the bassinet is positioned closer to the handle portion (pink) than to the “front end portion.” (See Ground 2, [1.1]; EX1001, ¶¶268-270.) Although Liao discloses various seating configurations, the foot end of the bassinet appears right next to the handle portion, illustrating that the first seat is disposed closer to the handle portion than to the front end portion—*i.e.*, D1 is much less than D2. (EX1001, ¶369.)



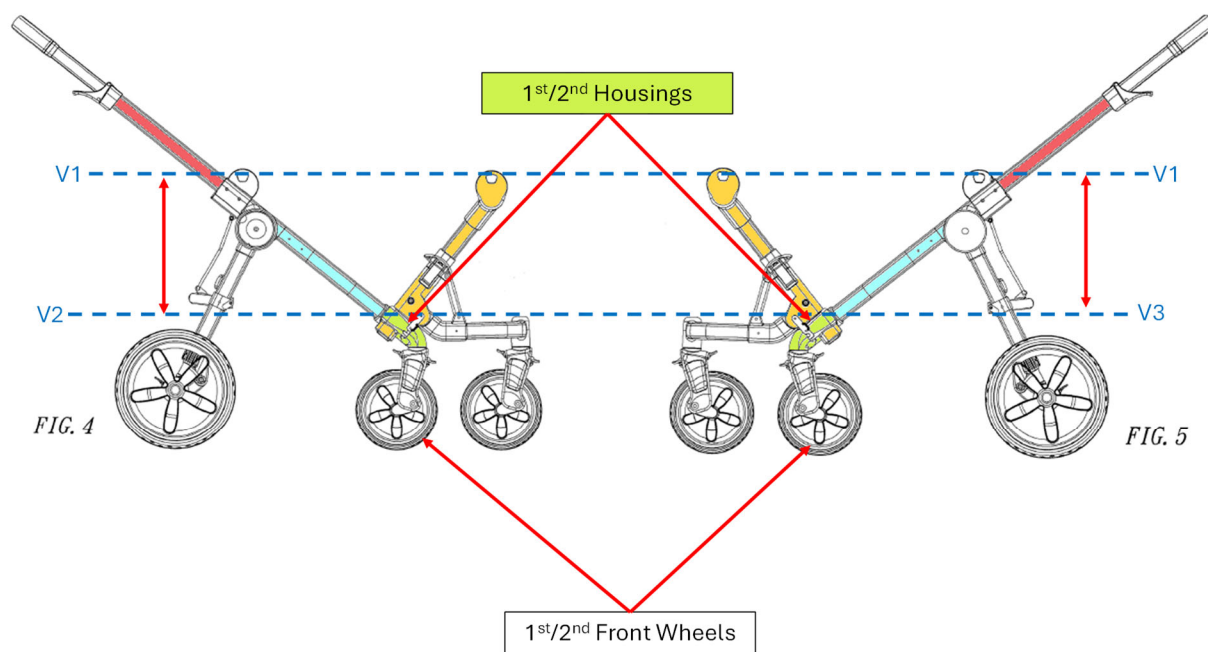
EX1048, Fig. 10

The Examiner in the '417 Application also found Liao taught: (1) a “first seat ... removably attached to the stroller frame” (EX1024, 1203); (2) “the first seat is positioned adjacent to the stroller frame’s handle portion” (EX1024, 1205 [Claim 5]); and (3) “the first seat is ... attached to the stroller frame at a first vertical position.” (EX1024, 1205 [Claim 15].) The Examiner’s rejection confirms that a POSITA would have found Liao teaches the claimed limitations. (EX1001, ¶370.)

e. [1.4] / [1.5]

Liao illustrates two components that a POSITA would recognize as first and second “seat attachment housings” (green)—the right and left side housings. These housings are used to couple a removable second-seat subassembly to the stroller

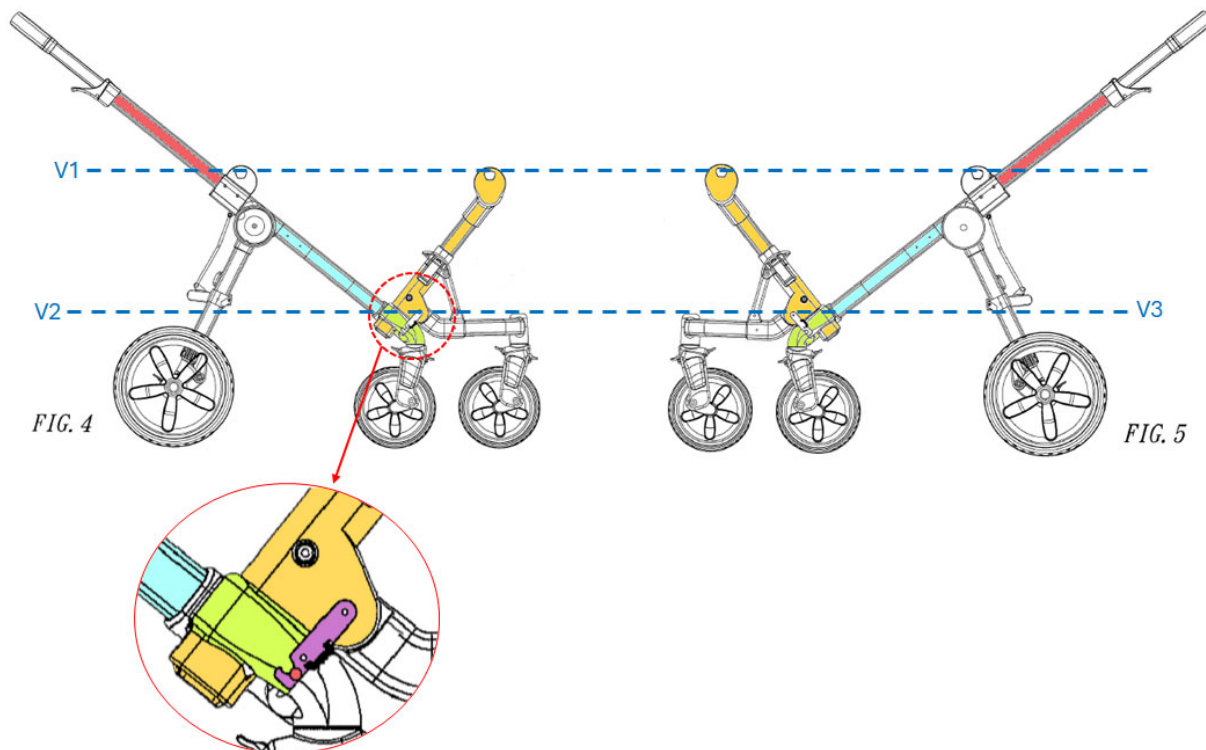
frame by receiving and surrounding the adapter arms of that subassembly. (EX1048, Figs. 4-5; EX1001, ¶¶372-373.) Liao teaches first/second front wheels attached and extending downward from the front end of the stroller. (EX1001, ¶375.) Liao also teaches where the “housings” are coupled to the frame at a “second vertical position” (V2) and “third vertical position” (V3) that is below the first vertical position (V1) and is closer to the front end portion (*i.e.*, front end) than the handle portion. (EX1001, ¶¶372, 374.)



EX1048, Figs. 4-5

As shown in the enlarged Figure 1, the right and left lower frame support members (light blue) are inserted into and coupled to the housings (green). The front-end cross frame member (dark blue) is similarly coupled to the same

housings. A POSITA would understand these connections as structural couplings made using known techniques, such as mechanical fasteners, press-fits, or adhesive bonding. (EX1048, Fig.1; EX1001, ¶373.)



EX1048, Figs. 4-5

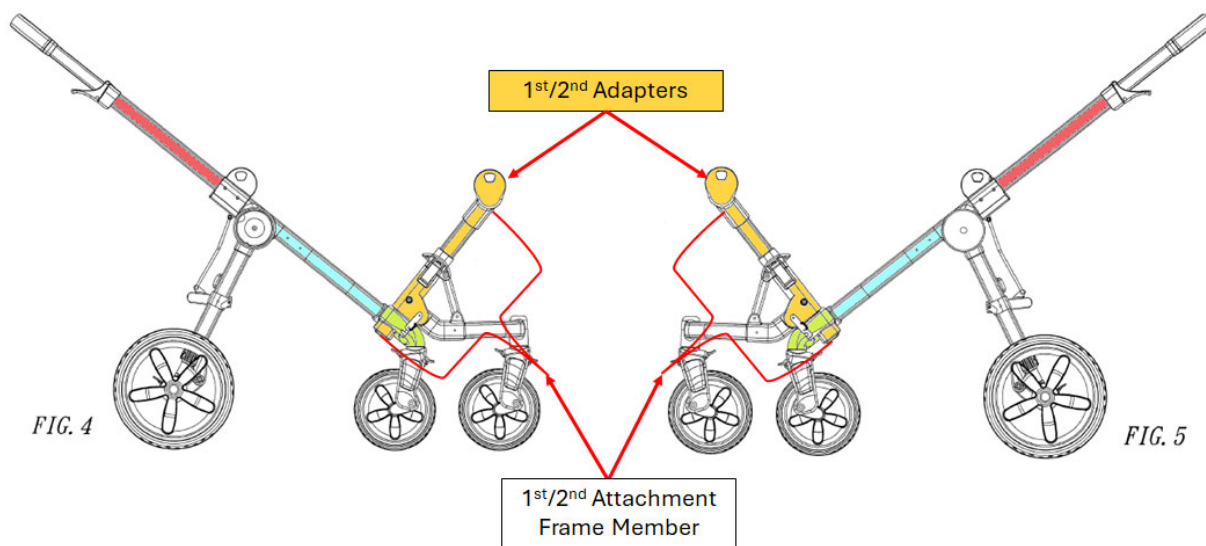
In the '417 Application, the Examiner found Liao teaches “one or more seat attachment portions removably attached to the stroller frame.” (EX1024, 1203.) These “seat attachment portions” would be understood as being the first/second “adapters” discussed below. A POSITA would understand the Examiner found Liao discloses adapters removably coupled to the frame. (EX1001, ¶376.) The Patent Owner later argued that Liao teaches a “seat attachment portion ... coupled

to a separate, discrete component” and not directly to the frame. (EX1024, 1394.)

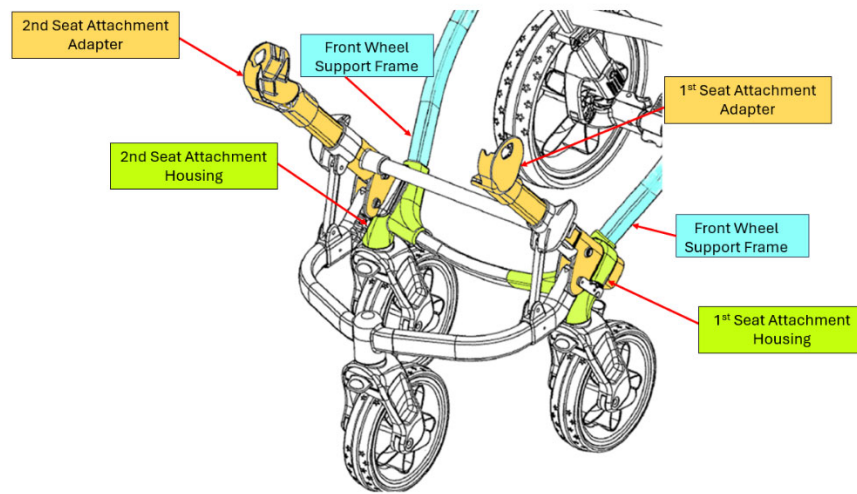
This argument confirms a POSITA’s understanding that Liao discloses “ housings”—*i.e.*, separate components (highlighted in green)—that indirectly couple the “adapters” to the stroller frame. (EX1001, ¶377.)

f. [1.6] / [1.7]

A POSITA would understand that Liao discloses a second-seat subassembly comprising first and second seat attachment adapters (gold), each coupled to a corresponding housing (green). Liao’s figures show the lower ends of the adapters inserted through openings in the housings and secured using latches. (EX1001, ¶379.)

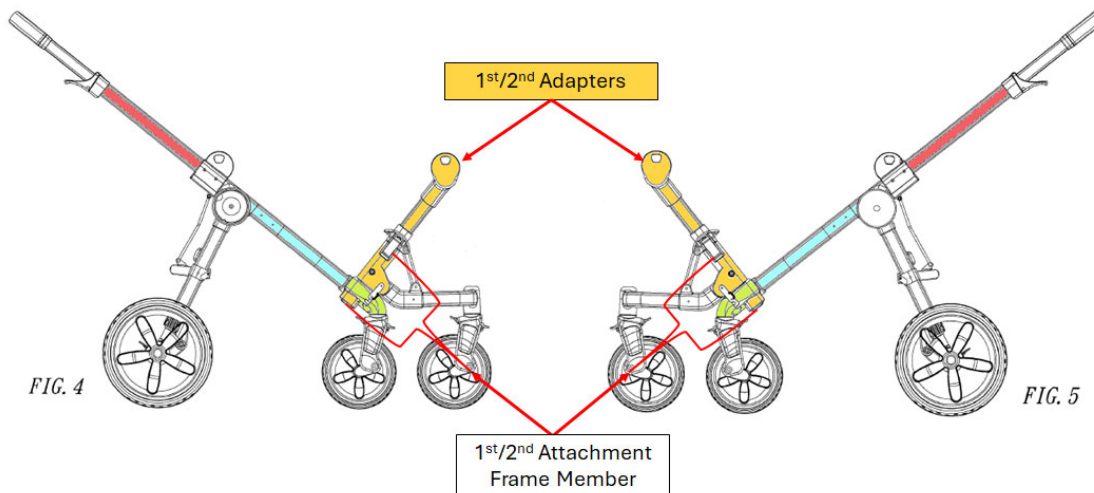


EX1048, Fig. 1



EX1048, Fig. 1

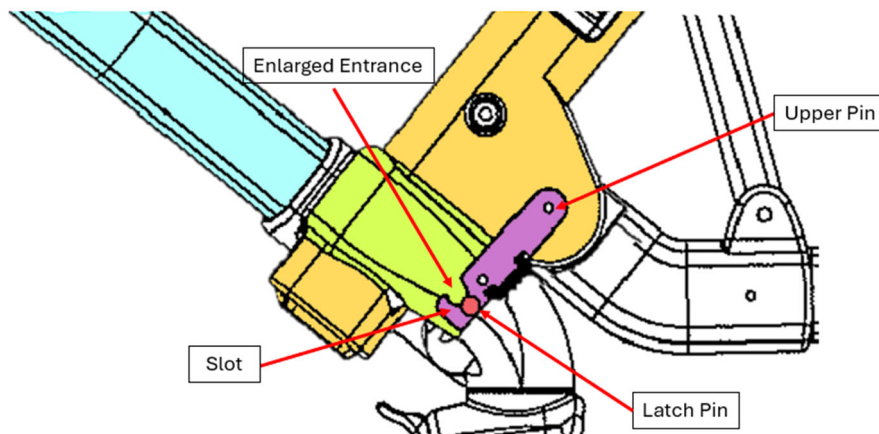
A POSITA would further recognize that the portion of each adapter shaded brown below corresponds to an “attachment frame member.” This portion, which is spaced from but configured for insertion into the housings, enables the adapters to couple to the housings while remaining removable. (EX1001, ¶380.)



EX1048, Figs. 4-5

Each adapter (gold below) is latched to its respective housing (green) using a

pivoting latch mechanism (purple) with an upper pin connection and a lower slot that engages a latch pin (red) extending from the housing. This configuration enables secure attachment and selective removal of the seat subassembly. (EX1001, ¶381.)

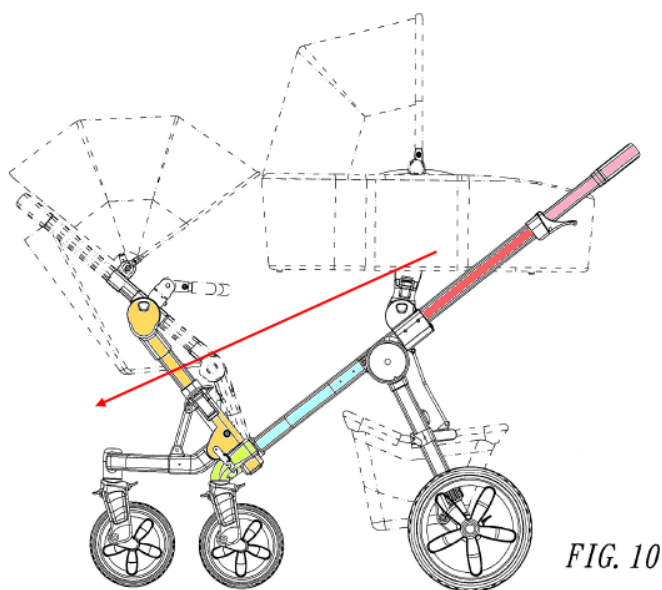


EX1048, Fig. 4

The Examiner's findings in related applications further confirm a POSITA's understanding. During prosecution of the '568 Patent, the Examiner found Liao discloses "seat attachment adapters coupled to the front wheel support frame of the stroller." (EX1019, 559; EX1001, ¶382.) Similarly, in the '417 Application, the Examiner found that Liao teaches "one or more seat attachment portions ... removably attached to the stroller frame's front wheel support portion[.]" (EX1024, 1204, Claim 7.) These "seat attachment portions" correspond to the first and second adapters, which a POSITA would understand as being removably coupled to the housings and spaced therefrom via attachment frame members. (EX1001, ¶383.)

g. [1.8]

Liao discloses a first (upper) and second (lower) seat arranged in an inline, descending configuration along the stroller frame. This arrangement is visible to a POSITA by the relative vertical positioning of the seats as shown in the figures, including the general seating areas where an infant's lower body would rest. (EX1001, ¶385.)

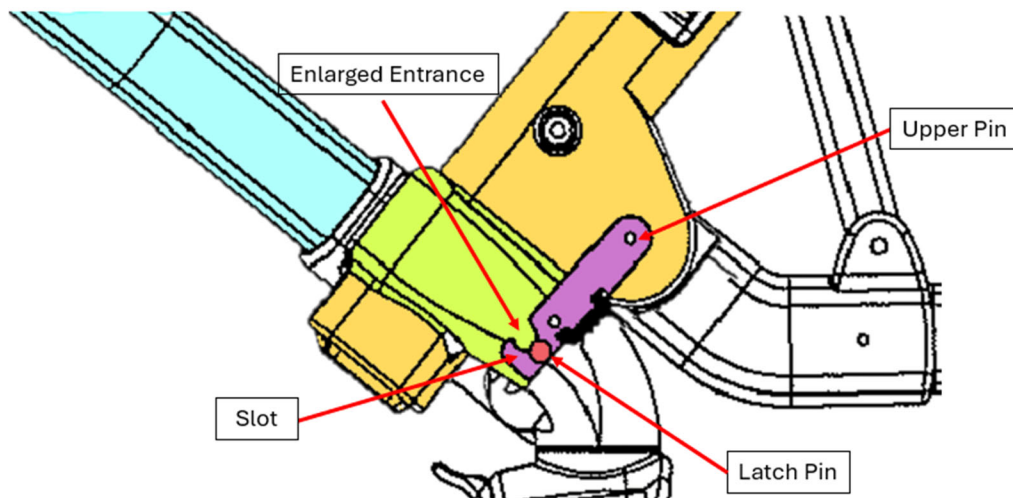


EX1048, Fig. 10

A POSITA's understanding is confirmed by the Examiner's findings during prosecution of the '417 Application. The Examiner determined that Liao teaches a first seat at a first vertical position and a second seat at a lower, second vertical position. (EX1024, 1205, Claim 15.) The PO did not dispute this finding, further confirming a POSITA's understanding (*Id.*, 1394). (EX1001, ¶386.)

2. Claim 2

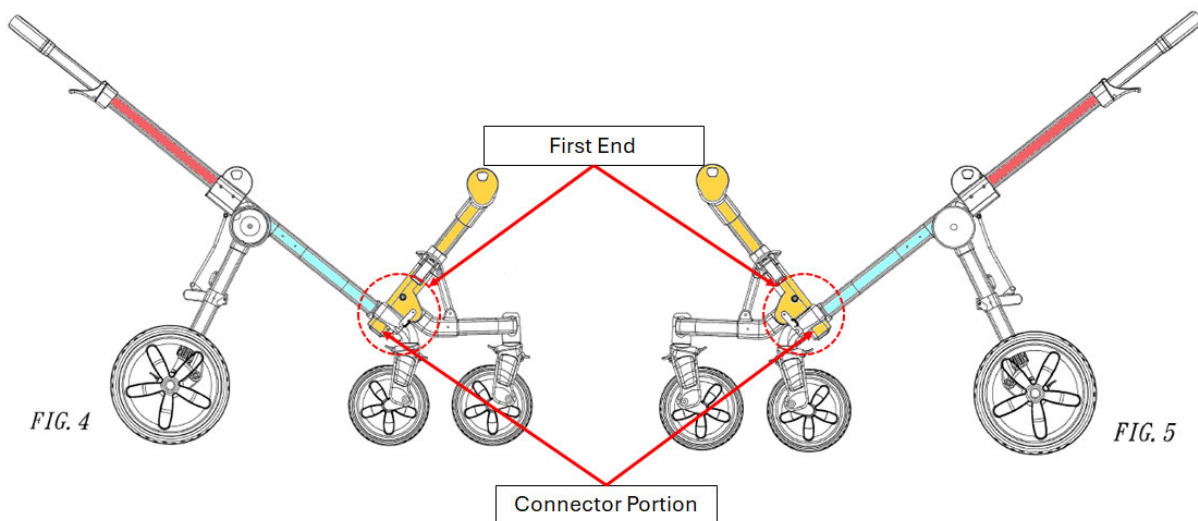
Liao discloses first and second seat attachment adapters that are removably coupled to corresponding first and second seat attachment housings. (See [1.6]-[1.7]; EX1019, 559; EX1024, 1204, Claims 2, 11.) A POSITA would have understood the adapters (gold) are inserted and secured to the housings (green) using latching mechanisms (purple), as shown in Figure 4 and mirrored on the opposite side in Figure 5. Each latch is pivotally connected to its adapter by an upper pin and includes a lower slot configured to receive a latch pin (red) extending from the housing. A POSITA would recognize the latches, latch pins, or both as corresponding to the claimed first and second “connector portions,” which mechanically couple the adapters to the housings and allow for their selective removal. (EX1001, ¶¶379-384, 388-389.)



EX1048, Fig. 4

A POSITA would alternatively understand the portion of each adapter that

extends through the housing as the “connector portion,” since it enables the adapter to engage with and secure to the stroller frame. (EX1001, ¶390.)

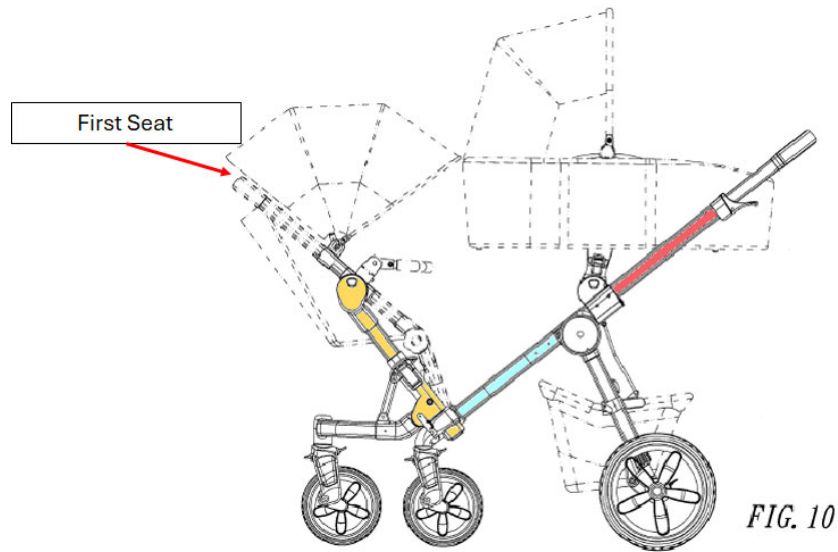


EX1048, Figs. 4-5

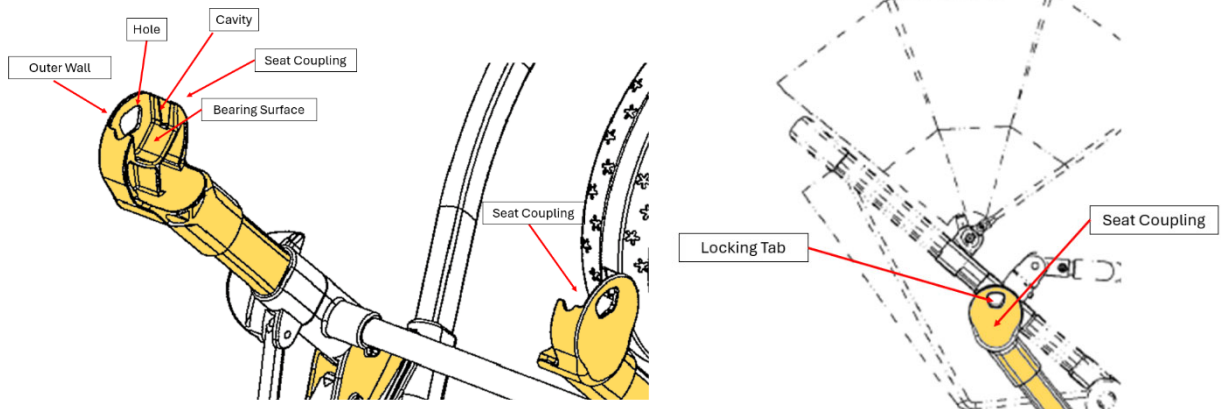
3. Claim 3

Liao discloses a second seat coupled to the upper ends of the seat attachment adapters (gold), with Figure 1 illustrating mechanical couplings (shown below) that include open-top cavities, outer walls with locking holes, and bearing surfaces that support and secure the seat via a resilient tab that snaps into place. (EX1001, ¶¶392-394.) A POSITA would understand from these details shown by Figures 8-13 that the second seat is removably coupled to the adapters to allow interchangeable seat orientations and configurations. (EX1001, ¶395.) The Examiner also confirmed a POSITA’s understanding by finding “Liao discloses: ... the one or more seat attachment portions each comprise a seat connector

configured for connecting to the second seat.” (EX1024, 1204, Claim 9; EX1001, ¶¶396-397.)



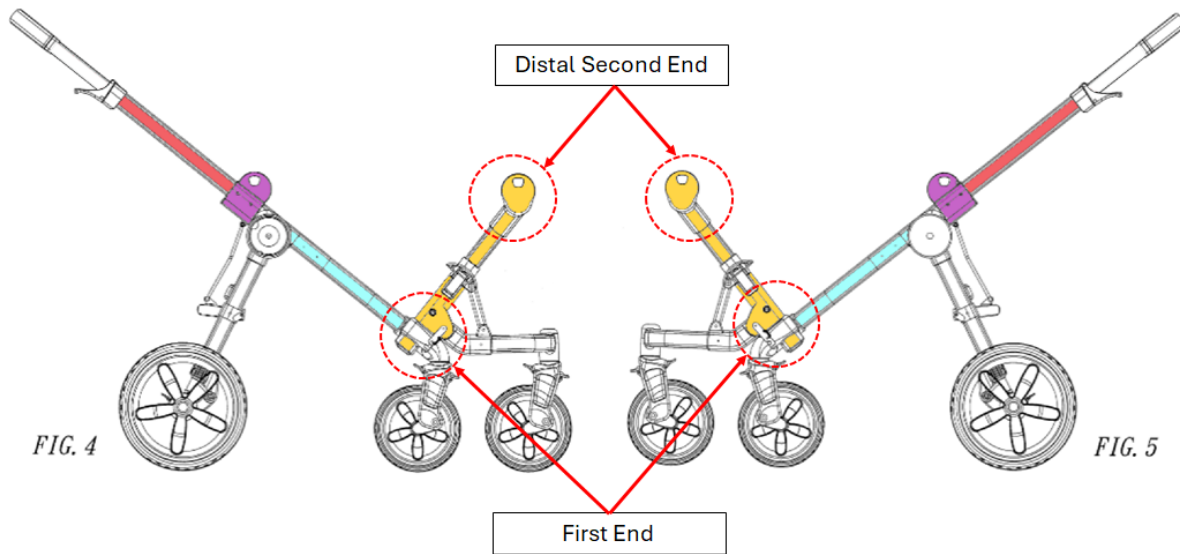
EX1048, Fig. 10



EX1048, Figs. 1, 10

4. Claim 4

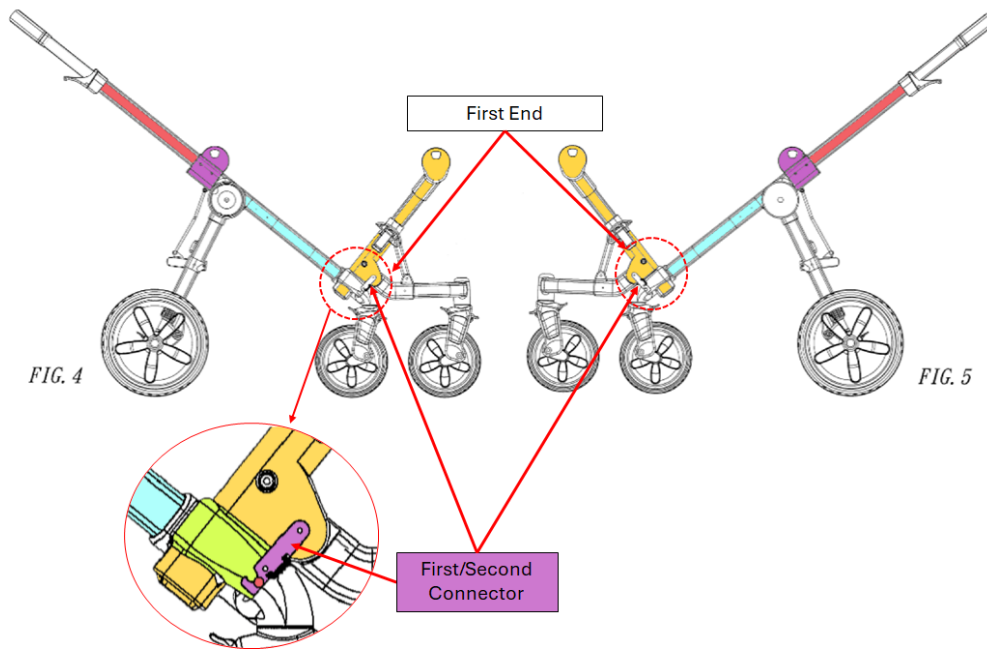
Liao’s first/second adapters include first and distal second ends. (EX1001, ¶399.)



EX1048, Figs. 4-5

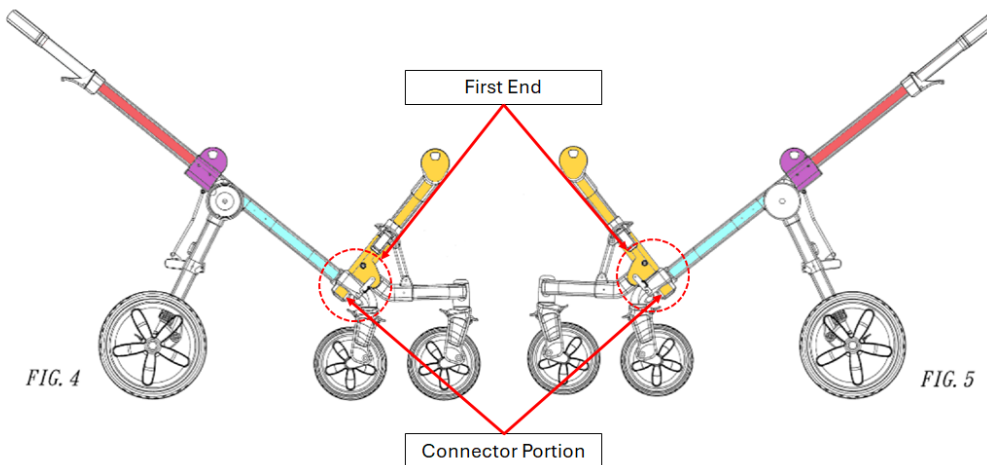
5. Claim 5

A POSITA would recognize that the right- and left-side latches (purple) illustrated in Figures 4 and 5 are the first/second “connector portions.” These latches are located at the first ends of the seat attachment adapters and function to releasably couple the adapters to the corresponding housings, satisfying the claimed connector portion limitations. (EX1001, ¶401.)



EX1048, Figs. 4-5

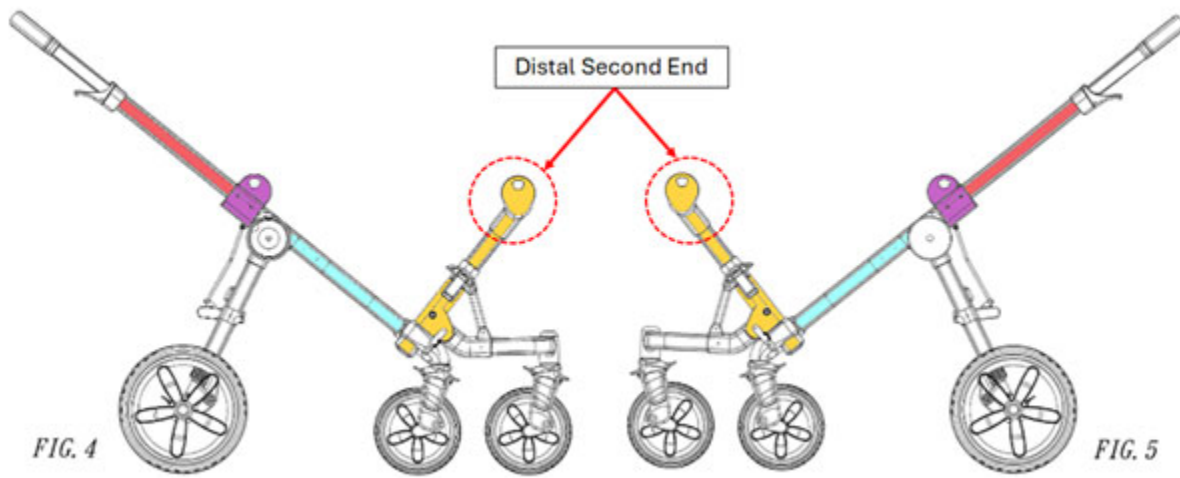
A POSITA would alternatively view the inserted portions of the adapters as the first and second “connector portions,” as they enable removable connection to the housings. (EX1001, ¶402.)



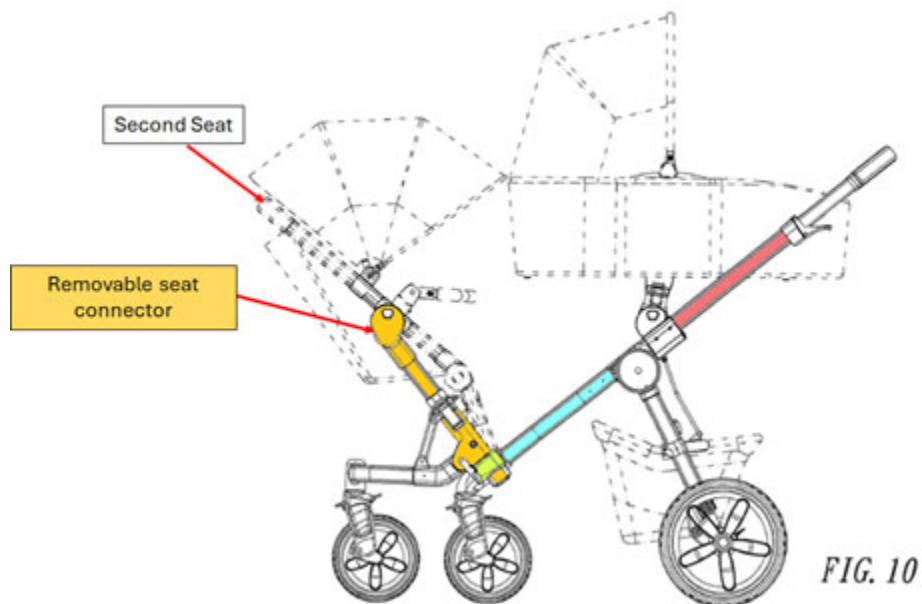
EX1048, Figs. 4-5

6. Claim 6

As discussed in connection with claims 3 and 4, the upper end of the adapter is a “distal second end.” Liao discloses that this end includes a connector configured to releasably couple the second seat. (EX1003, ¶404.)



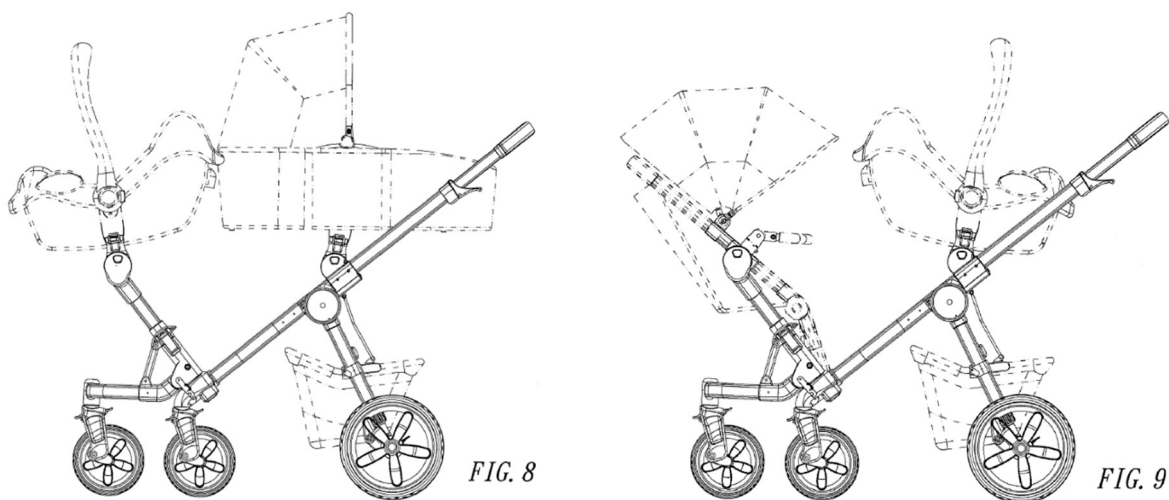
EX1048, Figs. 4-5



EX1048, Fig. 10

7. Claim 7

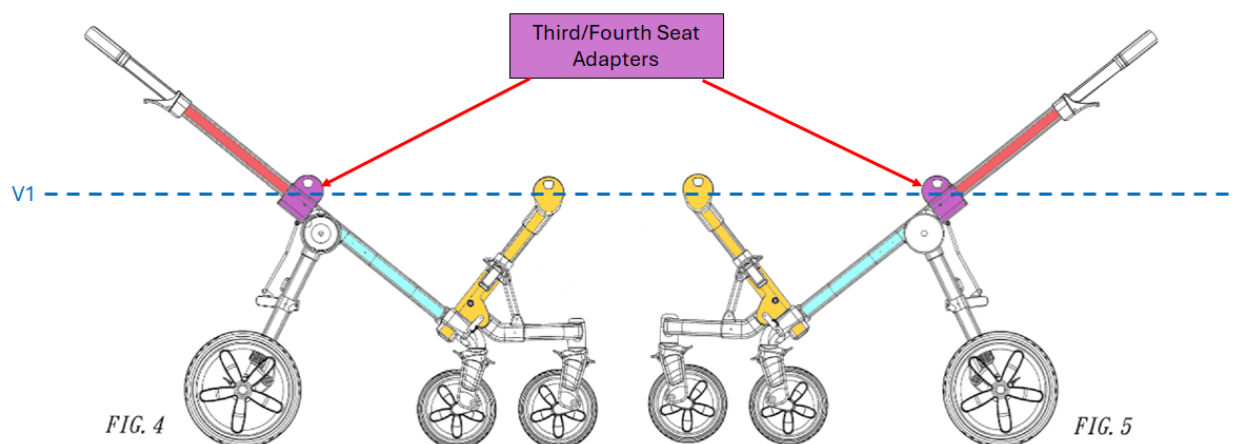
Liao discloses many different types of infant seats that may be connected to the stroller. Figure 8 illustrates “a bassinet” as the first seat and an “infant/baby carrier” as the second seat. (EX1048, Figs. 8-13; EX1001, ¶¶405-407.)



EX1048, Figs. 8-9

8. Claim 8

Liao discloses third/fourth seat attachment adapters (purple) which are directly coupled to the upper stroller frame supports (red) at a first vertical position (V1). These third/fourth adapters are like the first/second adapters and a POSITA would understand they function to removably couple the upper first seat to the frame—as shown by Liao Figs. 8-13. (EX1048, Figs. 4-13; EX1001, ¶¶409-410.)



EX1048, Figs. 4-5

During prosecution of the '417 Application, the Examiner found Liao discloses a second set of “seat attachment portions” coupled to the stroller frame. (EX1024, 1203-1205, Claims 2, 10, 12.) The Examiner also found Liao disclosed the first seat is attached (coupled) at a “first vertical position.” (EX1024, 1205, Claim 15.) The Examiner’s findings confirm Liao teaches third/fourth adapters that allow the upper (first) seat to be removably coupled from the stroller frame at a first vertical position. (EX1024, 1203-1205, Claims 2, 10, 12, 15; EX1001, ¶411.)

9. Claim 9

Liao is symmetrical with the “first and second seat attachment housings” being coupled to the frame at the same height as shown by the blue datum line in back view of Figure 3 annotated below. (EX1048, Fig. 3; EX1001, ¶413.)

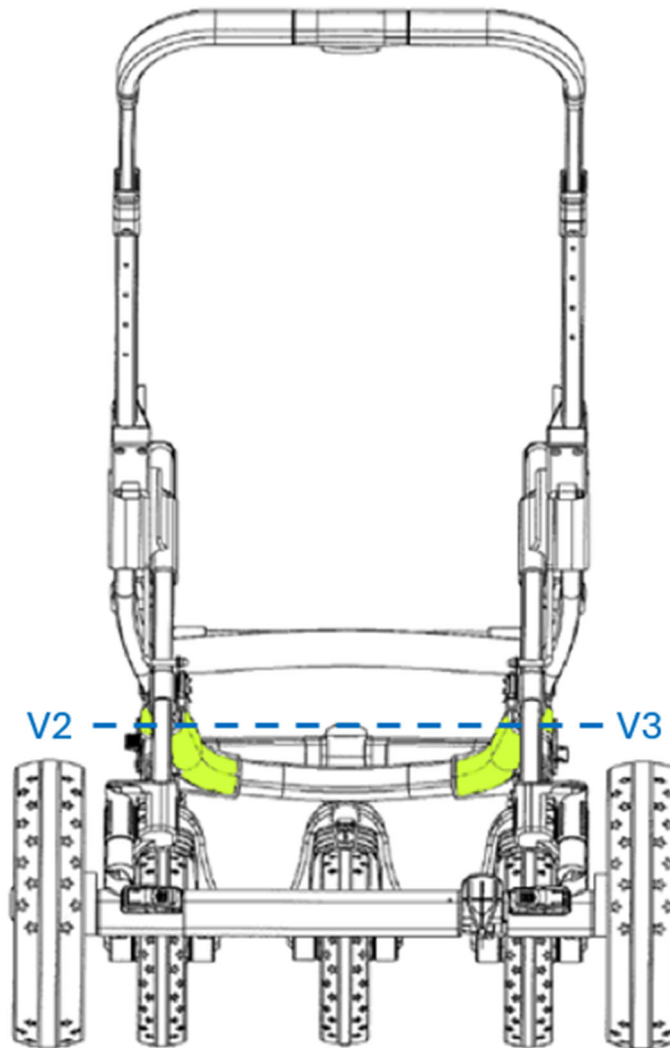


FIG. 3

EX1048, Fig. 3

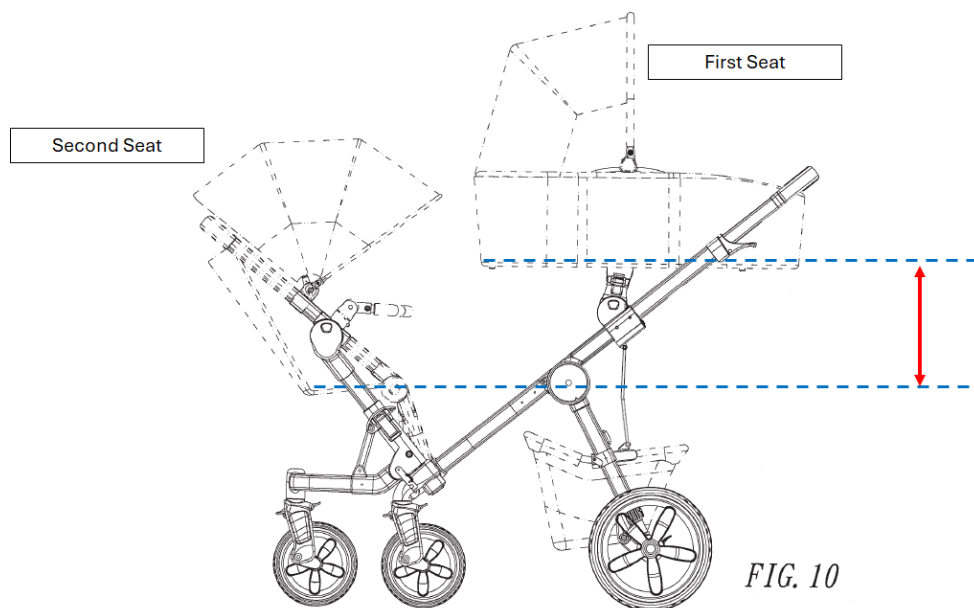
10. Claim 13

Limitations [1.4]-[1.5] discuss and illustrate the housings (green) are coupled to the front wheel support frames (blue). A POSITA would understand the housings directly connect to both the frame tubes and the front wheels, contributing to the structural integrity of the stroller. (EX1048, Figs. 1-13;

EX1001, ¶¶372-377, 415-416.)

11. Claim 14

Liao teaches multiple configurations of seats that may be coupled to the stroller. (EX1048, Figs. 8-13.) A POSITA would understand Figure 10 illustrates the second seat is vertically lower than the first seat. (EX1001, ¶¶418.)

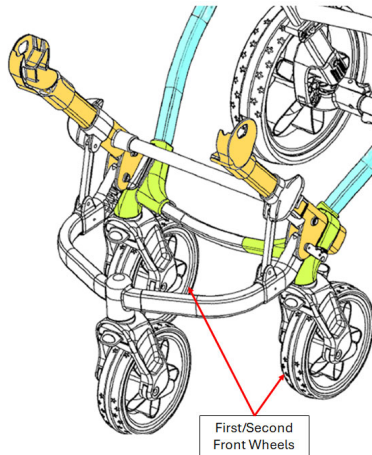


EX1048, Fig. 10

12. Claim 15

See [1.4] above. (EX1001, ¶¶372-377, 420.)

The first and second front wheels are pivotally connected to Liao's seat attachment housings (green) by a shaft, allowing the stroller to be steerable. (EX1048, Figs. 1-13.) A POSITA would understand that the wheels extend downward from the bottoms of the "seat attachment housings." (EX1001, ¶¶372-377, 421.)



EX1048, Fig. 1

13. Claim 16

Liao visually discloses a single central wheel as part of the second-seat assembly, which becomes the “at least one central wheel” within the “plurality of wheels” when the adapters are coupled to the stroller frame housings. (EX1048, Figs. 1-13; EX1001, ¶¶423-424.)

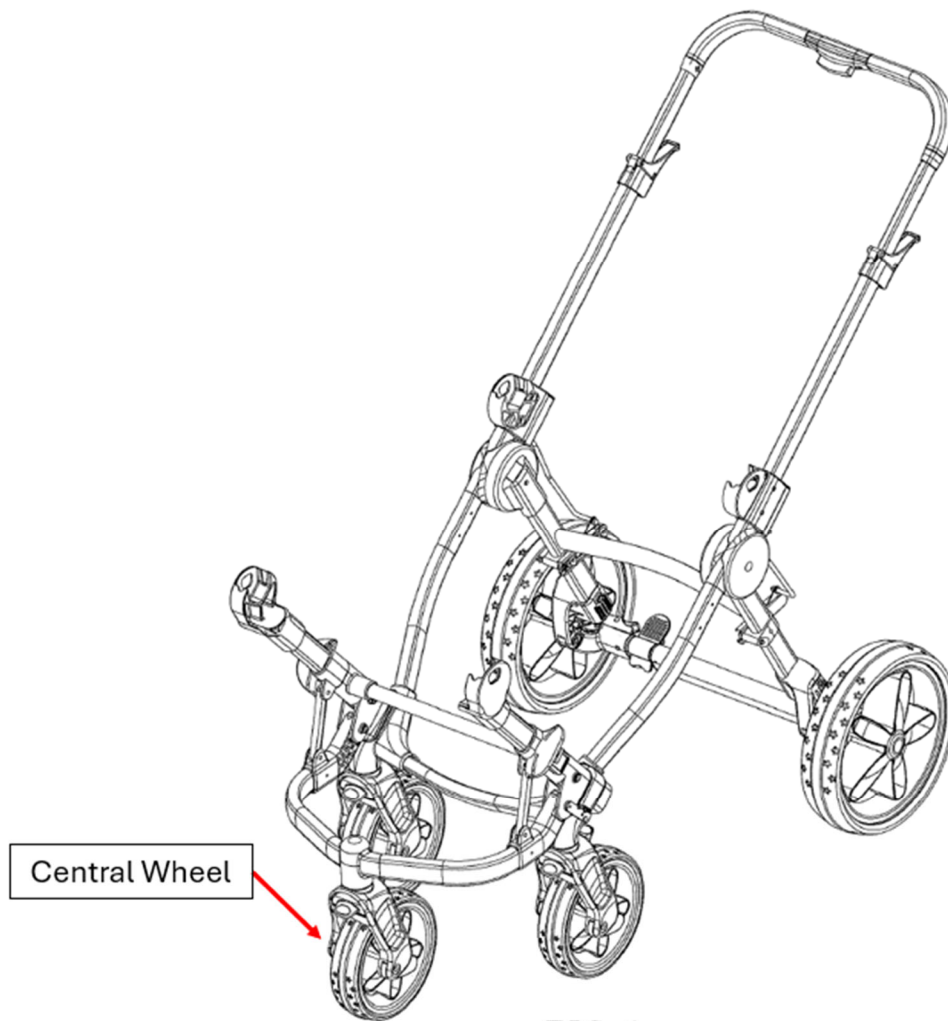


FIG. 1

EX1048, Fig. 1

C. Ground 3 – Claims 10-12 are obvious over Liao and Cheng

1. Claim 10

a. [10.0]

See Ground 2, [1.0] above. (EX1001, ¶¶353-360, 425.)

b. [10.1]/[10.2]

Liao teaches the stroller includes left (“first”) and right (“second”) “upper

tube support frames” (red). (EX1048, Figs. 1, 4-5; EX1001, ¶426.)

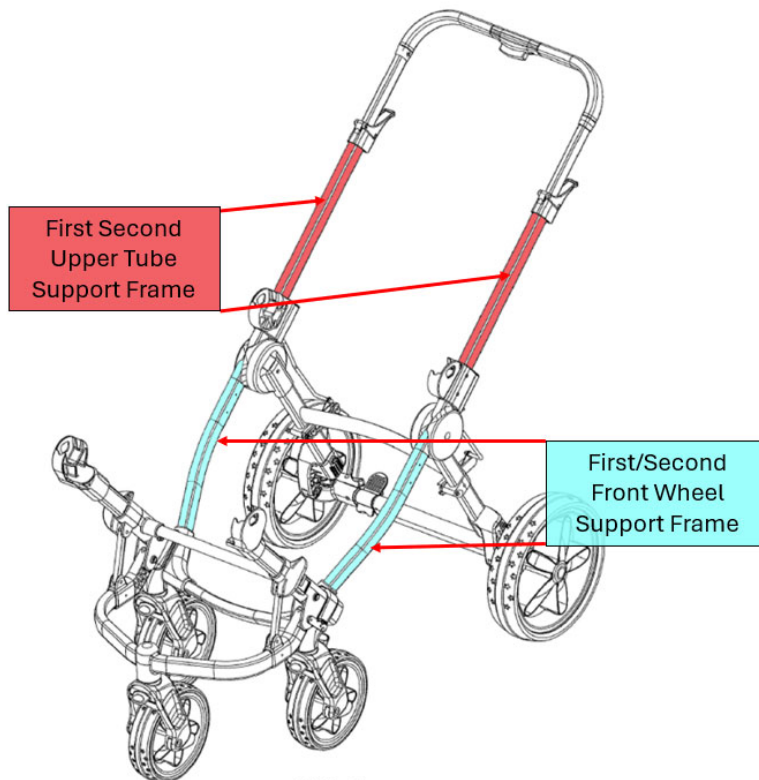
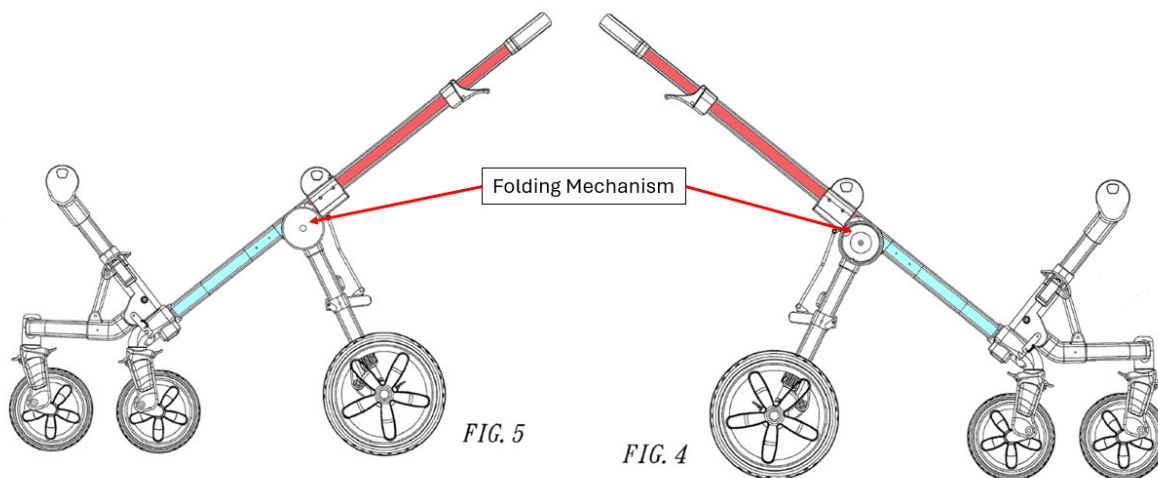


FIG. 1

EX1048, Fig. 1

c. [10.3] / [10.4]

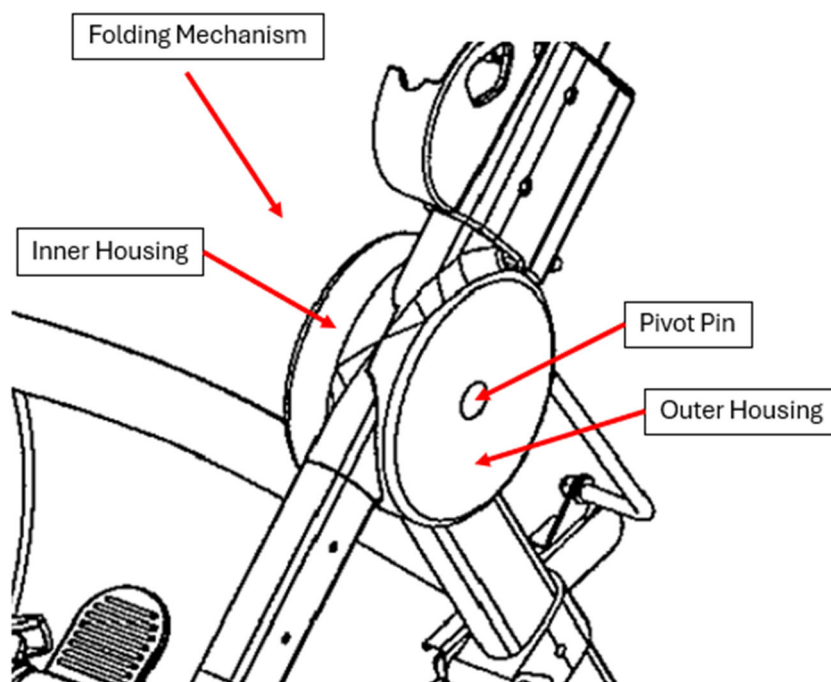
Liao teaches first/second front wheel support frames (blue). (EX1048, Fig. 1.) Liao informs a POSITA the upper tube frames (red) are joined to the front wheel frames (blue) by what appears to be a circular folding mechanism. (EX1048, Figs. 4-5.) (EX1001, ¶¶428-430.)



EX1048, Fig. 4-5

Prior to December 2008, a POSITA understood folding mechanisms were used to allow the stroller frame to be rotated between a folded and unfolded configuration. (EX1001, ¶¶431-432, 42-45; *see also* EX1031, Hollie Schultz Dec., EX10, ¶¶284-285¹⁶.) Liao's drawings are detailed 3-D CAD drawings which, when enlarged, inform a POSITA Liao's upper and lower frame members are not rigid but are coupled together by a known folding mechanism so that they can rotate between a folded and unfolded configuration. (EX1001, ¶¶353, 433-434.)

¹⁶ Ms. Schultz's declaration (EX1031) cites "*The Baby Gizmo Buying Guide*," (p284) describing known stroller folding designs.



EX1048, Fig. 1

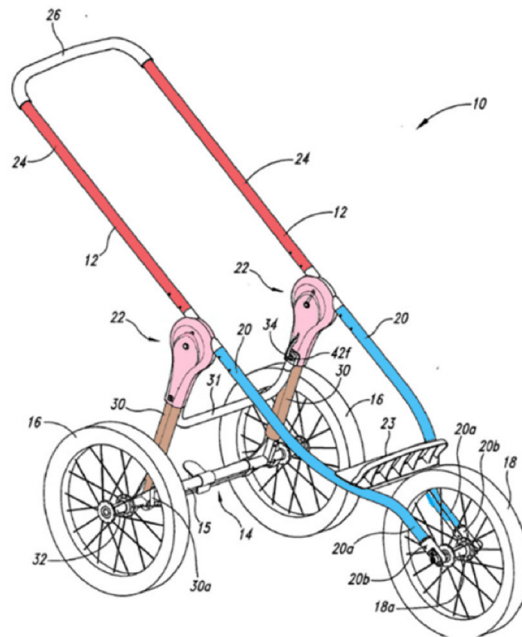
The Examiner, in the '417 Application, confirmed a POSITA's understanding finding Liao teaches, "a stroller frame ... configured for being adjusted between a folded configuration and an unfolded configuration." (EX1024, 1203; EX1001, ¶439.)

To the extent it is argued Liao does not teach a foldable stroller, it would have been obvious to a POSITA to design Liao in combination with Cheng¹⁷ to include a folding mechanism. (EX1001, ¶440.)

Cheng discloses a baby stroller 10 with folding mechanisms 22 (pink)

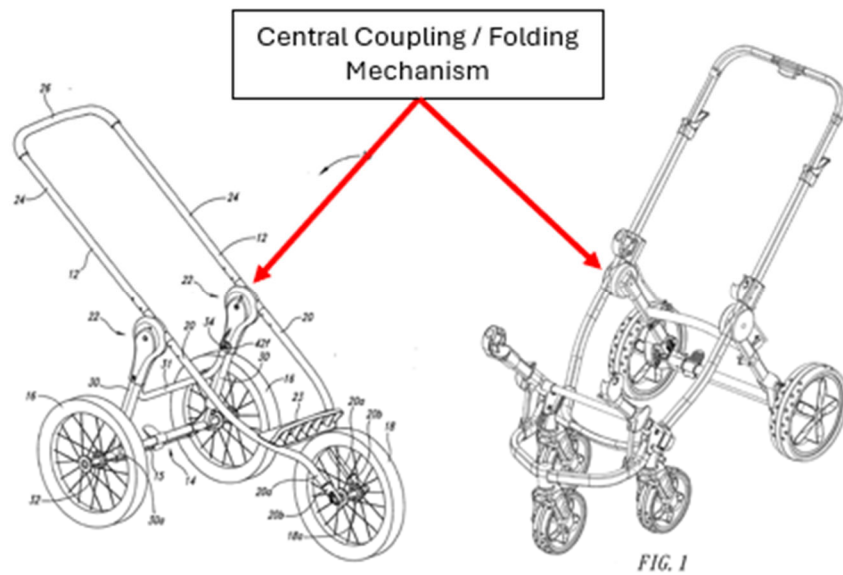
¹⁷ See Section X.E.1.

coupling left/right upper tube support frames (red), left/right front wheel support frames (blue), and left/right back wheel support frames (brown). (EX1049, ¶¶0040-0042, Fig. 2; EX1001, ¶¶441-442.)



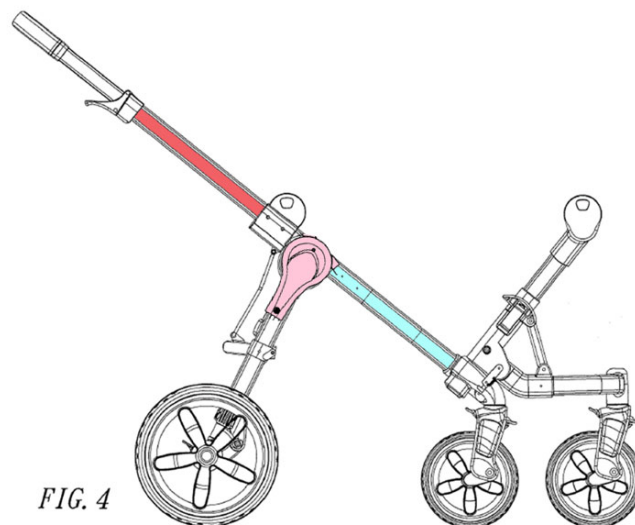
EX1049, Fig. 2

As shown below, Liao and Cheng in the unfolded position share common structural similarities in terms of baby stroller design, including the location of where the folding mechanism would be placed. (EX1001, ¶443.)



EX1049, Fig. 2; EX1048, Fig. 1

Assuming that Liao does not already fold, as shown below, it would have been obvious to a POSITA that Cheng's folding assembly 22 (pink) could have been added to the frame of Liao, allowing the upper frame structure (red) to fold relative to the front wheel frame structure (blue). (EX1001, ¶444.)

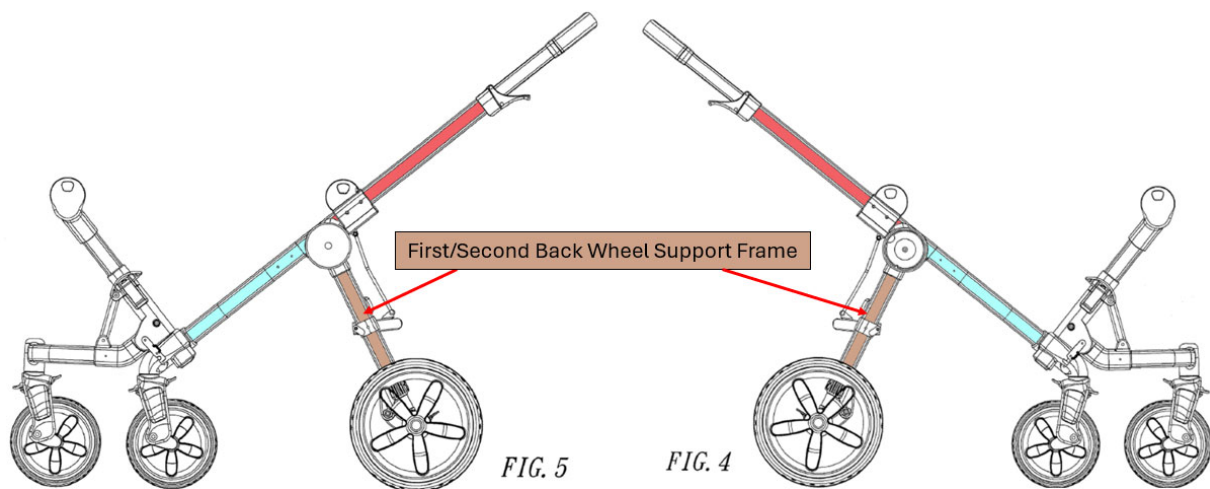


EX1048, Fig. 4 with Cheng's folding assembly (EX1049, Fig. 5)

Therefore, Liao alone or alternatively in view of Cheng discloses “upper tube support frames” (red) rotatably adjusted with respect to the “front wheel support frames” (blue). (EX1001, ¶¶365-371, 445-446.)

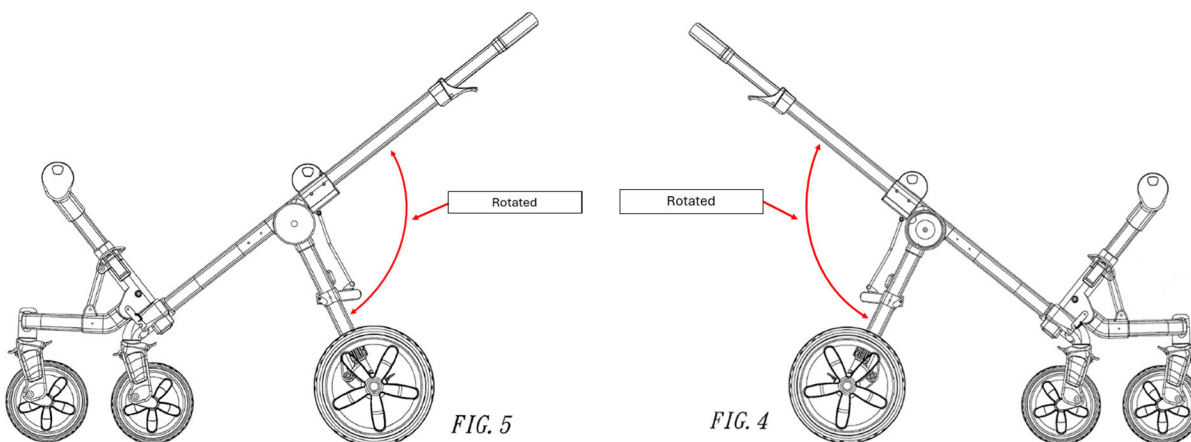
d. [10.5] / [10.6]

Liao teaches first/second “back wheel support frame[s]” (brown). (EX1048, Figs. 1-13; EX1001, ¶447.)



EX1048, Figs. 4-5

A POSITA would have further understood the first/second “back wheel support frames” are “configured to rotate with respect to the [first/second] upper tube support frames” (red) (EX1001, ¶448.)



EX1048, Figs. 4-5

The folding mechanisms discussed above are coupled to the “back wheel support frame[s]” allowing “back wheel support frames” to fold for transportation or storage. (EX1001, ¶¶428-439, 42-45, 449.)

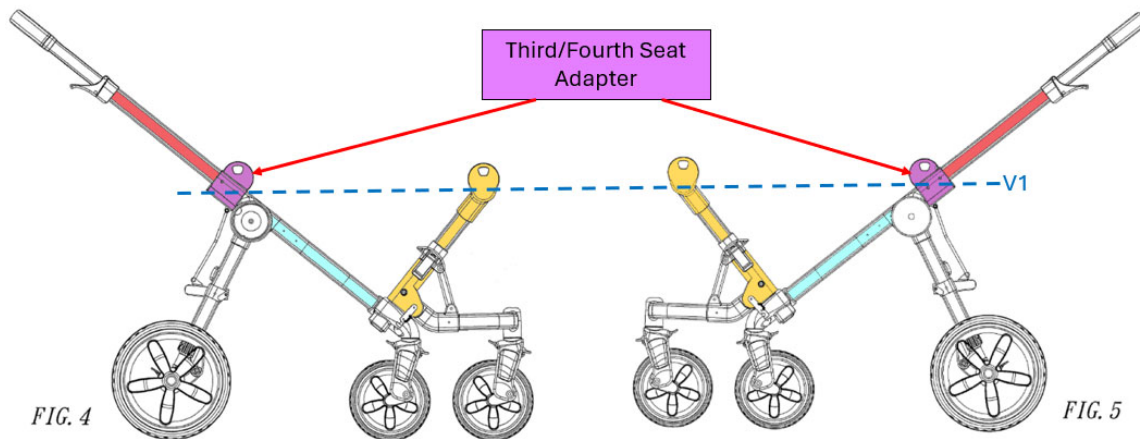
Moreover, the Examiner also found in the '417 Application that “Liao discloses: ... a stroller frame ... configured for being adjusted between a folded configuration and an unfolded configuration ..., the stroller frame comprising: ... a back wheel support portion[.]”. (EX1024, 1203.) The Examiner’s rejection confirms a POSITA would have understood Liao teaches a back wheel support frame capable of being rotated with respect to the upper tube support frame. (EX1001, ¶¶449-450.)

2. Claim 11

a. [11.0]

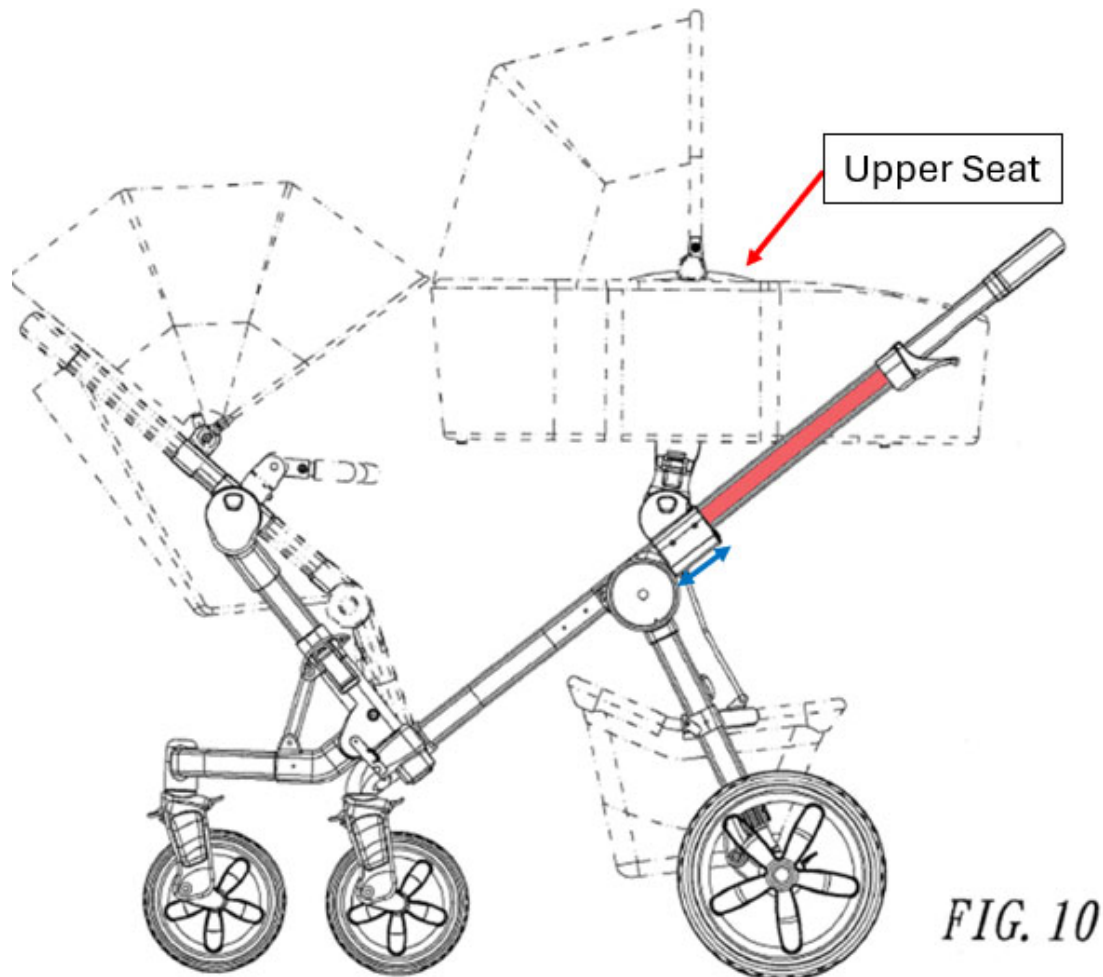
As discussed in Claim 8, Liao shows third/fourth coupling mechanisms (one

attached to each upper support frame) allowing the first seat to be removably coupled. (EX1048, Liao, Figs. 1, 4-5.) (EX1001, ¶¶409-411, 452.)



EX1048, Figs. 4-5

In Figures 8-13, Liao illustrates various seats and attachments coupled to Liao's "upper tube support frame[s]." Figure 10, for example, illustrates a baby bassinet being coupled along (blue arrow) the first/second "upper tube support frame[s]" (red). (EX1001, ¶453.)



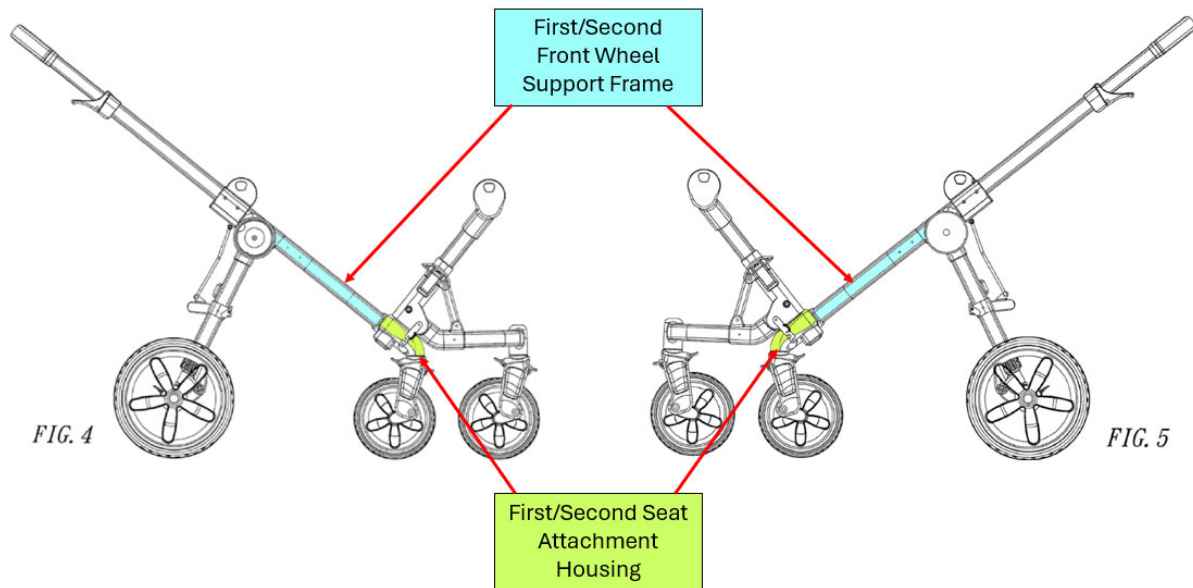
EX1048, Fig. 10

During prosecution of the '417 Application, the Examiner found that Liao discloses a “first seat” removably attached to upper “seat attachment portions” positioned near the “handle portion,” confirming what a POSITA would understand Liao to teach. (EX1024, 1203-1205, Claims 2, 5, 10; EX1001, ¶454.)

b. [11.1]

See Ground 2, [1.4]-[1.5] *supra*. (EX1001, ¶¶372-378, 456.)

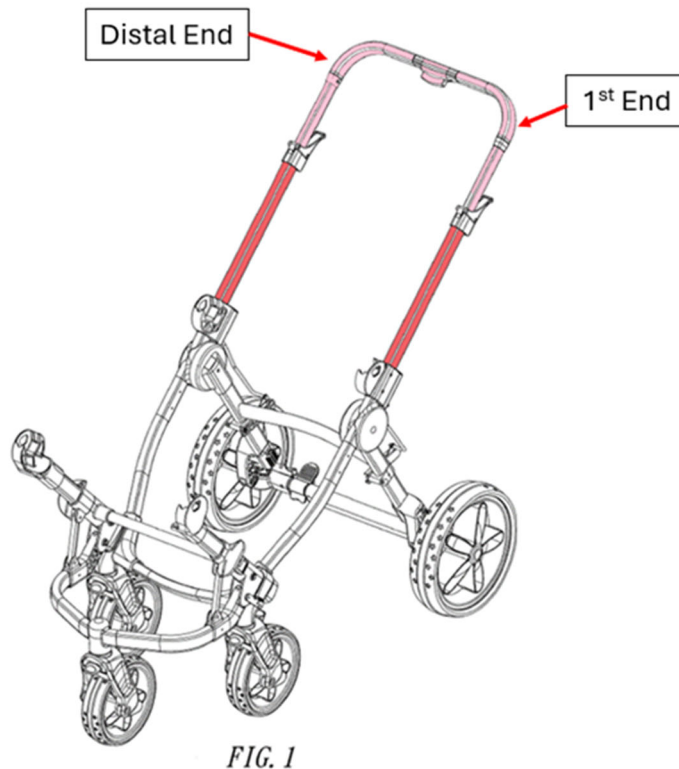
Liao illustrates first/second “front wheel support frames” (blue) that extend into and are coupled to the first/second “seat attachment housings” (green), thereby rigidly securing the stroller frame together. (EX1048, Figs. 1-13; EX1001, ¶457.)



EX1048, Figs. 4-5

3. Claim 12

Liao discloses a “handle portion” (pink) comprising “a first end” and a “distal second end” coupled to the first/second upper tube support frames. (EX1001, ¶459.)



EX1048, Fig. 1

Moreover, in the '417 application, the Examiner found that Liao disclosed a “handle portion,” confirming a POSITA’s understanding. (EX1024, 1203; EX1001, ¶460.)

D. Ground 4 – Claims 1–16 are obvious over Offord '341 and Offord '797

1. Claim 1

a. [1.0]

Offord '341 discloses “an infant’s pushchair” and a “vehicle 2 for transporting children.” (EX1051, 1:4-6, 5:45-50.) A POSITA would understand

Offord '341 discloses “a stroller.” (EX1001, ¶¶468-469.)

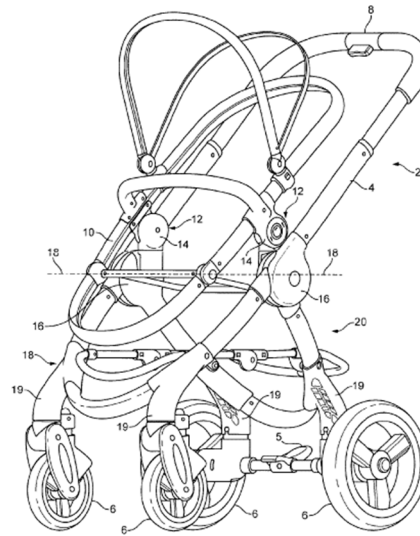


FIG. 1

EX1051, Fig. 1

b. [1.1]

The “vehicle 2” (“stroller”) comprises a “frame assembly 4” having a handle 8 (“handle portion”) shown in pink and a “front end portion” shown in dark blue. (EX1051, 5:45-50; EX1001, ¶¶471-473.)

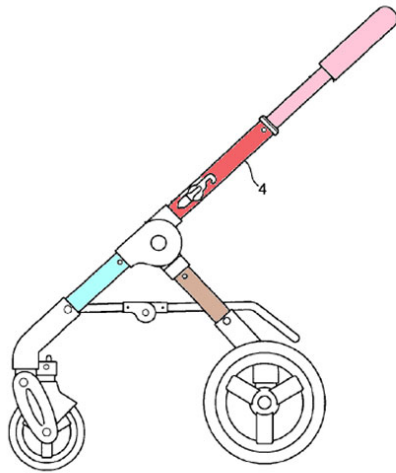


FIG. 13A

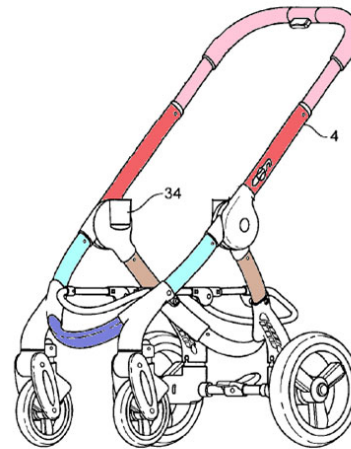


FIG. 13B

EX1051, Figs. 13A-13B (All Modified)

c. [1.2]

The stroller (“vehicle 2”) of Offord ’341 includes “a plurality of ... wheels 6 attached to the frame assembly 4” including “rear wheels 6”—*i.e.*, plurality of back wheels. (EX1051, Offord ’341, 5:45-51; EX1001, ¶¶474-475.)

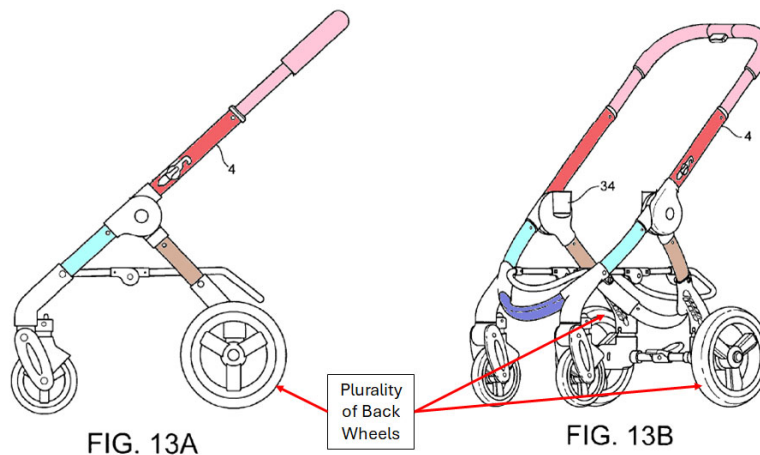


FIG. 13A

FIG. 13B

EX1051, Figs. 13A-13B (All Modified)

d. [1.3]

Offord '341 discloses “seats 10” that can be releasably connected to the frame assembly 4. (EX1051, 9:53-56; EX1001, ¶476.) Each seat includes a pair of “mounting devices 14” located on opposite sides of the seat, which are releasably attachable to the stroller frame. (EX1051, 5:45-57.) Figure 1 illustrates a single-seat configuration in which the “mounting devices 14” are releasably coupled to a pair of “receptor cups 34” positioned on the “inner housing 30” of the stroller frame’s “hinge device 16.” (EX1051, 6:29-36, 7:36-48; EX1001, ¶477.)

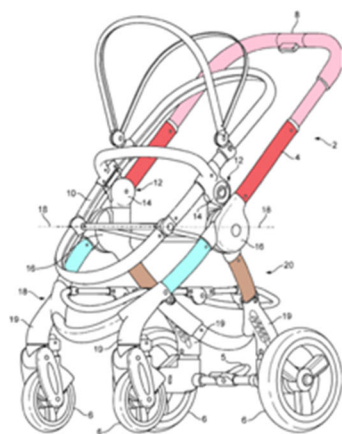


FIG. 1

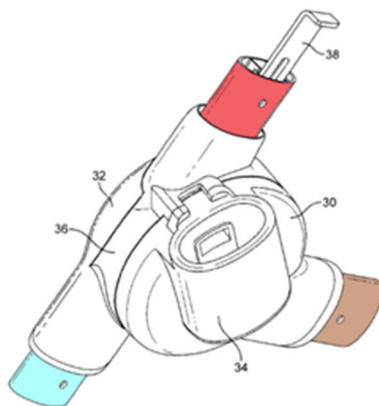


FIG. 4

EX1051, Figs. 1, 4

In a second embodiment, Offord '341 discloses “adaptor devices 90,” each including a “mounting device 14” releasably coupled to the “receptor cups 34” on the stroller frame’s “hinge device 16.” (EX1051, 8:63-9:2.) The upper ends of the adaptors include “receptor cups” that receive the seat’s “mounting device 14.”

(EX1051, 9:2-15.) This configuration elevates the seat above the height shown in Figure 1. (EX1001, ¶478.)

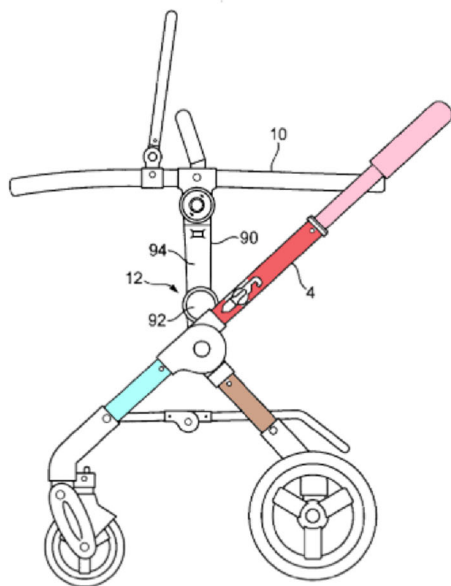


FIG. 13A

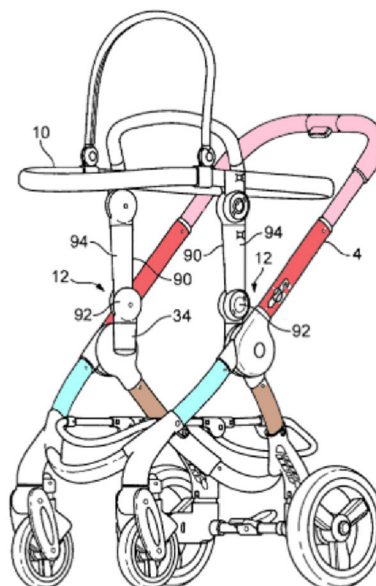


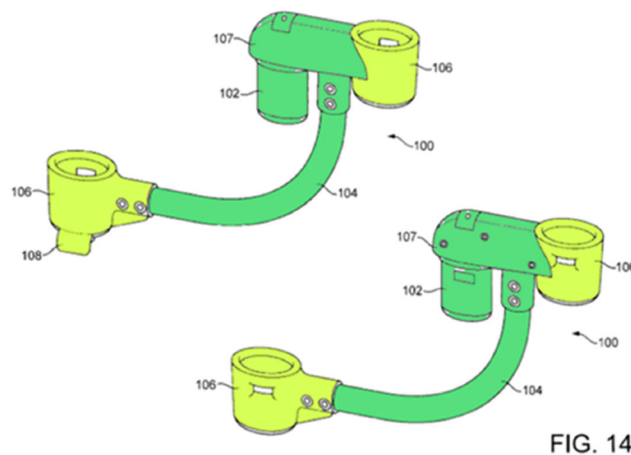
FIG. 13B

EX1051, Figs. 13A-13B

Offord '341 further discloses the stroller frame can be converted from a single-seat to a double-seat configuration. (EX1051, 9:16-22.) Offord discloses a pair of “interface portion components 100” (shown below by Figure 14) each having a “connecting leg 102” that is releasably coupled to the pair of “receptor cups 34” located on the “inner housing 30” of the stroller frame’s “hinge device 16.” (EX1051, 9:16-22; EX1001, ¶479.)

“When the interface portion components 100 are attached to the frame assembly 4 they form a sub-frame of the frame assembly 4.” (EX1051, 9:23-25.) Each “interface portion component 100” has upper and lower “connector sockets

106” (light green) interconnected by a “curved bar 104” (dark green). (EX1051, 9:16-22.) The “connector sockets 106” are the same as the “receptor cups 34,” so both can receive the “legs 48” of the “seats 10.” (EX1001, ¶481.)



EX1051, Fig. 14

The “interface components 100” thus cooperate to support two seats located at different heights. This results in the seats being arranged in an “echelon formation.” (EX1051, 9:23-31; EX1001, ¶482.)

The example of Figure 15 shows the “interface components 100” being installed onto the frame such that the seat closest the rear wheels is lower than the seat closest the front wheels. (EX1001, ¶483.)

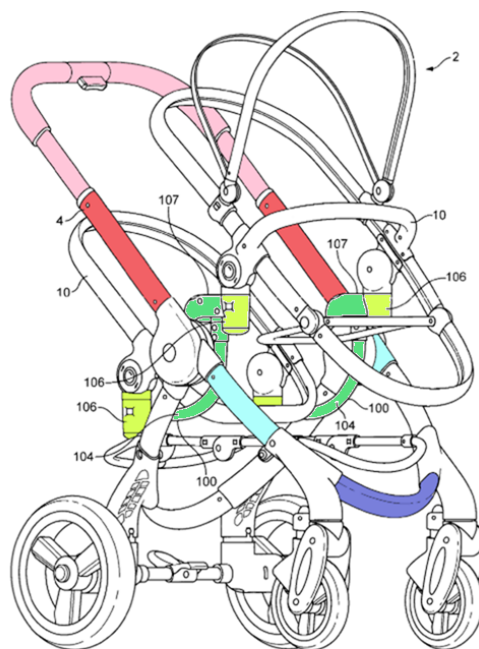


FIG. 15

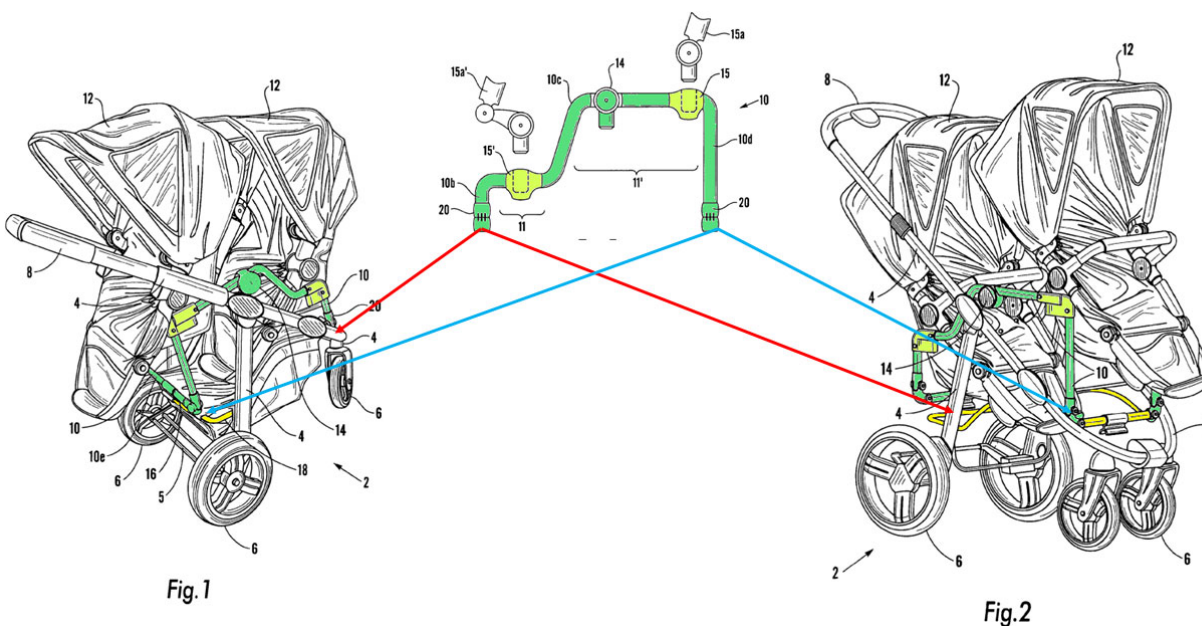
EX1051, Fig. 15

FIG. 15 shows the components 100 mounted on the frame assembly 4 as a sub-frame assembly for the releasable mounting of two seats 10 in the connector sockets 106 in the echelon formation, one behind the other.

(EX1051, 9:53-56.)

This, however, is not the only orientation of the “interface component 100.” (EX1001, ¶484.) A POSITA would have understood, based on Offord ’341’s disclosure, that the “interface components 100” were reversible. (*Id.*) To the extent that there is any doubt, Offord ’341 cites to one of his earlier patents stating, “[a] similar sub-frame arrangement is disclosed in WO 2008/040797” – i.e., “Offord ’797.” (EX1051, 9:35-36; EX1001, ¶486.)

A simple review of Offord '797 confirms it discloses a similar “interface portion 10” to that disclosed by Offord '341, with The an “interface portion 10” (dark green) having “sockets 15” (light green) for receiving the “adaptor piece 15a” from a pair of infant seats. (EX1054, 3:3-14, 3:34-4:4; EX1001, ¶¶487-488.) Offord '797 also teaches the “interface portion 10” can be rotated 180 degrees (as shown by Figures 1 and 2) to reverse the orientation *and vertical positioning* of both seats. (EX1054, 4:24-30.) Figure 1 illustrate the front seat is vertically lower than the rear seat; and Figure 2, illustrates the interface portion reversed with the rear seat vertically positioned lower than the front seat. (EX1001, ¶488.)



EX1054, Figs. 1-2

The vertical positioning is due to the “sockets 15” (light green) being reversed when the entire structure is reversed 180 degrees as shown between the

original and modified versions of Figure 14 illustrated below. (EX0154, Fig.14.)

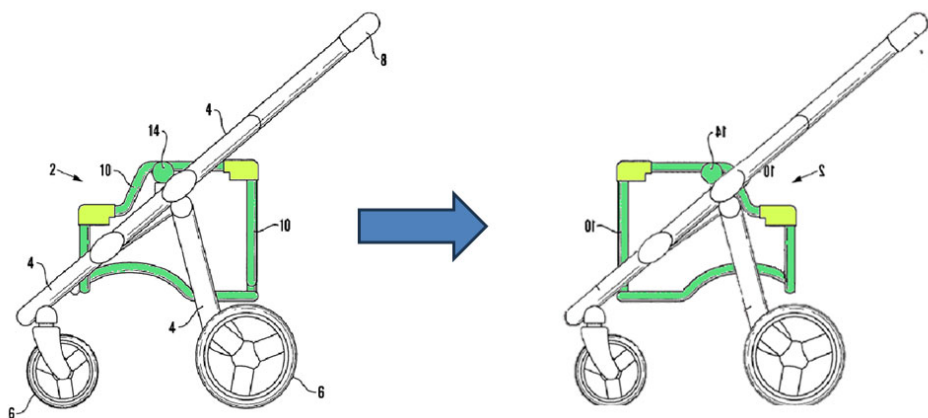
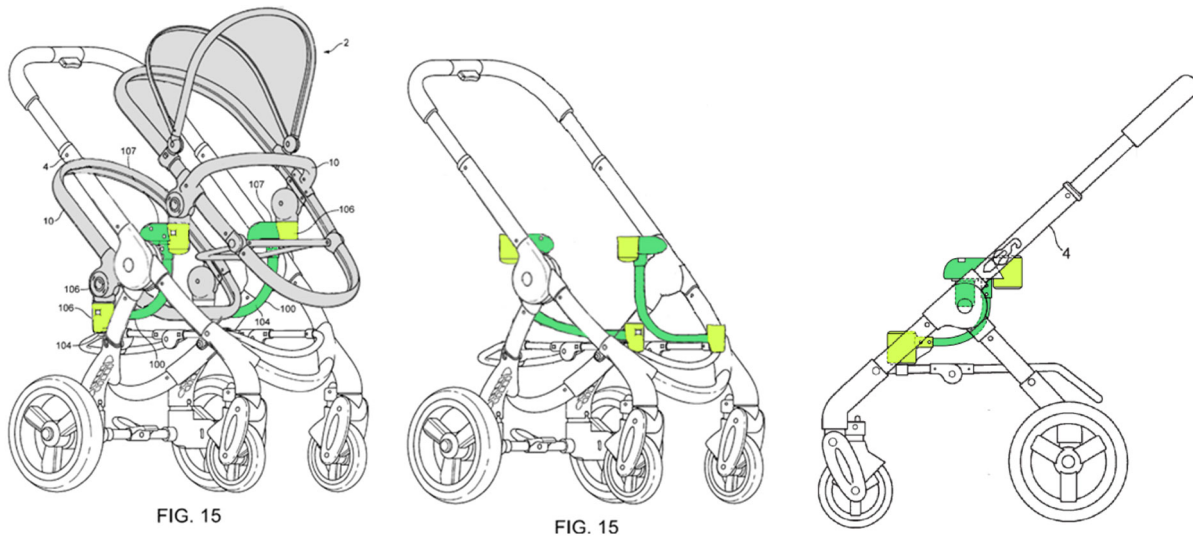


Fig.4

EX1054, Fig. 4 (original, left) and (modified, right)

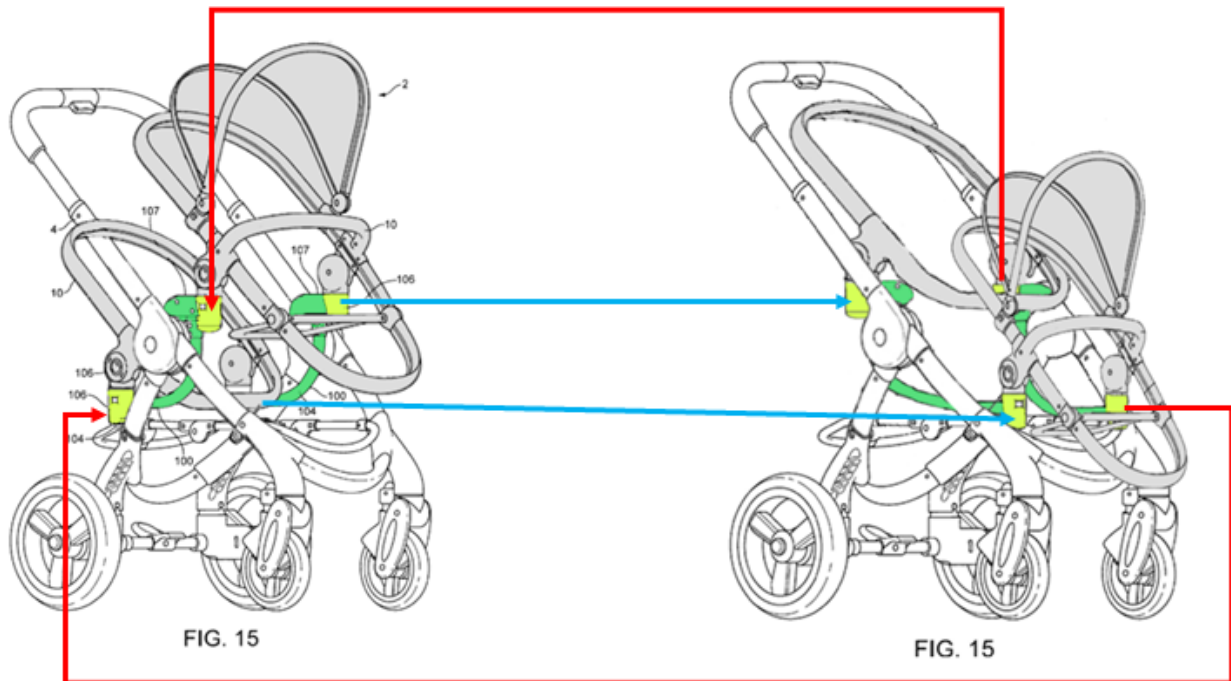
It would have been obvious to reverse the orientation of the sub-frame of Offord '341 as taught by Offord '797. (EX1001, ¶¶484, 486.) A POSITA would have understood the design and operation of the “receptor cups 34” would allow the first “interface component 100” to be turned around (*i.e.*, reversed) and installed on the right-side “receptor cup 34” and the second “interface component 100” to be reversed and installed on the left-side “receptor cup 34” (compared to the placement of Figure 15). (EX1001, ¶¶484, 490, 493-494.) This modification is shown below right:



EX1051, Fig. 15 (left); Fig. 15 (center, modified); Fig. 13A (right, modified)

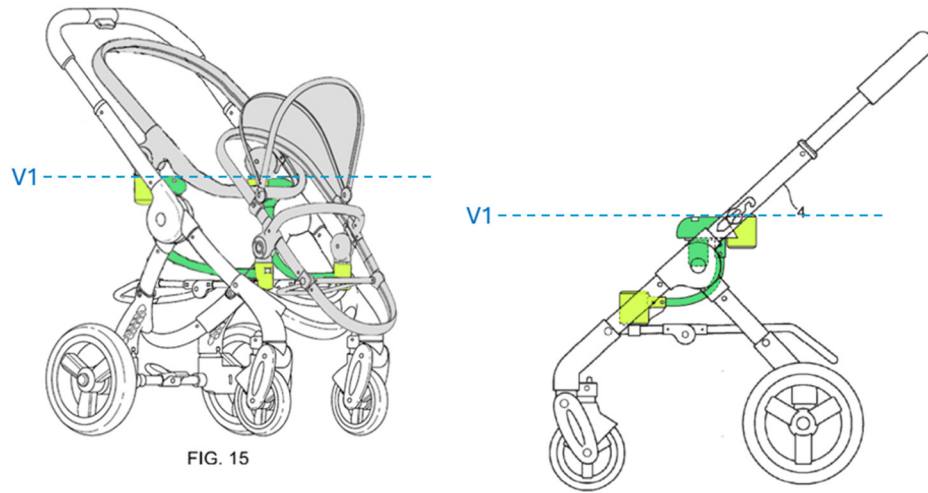
Figure 15 further shows the “downwardly curved lug 108” resting on the “basket frame 44” further informing a POSITA that orientation of the “interface component 100” could be reversed. (EX1051, 9:32-36; EX1001, ¶485.)

As shown below, once reversed and placed into the opposite receptor cup 34, the vertical positioning of the “seats 10” would be reversed such that the rear seat would be positioned vertically above the front seat as shown right. (EX1001, ¶495.)



EX1051, Fig. 15 (left) and Fig. 15 (right, modified)

Therefore, modified Offord '341 taught an upper “first” seat that is positioned (disposed) closer to the handle portion than the front end of the stroller. The first seat would be coupled to the stroller sub-frame (*i.e.*, “interface portion components 100” attached to frame) at the upper pair of “sockets 106” at a first vertical position (V1). (EX1001, ¶496-497.)

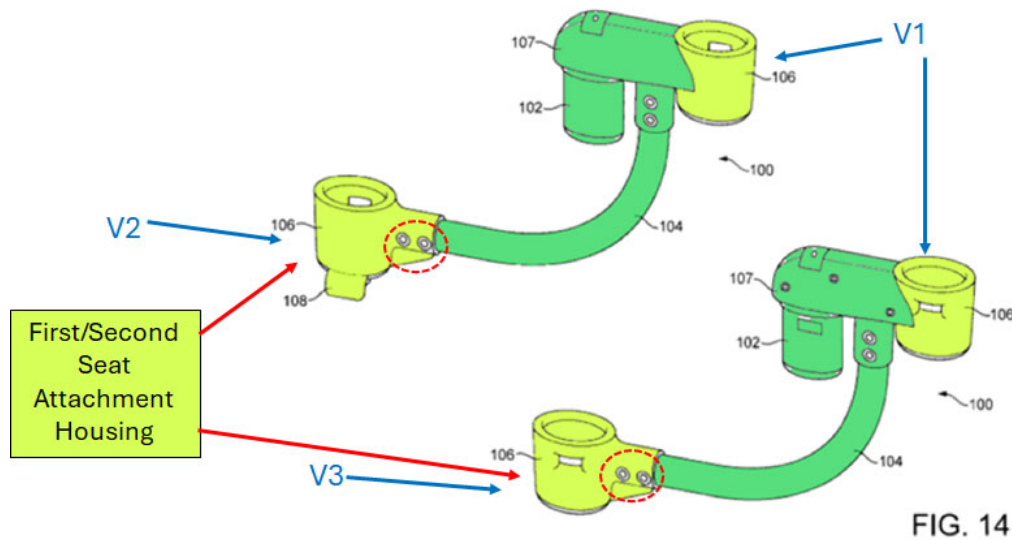


EX1051, Figs. 15, 13A (All modified)

e. [1.4] / [1.5]

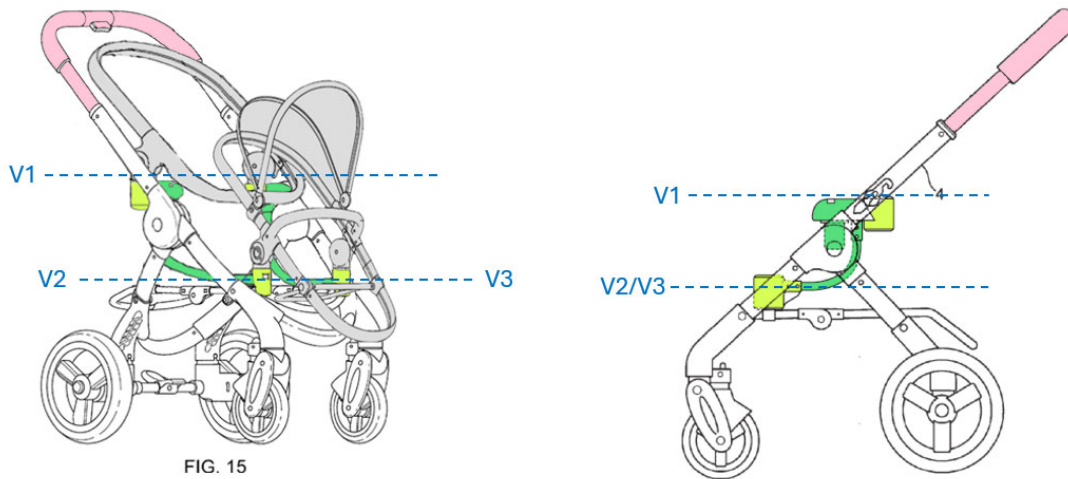
A POSITA would understand the “interface portion components 100,” which are described as a “subframe,” are part of the “stroller frame.” (EX1001, ¶498; EX1051, 6:29-30.)

Each “interface portion component 100” has a pair of “sockets 106” that are hollow and configured to receive the “legs 48” of the “seats 10.” (EX1051, 9:53-61.) A POSITA would consider the lower “connector sockets 106” to be the first/second “seat attachment housings” (light green). (EX1001, ¶499.)



EX1051, Fig. 14

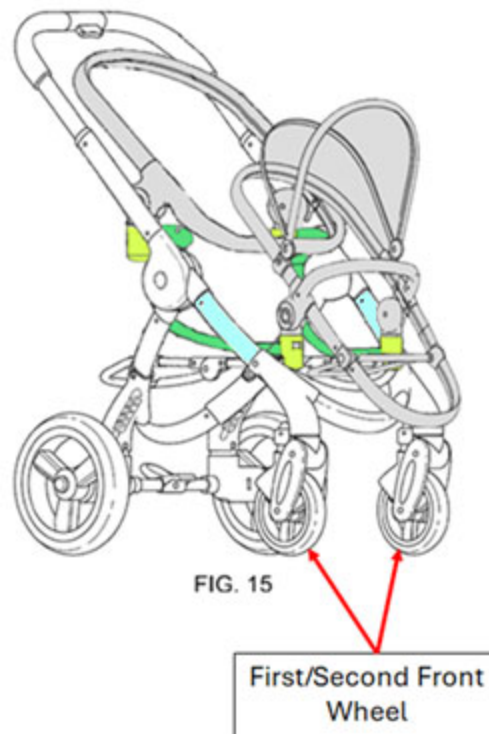
The first/second “seat attachment housings” are coupled to the “curved bar 104” (which is part of the “frame”) by a pair of fasteners (circled in red). As illustrate in Figures 13A and 15 (below), the vertical positions (V2/V3) where the “housings” connect to the “bar 104” are below the first vertical position (V1). (EX1001, ¶500.)



EX1051, Figs. 15 and 13A (All modified)

As shown above, the third vertical position (V3) is closer to the front end portion than the handle portion (pink) when the subframe is attached to the “frame assembly 4” in the reversed configuration discussed above. (EX1001, ¶501.)

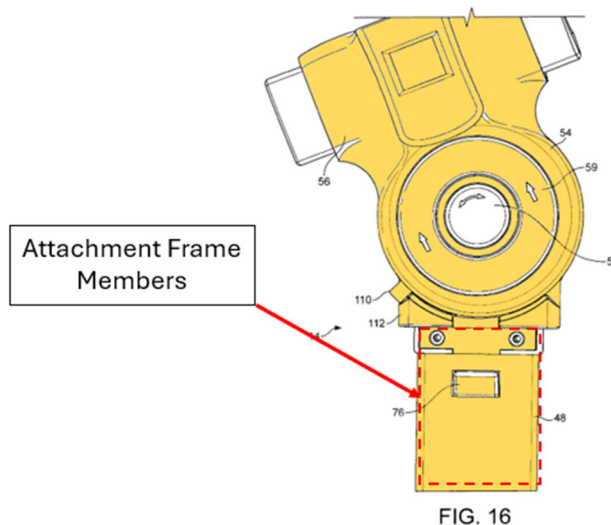
Offord further discloses first and second front wheels 6. (Offord '341, 5:45-48; EX1001, ¶502.) Offord illustrates the front wheels 6 *extending* from the “common mouldings 19,” which are the wheel housings at the front end portion (blue). (EX1051, Offord '341, 6:9-12; (EX1001, ¶502.)



EX1051, Fig. 15 (Modified)

f. [1.6] / [1.7]

Offord '341 discloses seats having first/second “mounting devices 14” (entire structure shaded gold below). (EX1051, 5:51-57, 8:63-9:2.) Both “mounting devices 14” are designed to connect with “receptor cups 34” in a single-seat configuration or with the “connector sockets 106” in the double-seat configuration. (EX1051, 5:51-57, 8:63-9:2, 9:57-67; EX1001, 503.) These “mounting devices 14” would be understood as being the recited first/second “adapters” (gold). (EX1001, ¶¶504-506.)



EX1051, Fig. 16

A POSITA would understand a portion of the “adapters” is disclosed as being a “connecting leg 48” (outlined in red dash above). (EX1051, 7:36-48, 8:14–20, 9:57-61.) The leg 48 is inserted into either “connector socket 106” or “receptor cup 34,” depending on the configuration. (EX1001, ¶507.)

A POSITA would understand the “legs 48” located on the first/second “adapters” (gold) function as a first/second “attachment frame members” (outlined in red) that projects downward into the corresponding connector socket 106 (*i.e.*, “housing”). (EX1001, ¶¶507-508.) A POSITA would also understand that the adapters are “spaced from and coupled to” the housings, as insertion requires clearance within the socket. (*Id.*) Each adapter includes a “detent 76” that engages an opening in the socket or cup to secure the connection. (EX1001, ¶509; EX1051, Fig. 12, 8:27-39.) The left/right “attachment frame members” included on each

“adapter” include “detents 76” that also operate to provide secure coupling with the housings. (EX1001, ¶510.)

g. [1.8]

As shown below left, Offord '341 illustrates a dual-seat configuration where the seats are in an inline and descending arrangement. (EX1051, 9:16-29; 3:65-4:1; EX1001, ¶512.) The only question is whether this orientation qualifies as “along the frame.” (EX1001, ¶¶511-512.) As discussed in [1.3], a POSITA would find it obvious to rotate the “interface portion components 100” 180 degrees, placing the upper sockets 106 at the rear and lower sockets 106 at the front—an arrangement explicitly disclosed by Offord '797. In this orientation, a POSITA would understand the seats are in an inline descending configuration along the stroller frame. (EX1001, ¶¶511-513.)

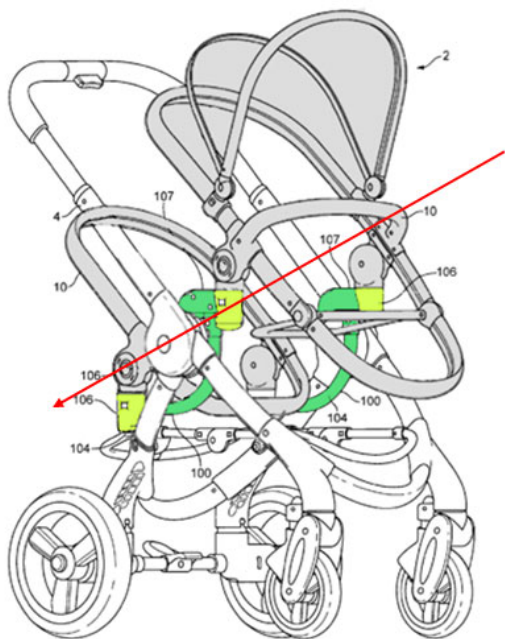


FIG. 15

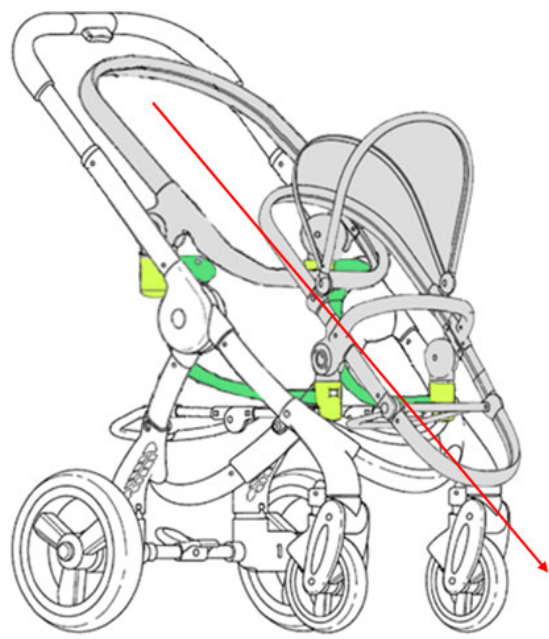


FIG. 15

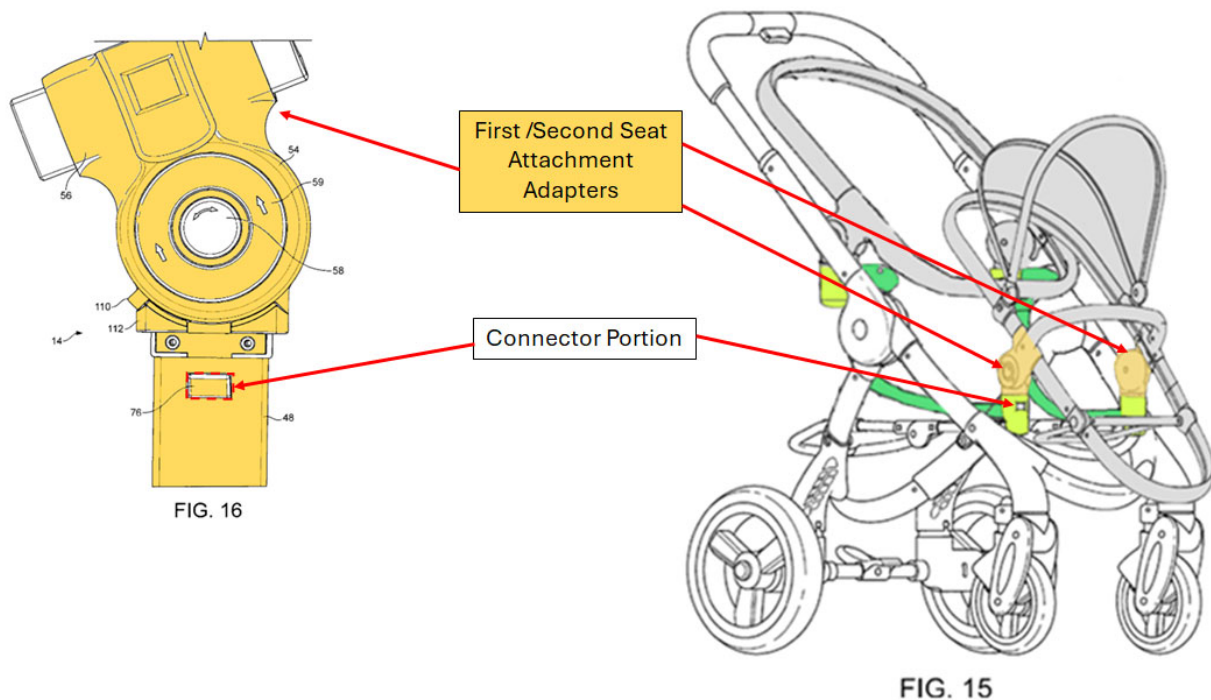
EX1051, Fig. 15; EX1051, Fig. 15 (Modified)

A POSITA would also find this configuration obvious based on Offord '341's teaching that the vertical and horizontal positions of sockets 106 are adjustable. (EX1051, 9:37-51.) Offord instructs that adjusting the sockets helps align with the stroller frame's angle to maintain center of gravity and improve stability, thereby "prevent[ing] any possibility of dangerous tilting or toppling over." (EX1051, 9:45-52; EX1001, ¶513.)

2. Claim 2

Each seat includes two "retractable detents 76," one on each "mounting device 14." (EX1051, 8:1-8:6; EX1001, ¶515.) A POSITA would understand that the detents click-fit into slots on the sockets 106 and can be released by pressing

them to remove the seat. (EX1001, ¶¶516-517.) These detents serve as the first and second “connector portions” that allow the adapters (gold) to be removably coupled to the respective housings (green). (EX1001, ¶¶518-520.)



EX1051, Figs. 16, 15 (Modified)

3. Claim 3

Offord '341 discloses “adapter devices 90” removably coupled between the stroller frame’s “receptor cups 34” and the seat’s “mounting devices 14.” (EX1051, 8:64-9:14.) As shown below, the “adapter devices” operate to raise the vertical position of the seat. (EX1001, ¶521.)

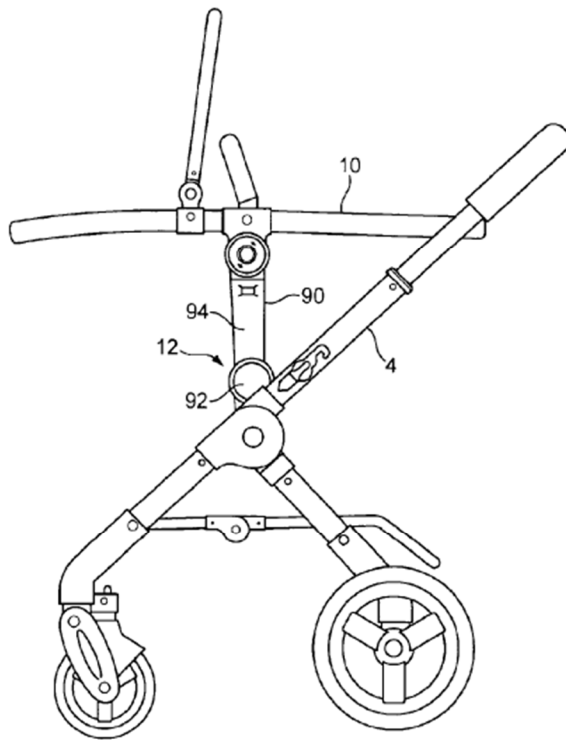


FIG. 13A

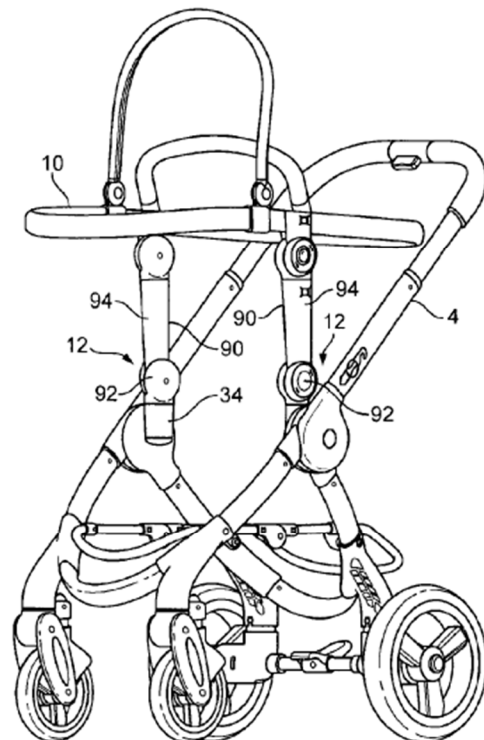


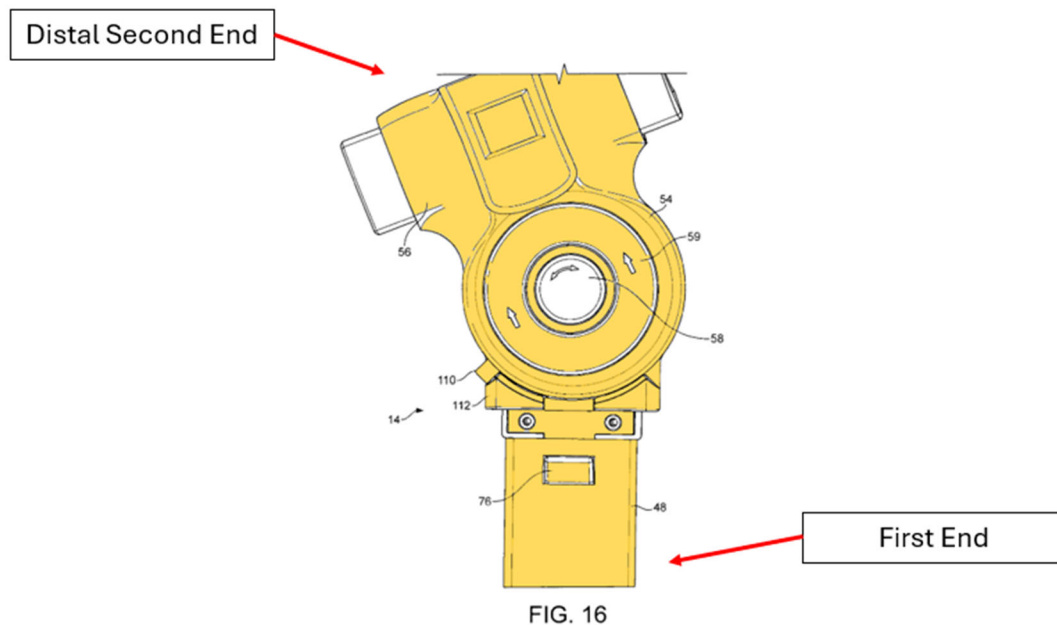
FIG. 13B

EX1051, Figs. 13A, 13B

A POSITA would have found it obvious to use the disclosed “adapter devices” in combination with the “interface components 100” to adjust seat height, when desirable. (EX1051, 9:37–48; EX1001, ¶522.) A POSITA would understand the length of “adapter device 90” used could be modified to suit the dual-seat setup, with Offord ’341 providing guidance on selecting the appropriate height. (EX1051, 9:37–52; EX1001, ¶¶523-524.) Each pair of mounting device 14 and adapter device 90 would be understood to form the claimed “seat attachment adapter,” as both cooperate to secure the seat to the frame and both are designed to be removably coupled to the second seat. (EX1001, ¶¶525-527.)

4. Claim 4

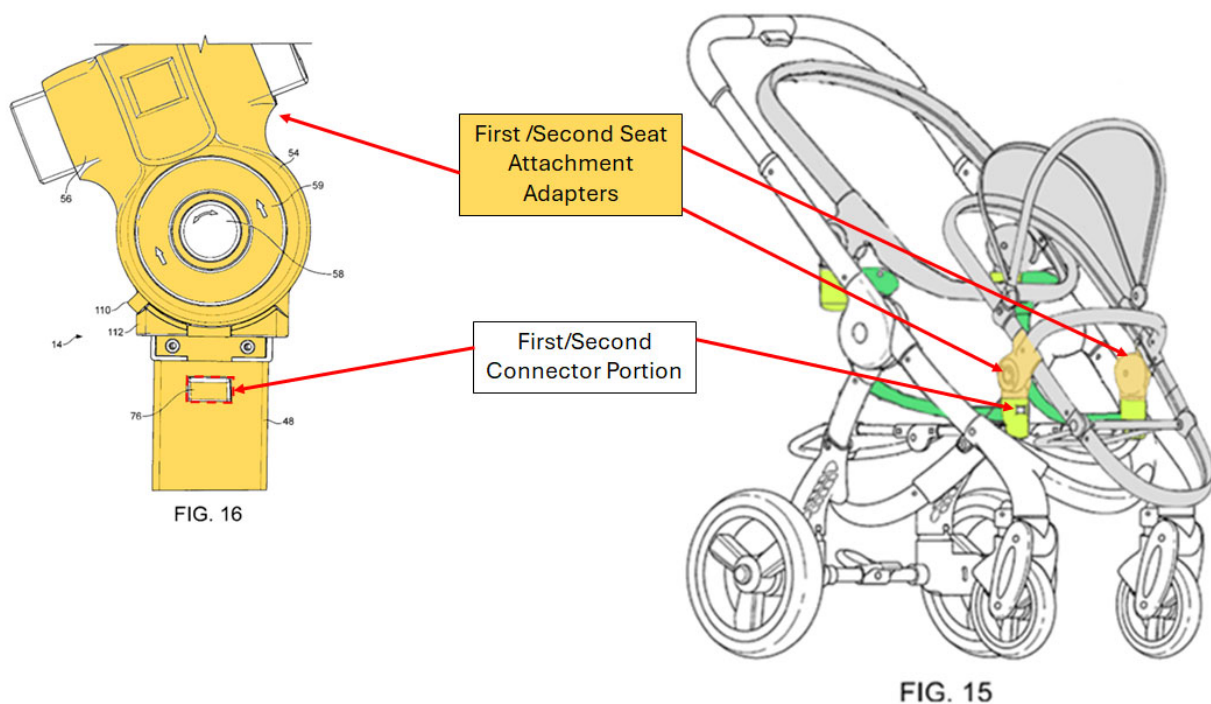
The first/second “adapters” (gold) would be understood as having a first end and distal second end. (EX1001, ¶529.)



EX1051, Fig. 16

5. Claim 5

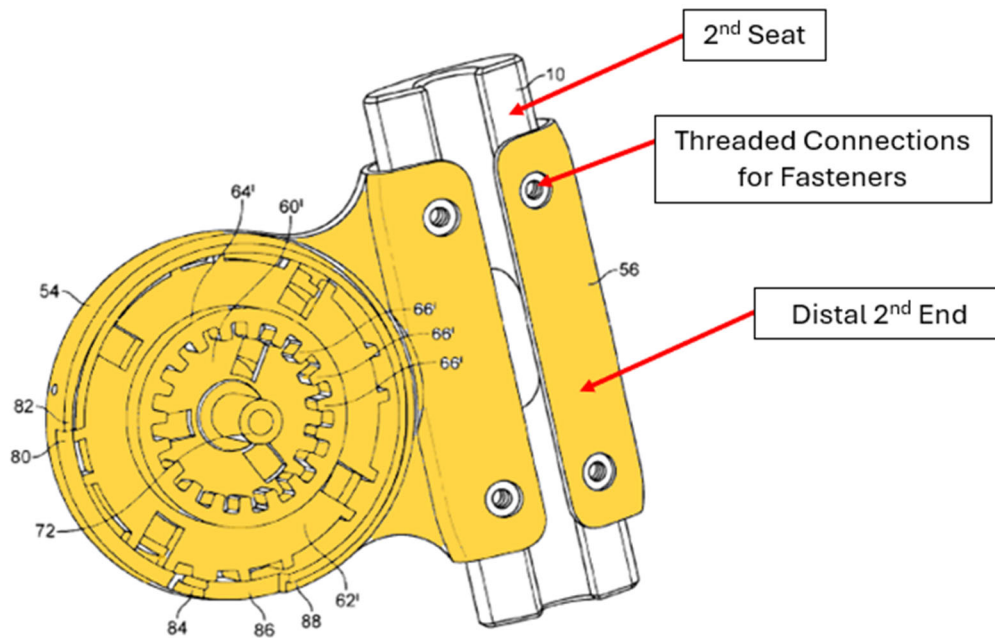
The pair of “adapters” on the seats each have a “first end” (directly above) with the “detents 76” (*i.e.*, first/second “connector portions”) as discussed in claim 2. The first/second “connector portions” (detents) allow the “adapters” to be releasably connected to the first/second “ housings” (green). (EX1001, ¶¶515-520, 531.)



EX1051, Figs. 15, 16 (Modified)

6. Claim 6

Offord '341 discloses a “second seat” with first/second “adapters” (gold). (EX1051, 5:51-55, 9:53-56; EX1001, ¶¶479-487, 533.) Each adapter is secured to the seat frame using four fasteners inserted into threaded holes. (EX1051, 7:43-45.) A POSITA would understand this as a releasable connection between the distal end of the adapter and the second seat, removable without special tools. (EX1001, ¶¶532-535; EX1010, 4:23-30.)



EX1051, Fig. 11

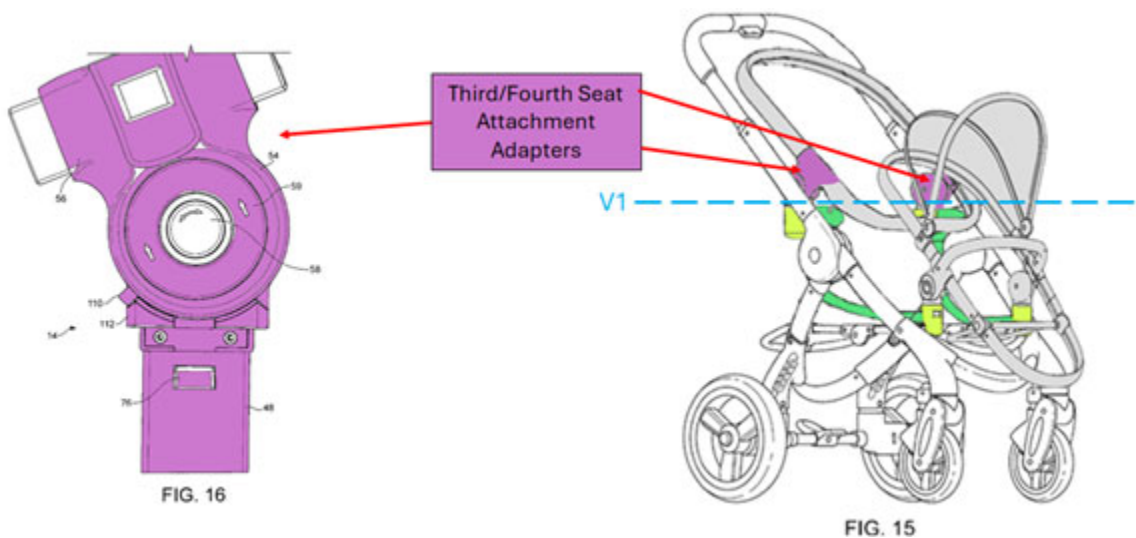
Alternatively, the second seat is releasably connected to the distal end via the “actuating device 58.” (EX1051, 7:41-48, 8:14-20.) The seat can pivot relative to legs 48 through a rotatable hub assembly 52 and “teeth (66 and 66’ shown above) can be selectively engaged or released by “button 58.” (EX1051, 8:7-20.) A POSITA would understand that pressing button 58 releasably couples the second seat via the hub assembly 52. (EX1001, ¶¶536-541.)

7. Claim 7

Offord ’341 discloses an “infant car seat or ... carry-cot.” (EX1051, 5:51-57; EX1001, ¶¶543-544.)

8. Claim 8

See [1.3] and Claim 3 above. The upper “first seat” is designed to be removably coupled to the “upper sockets 106.” (EX1051, 9:53-56; EX1001, ¶546.) When the “interface connector 100” (*i.e.*, the subframe assembly) is reversed, Offord 341’s “mounting devices 14” (third/fourth “seat attachment adapter[s]”) could be inserted directly into the “upper sockets 106” at the first vertical position. (EX1001, ¶¶476-497, 521-528, 503-510, 547-548.)



EX1051, Figs. 15 (Modified) and 16

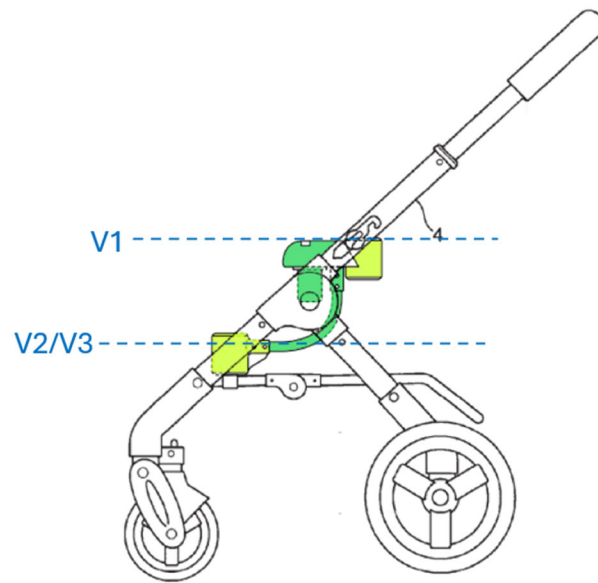
As explained in claim 3, a POSITA would have further understood the “adapter devices 90” could be used in conjunction with “interface connectors 100” and, when used, would be considered part of the “seat attachment adapter.” (EX1001, ¶522.) A POSITA would have been motivated to do this to adjust the height of the seat as explained in claim 3. (EX1001, ¶523.) Therefore, the upper

left and right pairs of “mounting device 14” and “adapter device 90” would disclose the claimed third/fourth “seat attachment adapter[s].” (EX1001, ¶¶525, 549.)

The “adapter devices 90” are removable from the “mounting devices 14” of the seats. (EX1051, Offord ’341, 8:65-9:5; EX1001, ¶526.) Therefore, “the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.” (EX1001, ¶549.)

9. Claim 9

A POSITA would understand the “receptor cups 34” are positioned at the same height on the frame. (EX1051, Fig. 1; 2:51–65.) A POSITA would understand the “interface components 100” are designed to attach to the frame so the “ housings” (light green) would be at the same height—and so would V2/V3. (EX1001, ¶¶551-552.) A POSITA would recognize that differing heights would misalign the seat, creating coupling and safety issues. (EX1001, ¶553.)



EX1051, Fig. 13A (Modified)

10. Claim 10

a. [10.0]

See [1.0] above. (EX1001, ¶¶468-469, 555.)

b. [10.1] / [10.2]

See [1.1] above. (EX1001, ¶¶471-473.) The two upper tubes (red) of the “frame assembly 4” would be understood by a POSITA as being the first/second “upper tube support frames.” (EX1001, ¶556.)

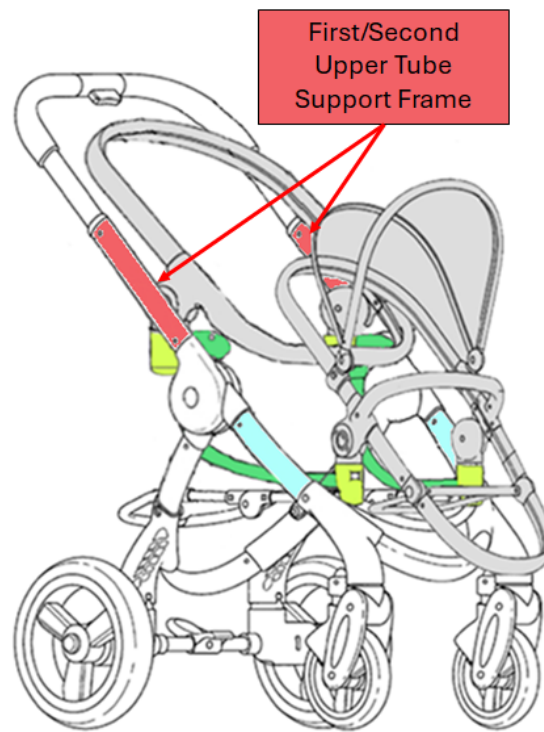


FIG. 15

EX1051, Fig. 15 (Modified)

c. [10.3] / [10.4]

Offord '341 discloses the “frame assembly 4” includes two “forward-projecting sub-portions 18” (light blue) which a POSITA would understand are the first/second “front wheel support frames” (EX1051, 6:3-12.) A pair of “hinge devices 16” allow the “front wheel support frames” to rotate respective the first/second “upper tube support frames” (red). (EX1051, 5:60-6:2.) (EX1001, ¶¶557-560.)

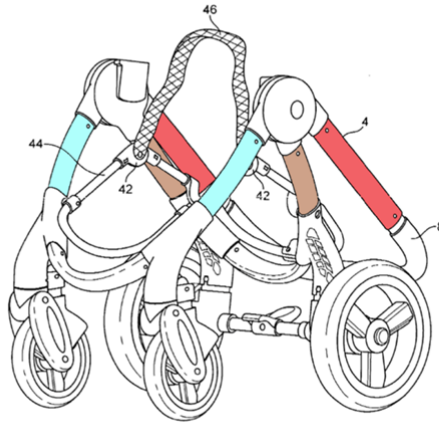


FIG. 7

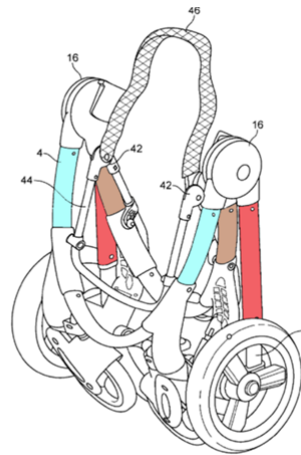


FIG. 8

EX1051, Figs. 7-8

d. [10.5] / [10.6]

Offord '341 discloses the “frame assembly 4” includes a “rearward-projecting sub-portion 20.” (EX1051, 6:3-12.) The “sub-portion 20” includes a pair of tubes (brown) that a POSITA would identify as the first/second “back wheel support frames” As shown directly above, the “sub-portions 20” rotate relative to the first/second “upper tube support frames” (red). (EX1051, 6:18-36; EX1001, ¶¶561-564.)

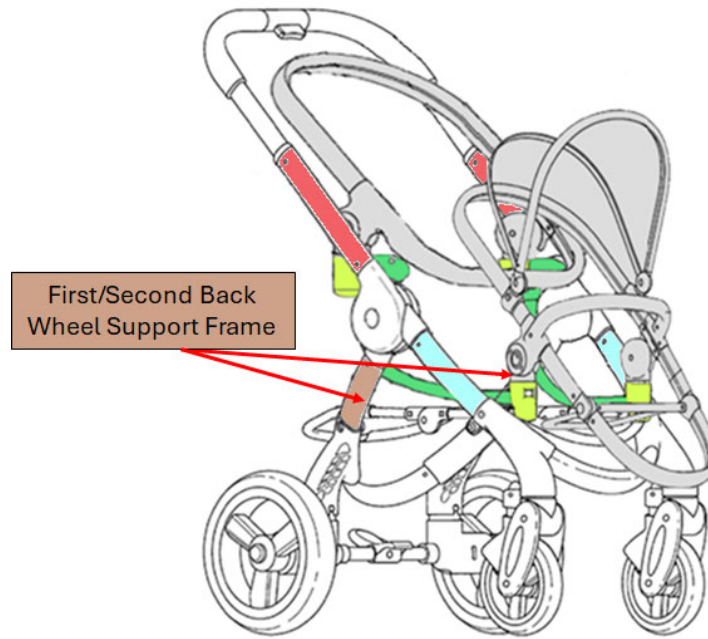
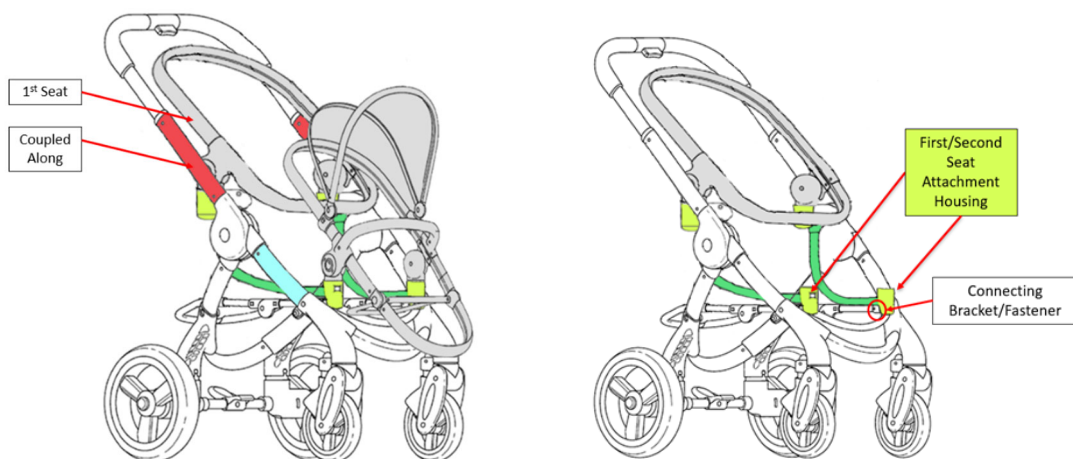


FIG. 15

EX1051, Fig. 15 (Modified)

11. Claim 11

As shown below, the upper “first” seat is coupled to connectors on a sub-frame assembly positioned adjacent to the “upper tube support frames,” with the sub-frame itself mounted to the stroller frame at “receptor cup 34.” (EX1001, ¶566.)



EX1051, Offord '341, Fig. 15 (Modified)

Offord '341 further discloses that each lower socket 106 is connected to the basket frame 44 via a curved lug 108, and that the basket frame 44 is in turn coupled to the “front wheel support frames” by a bracket and fastener. (EX1051, 9:32–35; EX1001, ¶567.) Accordingly, the first and second “seat attachment housings” are indirectly coupled along the first and second “front wheel support frames” through the basket frame and lug, satisfying the claimed coupling arrangement. (EX1001, ¶568.)

12. Claim 12

See [1.1] above. (EX1001, ¶¶471-473.)

Offord '341 discloses a “handle portion” (*i.e.*, “handle 8”) is a portion of the frame having a first/second end coupled to the first/second upper tube “frame assembly 4.” (EX1051, 5:45-50; EX1001, ¶570.)

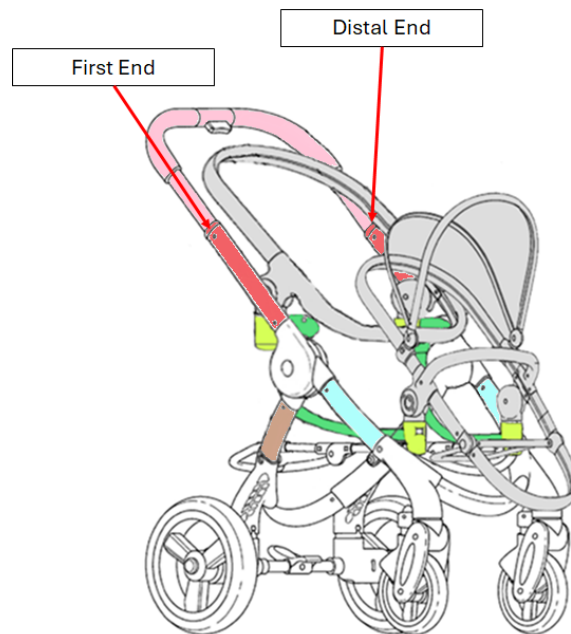


FIG. 15

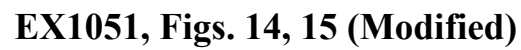
EX1051, Fig. 15 (Modified)

13. Claim 13

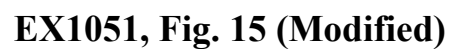
See [1.4]/[1.5] above. (EX1001, ¶¶498-502.) A POSITA would understand the “interface component 100” forms the stroller “subframe” assembly when installed onto the original stroller “frame.” A POSITA would understand that the lower sockets 106—which are part of “component 100”—are therefore “part of the stroller frame.” (EX1001, ¶572.)

14. Claim 14

See [1.3] above. (EX1001, ¶¶476-497.) When the interface components 100 are installed in a reverse orientation, the lower seat 10 (“second seat”) is positioned vertically below the upper seat 10 (“first seat”). (EX1001, ¶574.)



The “ housings” (green) are positioned adjacent to the front-wheel “ moldings 19.” (EX1051, 6:9-11.) As shown, the first/second front wheels extend from the first/second “ housings.” (EX1001, ¶575.)



16. Claim 16

Offord '341 discloses four wheels—two front and two rear. However, it was well known before 2008 to use dual-wheel sets where each front wheel set includes an inner and outer wheel—four front and four rear wheels. (EX1001, ¶¶576-577; *see* EX1033, Fig.1; EX1036, Fig. 4.) A POSITA would understand replacing Offord's front wheels to include multiple front wheels was a design choice commonly used in the field of stroller design. Once replaced, the inner wheel from either pair of front wheels would be the “at least one central wheel.” (EX1001, ¶¶578-579.)

E. Rational to Combine

1. Liao and Cheng

Liao (EX1048) and Cheng (EX1049) are both directed to baby strollers and disclose structurally similar frames—upper, front, and rear frame members joined at a central coupling. (EX1048, Fig. 1; EX1049, ¶0040, Fig. 2.) These similarities render Cheng analogous to Liao. (EX1001, ¶¶441-443, 462.) As discussed above, Liao's central couple at least looks like a folding mechanism. Thus, even if Liao does not disclose a central folding mechanism, a POSITA would have found it obvious to substitute Liao's central coupling with Cheng's folding mechanism to enable frame collapsibility. (EX1001, ¶463.) Given the shared three-way frame configuration and Cheng's folding assembly being designed for such a junction, a

POSITA would have understood how to integrate Cheng's mechanism into Liao's frame with minimal structural change. (EX1001, ¶¶464, 466.)

A POSITA would have been motivated to incorporate Cheng's folding feature based on Liao's indication of a folding mechanism and to enhance stroller portability and storage—widely recognized and commercially desirable goals in stroller design. (EX1033, 1:10-20; EX1001, ¶465.) Strollers are typically bulky and difficult to store, and Cheng's mechanism provides a clear, predictable benefit by allowing the upper frame to fold downward and the front wheel assembly to pivot, creating a more compact footprint. (EX1049, ¶¶0049-0050; EX1001, ¶464.) These improvements would have aligned with user expectations and design trends toward more versatile and transportable products. (EX1001, ¶465.)

The proposed modification is a substitution of one known component (a folding coupling) for another known component (a coupling) to achieve a predictable result. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). (EX1001, ¶467.) Cheng's folding assembly would operate in the same manner in Liao's frame as it does in Cheng's—joining three frame members and enabling collapsibility. A POSITA would have had a strong rationale to make this substitution and a reasonable expectation of success. (EX1001, ¶¶466-467.) The claimed invention merely brings together familiar elements with no change in their respective functions and is therefore obvious under the principles set forth in *KSR*

and *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969). (EX1001, ¶467.)

2. Offord '341 and Offord '797

Offord '341 and Offord '797 are both strollers and are analogous prior art. (EX1001, ¶¶580-581; EX1051, 1:4-6; EX1054, 1:1-5.)

Offord '341 expressly suggests review of his prior patent, Offord '797. (EX1051, 9:35-36.) Offord '797 discloses a similar sub-frame 10 enabling a dual-seat configuration. (EX1054, 3:3-7.) As such, a POSITA would have been motivated to review the teachings of Offord '797 to determine if they could be applied to the teachings of Offord '341. (EX1001, ¶¶486, 580.) A POSITA would have also understood that the reason for the citation to Offord '797 was to inform a POSITA that the “interface components 100” of Offord '341 could be reversible like the sub-frame 10. (EX1001, ¶¶490, 492-493, 580-581.)

Reversing the “interface components 100” so that the rear seat is higher than the front seat is nothing more than the obvious use of known technique to improve similar devices in the same way. *KSR*, 550 U.S. 398, 417 (2007). The only difference between the explicit embodiments Offord '341 and the claimed invention is the direction of the echelon (descending front to back). In Offord '797, the sub-frame is arranged so that the echelon of the seats is inline descending back to front. (EX1054, Fig. 1.) A POSITA would have understood, for the reasons

discussed in claim limitation [1.3], that the technique of reversing the sub-assembly could have been applied to Offord '341 a reasonable expectation of success and predictably resulted in the echelon of the seats (descending back to front). (EX1001, ¶¶ 492-494, 581.)

Therefore, it would have been obvious to a POSITA to reverse the “interface components 100” of Offord '341 as disclosed in Offord '797. (EX1001, ¶¶490, 582.)

XI. Secondary Considerations

Petitioner is not aware of any secondary considerations or objective indicia of non-obviousness.

XII. Conclusion

There is a reasonable likelihood that Petitioner will prevail and respectfully requests institution on the Challenged Claims.

Dated: June 16, 2025

Respectfully submitted,

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Certificate of Compliance Pursuant to 37 C.F.R. § 42.24

This paper complies with the type-volume limitation of 37 C.F.R. § 42.24. The paper contains 13,424 words, excluding the parts of the paper exempted by § 42.24(a).

This paper also complies with the format and type style requirements of 37 C.F.R. § 42.6(a).

Respectfully submitted,

Dated: June 16, 2025

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Appendix A – Index of Challenged Claims

Claim 1	
[1.0]	A stroller, comprising:
[1.1]	a stroller frame comprising a handle portion and a front end portion;
[1.2]	a plurality of wheels comprising a plurality of back wheels;
[1.3]	a first seat coupled to the stroller frame at a first vertical position of the stroller frame, wherein the first seat is disposed closer to the handle portion than the front end portion of the stroller frame;
[1.4]	a first seat attachment housing coupled to the stroller frame at a second vertical position of the stroller frame that is below the first vertical position, wherein a first front wheel and a second front wheel extend from the front end of the stroller;
[1.5]	a second seat attachment housing coupled to the stroller frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the third vertical position is closer to the front end portion than the handle portion;
[1.6]	a first seat attachment adapter spaced from and coupled to the first seat attachment housing by a first attachment frame member; and
[1.7]	a second seat attachment adapter spaced from and coupled to the second seat attachment housing by a second attachment frame member;
[1.8]	wherein the first seat and the second seat, when connected to the frame, are arranged in an inline descending configuration along the stroller frame.
Claim 2	
[2.0]	The stroller of claim 1, further comprising a first connector portion and a second connector portion, wherein the first seat attachment adapter is removably coupled to the first seat attachment housing via the first connector portion, and wherein the second seat attachment adapter is

	removably coupled to the second seat attachment housing via the second connector portion.
Claim 3	
[3.0]	The stroller of claim 2, further comprising a second seat removably coupled to the first seat attachment adapter and the second seat attachment adapter.
Claim 4	
[4.0]	The stroller of claim 2, wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end.
Claim 5	
[5.0]	The stroller of claim 4, wherein the first end comprises the respective first connector portion or the second connector portion and, and the first end is releasably connected to the respective first seat attachment housing or the second seat attachment housing.
Claim 6	
[6.0]	The stroller of claim 4, wherein the distal second end is releasably connected to a second seat.
Claim 7	
[7.0]	The stroller of claim 3, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.
Claim 8	
[8.0]	The stroller of claim 1, further comprising: a third seat attachment adapter coupled to the stroller frame at the first vertical position; and a fourth seat attachment adapter coupled to the stroller frame at the first vertical position; wherein the first seat is removably coupled to the

	third seat attachment adapter and the fourth seat attachment adapter.
Claim 9	
[9.0]	The stroller of claim 1, wherein the second vertical position and the third vertical position are at a same vertical height.
Claim 10	
[10.0]	The stroller of claim 1, wherein the stroller frame comprises:
[10.1]	a first upper tube support frame;
[10.2]	a second upper tube support frame;
[10.3]	a first front wheel support frame configured to rotate with respect to the first upper tube support frame;
[10.4]	a second front wheel support frame configured to rotate with respect to the second upper tube support frame;
[10.5]	a first back wheel support frame configured to rotate with respect to the first upper tube support frame; and
[10.6]	a second back wheel support frame configured to rotate with respect to the second upper tube support frame.
Claim 11	
[11.0]	The stroller of claim 10, wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame,
[11.1]	wherein the first seat attachment housing is coupled to the first front wheel support frame, and wherein the second seat attachment housing is coupled to the second front wheel support frame.
Claim 12	
[12.0]	The stroller of claim 10, further wherein the handle portion comprises a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

Claim 13	
[13.0]	The stroller of claim 1, wherein the first seat attachment housing and the second seat attachment housing are part of the stroller frame.
Claim 14	
[14.0]	The stroller of claim 3, wherein the second seat is vertically lower than the first seat.
Claim 15	
[15.0]	The stroller of claim 1, wherein the first front wheel extends from the first seat attachment housing, and wherein the second front wheel extends from the second seat attachment housing.
Claim 16	
[16.0]	The stroller of claim 1, wherein the plurality of wheels comprises at least one central wheel.

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e)(4), I hereby certify that on **June 16, 2025**, a copy of the foregoing **PETITION FOR *INTER PARTES* REVIEW**, and any supporting exhibits filed therewith, were served via USPS Priority Mail Express overnight delivery to the following correspondence address of record for U.S. Patent No. 11,731,682:

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