

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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BABYBJÖRN AB,

Petitioner,

v.

THE ERGO BABY CARRIER, INC.,

Patent Owner

Patent No. 11,786,055

Issued: October 17, 2023

Filed: April 20, 2023

Inventor: Rodney V. Telford

Title: ADJUSTABLE CHILD CARRIER

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*Inter Partes* Review No. IPR2025-00110

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**PETITION FOR *INTER PARTES* REVIEW OF U.S. PAT. NO. 11,786,055**

**LISTING OF CLAIMS**

| <b>Limitation<sup>1</sup></b> | <b>Claim 1</b>                                                                                                                                                                                                                                                       |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [1pre]                        | 1. An adjustable child carrier for supporting a child by a user, the adjustable child carrier comprising:                                                                                                                                                            |
| [1a]                          | a body configured to support the child,                                                                                                                                                                                                                              |
| [1b]                          | wherein the body forms a bucket seat configured to support legs of the child;                                                                                                                                                                                        |
| [1c]                          | a neck support comprising a first neck support attachment and a second neck support attachment;                                                                                                                                                                      |
| [1d]                          | a first shoulder strap coupled to the body and configured to extend over a first shoulder of the user;                                                                                                                                                               |
| [1e]                          | a second shoulder strap coupled to the body and configured to extend over a second shoulder of the user;                                                                                                                                                             |
| [1f]                          | a first attachment disposed on the first shoulder strap and configured to receive the first neck support attachment;                                                                                                                                                 |
| [1g]                          | a second attachment disposed on the second shoulder strap and configured to receive the second neck support attachment,                                                                                                                                              |
| [1h]                          | wherein the neck support is configured in an upward neck supporting position when the first neck support attachment is coupled to the first attachment and the second neck support attachment is coupled to the second attachment;                                   |
| [1i]                          | the body forming a first thigh support and a second thigh support;                                                                                                                                                                                                   |
| [1j]                          | a first setting, a second setting, and a third setting defined by the adjustable child carrier; and                                                                                                                                                                  |
| [1k]                          | at least one thigh support adjuster coupled to the first thigh support and the second thigh support,                                                                                                                                                                 |
| [1m]                          | wherein the at least one thigh support adjuster is configured to be selectively positioned to one of the first setting, the second setting, or the third setting to thereby adjust a length of the body to accommodate various sizes of the child as the child ages, |
| [1n]                          | wherein the length is defined from a bottom of the bucket seat to a top of the body.                                                                                                                                                                                 |

<sup>1</sup> Petitioner refers to claim limitations throughout this petition in the manner shown here (e.g., [1a] will always refer to “a body configured to support the child,” as recited in claim 1).

| <b>Limitation</b> | <b>Claim 2</b>                                                                                                                                                                 |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [2pre]            | 2. The adjustable child carrier of claim 1,                                                                                                                                    |
| [2a]              | wherein selectively positioning the at least one thigh support adjuster at the first setting adjusts the length of the body to a first length,                                 |
| [2b]              | wherein selectively positioning the at least one thigh support adjuster at the second setting adjusts the length of the body to a second length greater than the first length, |
| [2c]              | wherein selectively positioning the at least one thigh support adjuster at the third setting adjusts the length of the body to a third length greater than the second length.  |
| <b>Limitation</b> | <b>Claim 3</b>                                                                                                                                                                 |
| [3pre]            | 3. The adjustable child carrier of claim 1,                                                                                                                                    |
| [3a]              | wherein adjustment of the at least one thigh support adjuster adjusts a depth of the bucket seat for the child.                                                                |
| <b>Limitation</b> | <b>Claim 4</b>                                                                                                                                                                 |
| [4pre]            | 4. The adjustable child carrier of claim 1,                                                                                                                                    |
| [4a]              | wherein the first setting is at least partially vertically displaced from the second setting,                                                                                  |
| [4b]              | the second setting is at least partially vertically displaced from the third setting,                                                                                          |
| [4c]              | and the third setting is at least partially vertically displaced from the first setting,                                                                                       |
| [4d]              | wherein the adjustable child carrier defines the second setting between the first setting and the third setting.                                                               |
| <b>Limitation</b> | <b>Claim 5</b>                                                                                                                                                                 |
| [5pre]            | 5. The adjustable child carrier of claim 2,                                                                                                                                    |
| [5a]              | wherein adjusting the length of the body to the first length configures the adjustable child carrier in an infant mode,                                                        |
| [5b]              | wherein, in the infant mode, the adjustable child carrier is configured to carry the child when the child has a height within a range of 20-24 inches.                         |
| <b>Limitation</b> | <b>Claim 6</b>                                                                                                                                                                 |
| [6pre]            | 6. An adjustable child carrier for supporting a child by a user, the adjustable child carrier comprising:                                                                      |
| [6a]              | a body configured to support the child between the body and a torso of the user,                                                                                               |

|                   |                                                                                                                                                                                                                                                                                   |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [6b]              | wherein the body forms a bucket seat configured to support legs of the child;                                                                                                                                                                                                     |
| [6c]              | a neck support comprising a first neck support attachment and a second neck support attachment;                                                                                                                                                                                   |
| [6d]              | a first shoulder strap coupled to the body and configured to extend over a first shoulder of the user;                                                                                                                                                                            |
| [6e]              | a second shoulder strap coupled to the body and configured to extend over a second shoulder of the user;                                                                                                                                                                          |
| [6f]              | a first attachment disposed on the first shoulder strap and configured to receive the first neck support attachment;                                                                                                                                                              |
| [6g]              | a second attachment disposed on the second shoulder strap and configured to receive the second neck support attachment,                                                                                                                                                           |
| [6h]              | wherein the neck support is configured in an upward neck supporting position when the first neck support attachment is coupled to the first attachment and the second neck support attachment is coupled to the second attachment;                                                |
| [6i]              | the body forming a first thigh support and a second thigh support;                                                                                                                                                                                                                |
| [6j]              | at least one thigh support adjuster coupled to the first thigh support and the second thigh support; and                                                                                                                                                                          |
| [6k]              | a first position, a second position, and a third position defined by the adjustable child carrier,                                                                                                                                                                                |
| [6l]              | wherein the first position corresponds to a first setting, the second position corresponds to a second setting, and the third position corresponds to a third setting,                                                                                                            |
| [6m]              | wherein adjustment of the at least one thigh support adjuster among the first position, the second position, and the third position adjusts a length of the body to configure the adjustable child carrier to one of the first setting, the second setting, or the third setting, |
| [6n]              | the length defined from a bottom of the bucket seat to a top of the body.                                                                                                                                                                                                         |
| <b>Limitation</b> | <b>Claim 7</b>                                                                                                                                                                                                                                                                    |
| [7pre]            | 7. The adjustable child carrier of claim 6,                                                                                                                                                                                                                                       |
| [7a]              | wherein adjustment of the at least one thigh support adjuster from the first position to the second position adjusts the length of the body from a first length to a second length,                                                                                               |
| [7b]              | the second length being greater than the first length,                                                                                                                                                                                                                            |

|                   |                                                                                                                                                                                       |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [7c]              | wherein adjustment of the at least one thigh support adjuster from the second position to the third position adjusts the length of the body from the second length to a third length, |
| [7d]              | the third length being greater than the first length and the second length.                                                                                                           |
| <b>Limitation</b> | <b>Claim 8</b>                                                                                                                                                                        |
| [8pre]            | 8. The adjustable child carrier of claim 6,                                                                                                                                           |
| [8a]              | wherein adjustment of the at least one thigh support adjuster adjusts a depth of the bucket seat for the child.                                                                       |
| <b>Limitation</b> | <b>Claim 9</b>                                                                                                                                                                        |
| [9pre]            | 9. The adjustable child carrier of claim 6,                                                                                                                                           |
| [9a]              | wherein the first position is at least partially vertically displaced from the second position,                                                                                       |
| [9b]              | the second position is at least partially vertically displaced from the third position,                                                                                               |
| [9c]              | and third first position is at least partially vertically displaced from the first position,                                                                                          |
| [9d]              | wherein the adjustable child carrier defines the second position between the first position and the third position.                                                                   |
| <b>Limitation</b> | <b>Claim 10</b>                                                                                                                                                                       |
| [10pre]           | 10. The adjustable child carrier of claim 7,                                                                                                                                          |
| [10a]             | wherein adjusting the length of the body to the first length configures the adjustable child carrier in an infant mode,                                                               |
| [10b]             | wherein, in the infant mode, the adjustable child carrier is configured to carry the child when the child has a height within a range of 20-24 inches.                                |
| <b>Limitation</b> | <b>Claim 11</b>                                                                                                                                                                       |
| [11pre]           | 11. An adjustable child carrier for supporting a child by a user, the adjustable child carrier comprising:                                                                            |
| [11a]             | a body configured to support the child,                                                                                                                                               |
| [11b]             | wherein the body forms a bucket seat configured to support legs of the child;                                                                                                         |
| [11c]             | a neck support comprising a first neck support attachment and a second neck support attachment;                                                                                       |
| [11d]             | a first shoulder strap coupled to the body and configured to extend over a first shoulder of the user;                                                                                |

|                   |                                                                                                                                                                                                                                                 |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [11e]             | a second shoulder strap coupled to the body and configured to extend over a second shoulder of the user;                                                                                                                                        |
| [11f]             | a first attachment disposed on the first shoulder strap and configured to receive the first neck support attachment;                                                                                                                            |
| [11g]             | a second attachment disposed on the second shoulder strap and configured to receive the second neck support attachment,                                                                                                                         |
| [11h]             | wherein the neck support is configured in an upward neck supporting position when the first neck support attachment is coupled to the first attachment and the second neck support attachment is coupled to the second attachment;              |
| [11i]             | wherein folding the neck support down and away from the user configures the neck support in an outside folded down position, the outside folded down position reducing a length of the body in relation to the upward neck supporting position; |
| [11j]             | the body forming a first thigh support and a second thigh support;                                                                                                                                                                              |
| [11k]             | wherein the body, the first thigh support, and the second thigh support in combination form a seat for the child;                                                                                                                               |
| [11l]             | a first setting, a second setting, and a third setting defined by the adjustable child carrier; and                                                                                                                                             |
| [11m]             | at least one thigh support adjuster coupled to the first thigh support and the second thigh support,                                                                                                                                            |
| [11n]             | wherein selective positioning of the at least one thigh support adjuster at the first setting, the second setting, or the third setting adjusts the length of the body to accommodate various sizes of the child as the child ages,             |
| [11o]             | the length defined from a bottom of the bucket seat to a top of the body.                                                                                                                                                                       |
| <b>Limitation</b> | <b>Claim 12</b>                                                                                                                                                                                                                                 |
| [12pre]           | 12. The adjustable child carrier of claim 11,                                                                                                                                                                                                   |
| [12a]             | wherein adjustment of the at least one thigh support adjuster adjusts a depth of the bucket seat for the child.                                                                                                                                 |
| <b>Limitation</b> | <b>Claim 13</b>                                                                                                                                                                                                                                 |
| [13pre]           | 13. The adjustable child carrier of claim 11,                                                                                                                                                                                                   |
| [13a]             | wherein the first setting is at least partially vertically displaced from the second setting,                                                                                                                                                   |
| [13b]             | the second setting is at least partially vertically displaced from the third setting,                                                                                                                                                           |

|                   |                                                                                                                                                                                                                                                                        |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [13c]             | and the third setting is at least partially vertically displaced from the first setting,                                                                                                                                                                               |
| [13d]             | wherein the adjustable child carrier defines the second setting between the first setting and the third setting.                                                                                                                                                       |
| <b>Limitation</b> | <b>Claim 14</b>                                                                                                                                                                                                                                                        |
| [14pre]           | 14. The adjustable child carrier of claim 11,                                                                                                                                                                                                                          |
| [14a]             | wherein selectively positioning the at least one thigh support adjuster at the first setting adjusts the length of the body to a first length,                                                                                                                         |
| [14b]             | wherein selectively positioning the at least one thigh support adjuster at the second setting adjusts the length of the body to a second length greater than the first length,                                                                                         |
| [14c]             | wherein selectively positioning the at least one thigh support adjuster at the third setting adjusts the length of the body to a third length greater than the second length.                                                                                          |
| <b>Limitation</b> | <b>Claim 15</b>                                                                                                                                                                                                                                                        |
| [15pre]           | 15. The adjustable child carrier of claim 11,                                                                                                                                                                                                                          |
| [15a]             | wherein the seat is configured to support the child in a spread squat position.                                                                                                                                                                                        |
| <b>Limitation</b> | <b>Claim 19</b>                                                                                                                                                                                                                                                        |
| [19pre]           | 19. The adjustable child carrier of claim 1,                                                                                                                                                                                                                           |
| [19a]             | wherein the bucket seat is configured to support the child in a spread squat position.                                                                                                                                                                                 |
| <b>Limitation</b> | <b>Claim 20</b>                                                                                                                                                                                                                                                        |
| [20pre]           | 20. The adjustable child carrier of claim 6,                                                                                                                                                                                                                           |
| [20a]             | wherein the bucket seat is configured to support the child in a spread squat position.                                                                                                                                                                                 |
| <b>Limitation</b> | <b>Claim 21</b>                                                                                                                                                                                                                                                        |
| [21pre]           | 21. The adjustable child carrier of claim 5,                                                                                                                                                                                                                           |
| [21a]             | wherein adjusting the length of the body to the third length configures the adjustable child carrier in a toddler mode, wherein, in the toddler mode, the adjustable child carrier is configured to carry the child when the child has a height of at least 28 inches. |
| <b>Limitation</b> | <b>Claim 22</b>                                                                                                                                                                                                                                                        |
| [22pre]           | 22. The adjustable child carrier of claim 10,                                                                                                                                                                                                                          |

|                   |                                                                                                                                                                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [22a]             | wherein adjusting the length of the body to the third length configures the adjustable child carrier in a toddler mode, wherein, in the toddler mode, the adjustable child carrier is configured to carry the child when the child has a height of at least 28 inches.         |
| <b>Limitation</b> | <b>Claim 23</b>                                                                                                                                                                                                                                                                |
| [23pre]           | 23. The adjustable child carrier of claim 14,                                                                                                                                                                                                                                  |
| [23a]             | wherein adjusting the length of the body to the first length configures the adjustable child carrier in an infant mode, wherein, in the infant mode, the adjustable child carrier is configured to carry the child when the child has a height within a range of 20-24 inches. |
| <b>Limitation</b> | <b>Claim 24</b>                                                                                                                                                                                                                                                                |
| [24pre]           | 24. The adjustable child carrier of claim 23,                                                                                                                                                                                                                                  |
| [24a]             | wherein adjusting the length of the body to the third length configures the adjustable child carrier in a toddler mode, wherein, in the toddler mode, the adjustable child carrier is configured to carry the child when the child has a height of at least 28 inches.         |
| <b>Limitation</b> | <b>Claim 28</b>                                                                                                                                                                                                                                                                |
| [28pre]           | 28. The adjustable child carrier of claim 1,                                                                                                                                                                                                                                   |
| [28a]             | wherein each of the first setting, the second setting, and the third setting is visible to the user for the selective positioning of the at least one thigh support adjuster.                                                                                                  |
| <b>Limitation</b> | <b>Claim 29</b>                                                                                                                                                                                                                                                                |
| [29pre]           | 29. The adjustable child carrier of claim 6,                                                                                                                                                                                                                                   |
| [29a]             | wherein each of the first position, the second position, and the third position is visible to the user for the adjustment of the at least one thigh support adjuster.                                                                                                          |
| <b>Limitation</b> | <b>Claim 30</b>                                                                                                                                                                                                                                                                |
| [30pre]           | 30. The adjustable child carrier of claim 11,                                                                                                                                                                                                                                  |
| [30a]             | wherein each of the first setting, the second setting, and the third setting is visible to the user for the selective positioning of the at least one thigh support adjuster.                                                                                                  |

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**EXHIBITS**

| <b>Exhibit</b>    | <b>Reference</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| 1001              | U.S. Patent No. 11,786,055 (“’055 Patent”)                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1002              | Prosecution History of U.S. Patent No. 11,786,055                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1003              | Declaration of David Smith, P.E., CSP in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 11,786,055                                                                                                                                                                                                                                                                                                                                        |
| 1004              | Curriculum Vitae of David Smith, P.E., CSP                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1005 <sup>2</sup> | U.S. Patent Publication No. 20140014692 to Andren et al. (“Andren”)                                                                                                                                                                                                                                                                                                                                                                                              |
| 1006              | U.S. Patent No. 4,009,808 to Sharp (“Sharp”)                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1007              | Czech Republic Publication No. CZ2010531A3 to Kalouskova (“Kalouskova”)                                                                                                                                                                                                                                                                                                                                                                                          |
| 1008              | U.S. Patent Publication No. 20180199730 to Lundh (“Lundh”)                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1009              | U.S. Patent Publication No. 20080190972 to Gray (“Gray”)                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1010              | Zawn Villines, <i>What Is the Average Length for a Baby</i> , MEDICAL NEWS TODAY, March 31, 2023, <a href="https://www.medicalnewstoday.com/articles/324728">https://www.medicalnewstoday.com/articles/324728</a> .                                                                                                                                                                                                                                              |
| 1011 <sup>3</sup> | Centers for Disease Control and Prevention, <i>Data Table of Infant Length-for-age Charts</i> , August 24, 2001, <a href="https://web.archive.org/web/20150315044822/https://www.cdc.gov/growthcharts/html_charts/lenageinf.htm#expand">https://web.archive.org/web/20150315044822/https://www.cdc.gov/growthcharts/html_charts/lenageinf.htm#expand</a> .                                                                                                       |
| 1012              | International Hip Dysplasia Institute, <i>Hip Health in Baby Carriers, Car Seats, Swings, Walkers, and Other Equipment</i> , <a href="https://web.archive.org/web/20140208144252/http://hipdysplasia.org/developmental-dysplasia-of-the-hip/prevention/baby-carriers-seats-and-other-equipment/">https://web.archive.org/web/20140208144252/http://hipdysplasia.org/developmental-dysplasia-of-the-hip/prevention/baby-carriers-seats-and-other-equipment/</a> . |
| 1013              | International Publication No. WO 2006116117A2 to Staten (“Staten”)                                                                                                                                                                                                                                                                                                                                                                                               |
| 1014              | BabyBjorn Baby Carrier Synergy Owners Manual (“Synergy Manual”)                                                                                                                                                                                                                                                                                                                                                                                                  |

<sup>2</sup> Exs. 1005-1007 are included because they are cited in Petitioner’s concurrently filed IPR challenge to the ’055 Patent. Should the Board institute these petitions, Petitioner will seek to have the reviews consolidated, and Petitioner provides uniform exhibit numbering in both petitions for that purpose.

<sup>3</sup> Petitioner has requested declarations from the Internet Archive to authenticate Exs. 1011 and 1012, but the authenticating declarations were not provided prior to filing. Petitioner will file the authenticating declarations when they are available. Petitioner notes that the Internet Archive has had limited availability recently due to the impacts of a cyberattack.

| Exhibit | Reference                                                                                                                                                                                                                                                                                         |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1015    | Austrian Publication No. AT11620U2 to Stomper-Rosam (“Stomper-Rosam”)                                                                                                                                                                                                                             |
| 1016    | Complaint for Patent Infringement, <i>The Ergo Baby Carrier, Inc. v. BabyBjörn AB</i> , No. 6:24-cv-0083 (W.D. Tex. Feb. 9, 2024).                                                                                                                                                                |
| 1017    | Declaration of David Grünbaum                                                                                                                                                                                                                                                                     |
| 1018    | Procter & Gamble, <i>All About Newborn, Infant, Baby, and Toddler Age Ranges</i> , March 2, 2023, <a href="https://www.pampers.com/en-us/baby/development/article/newborn-baby-toddler-age">https://www.pampers.com/en-us/baby/development/article/newborn-baby-toddler-age</a> .                 |
| 1019    | YKK (U.S.A.) Inc., <i>The Difference Between Pin Lock Sliders and Auto Lock Sliders for Zippers</i> , 2022, <a href="https://ykkamericas.com/difference-between-pin-lock-sliders-and-auto-lock-sliders/">https://ykkamericas.com/difference-between-pin-lock-sliders-and-auto-lock-sliders/</a> . |
| 1020    | Rodney Telford, LINKEDIN, <a href="https://www.linkedin.com/in/rodney-telford-18043378/">https://www.linkedin.com/in/rodney-telford-18043378/</a> (last visited Oct. 25, 2024).                                                                                                                   |
| 1021    | Kevin Scheiferstein, LINKEDIN, <a href="https://www.linkedin.com/in/kevinscheiferstein/">https://www.linkedin.com/in/kevinscheiferstein/</a> (last visited Oct. 25, 2024).                                                                                                                        |
| 1022    | Thomas Aleblad, LINKEDIN, <a href="https://www.linkedin.com/in/thomas-aleblad-5b23ab40/">https://www.linkedin.com/in/thomas-aleblad-5b23ab40/</a> (last visited Oct. 25, 2024).                                                                                                                   |
| 1023    | U.S. Patent and Trademark Office, <i>Patents Official Gazette</i> , <a href="https://patentsgazette.uspto.gov/week42/OG/html/1515-3/US11786055-20231017.html">https://patentsgazette.uspto.gov/week42/OG/html/1515-3/US11786055-20231017.html</a> (last visited Oct. 25, 2024).                   |
| 1024    | <i>Bucket seat</i> , MERRIAM-WEBSTER.COM DICTIONARY, <a href="https://www.merriam-webster.com/dictionary/bucket%20seat">https://www.merriam-webster.com/dictionary/bucket seat</a> (last visited Oct. 25, 2024).                                                                                  |
| 1025    | <i>Bucket seat</i> , OXFORD ADVANCED LEARNER’S DICTIONARY, <a href="https://www.oxfordlearnersdictionaries.com/us/definition/english/bucket-seat">https://www.oxfordlearnersdictionaries.com/us/definition/english/bucket-seat</a> (last visited Oct. 25, 2024).                                  |
| 1026    | <i>Bucket seat</i> , COLLINS ENGLISH DICTIONARY, <a href="https://www.collinsdictionary.com/dictionary/english/bucket-seat#google_vignette">https://www.collinsdictionary.com/dictionary/english/bucket-seat#google_vignette</a> (last visited Oct. 25, 2024).                                    |
| 1027    | <i>Bucket seat</i> , WIKTIONARY.ORG, <a href="https://en.wiktionary.org/wiki/bucket_seat">https://en.wiktionary.org/wiki/bucket_seat</a> (last visited Oct. 25, 2024).                                                                                                                            |
| 1028    | <i>Bench seat</i> , COLLINS ENGLISH DICTIONARY, <a href="https://www.collinsdictionary.com/dictionary/english/bench-seat">https://www.collinsdictionary.com/dictionary/english/bench-seat</a> (last visited Oct. 25, 2024).                                                                       |

## **I. INTRODUCTION**

Petitioner, BabyBjörn AB (“Petitioner”), requests *Inter Partes* review of claims 1-15, 19-24, and 28-30 (the “Challenged Claims”) of the ’055 Patent granted to The ERGO Baby Carrier, Inc. (“Patent Owner”). Ex. 1001; 1002. The claimed invention in the ’055 Patent is nothing more than well-known and expressly taught features of contemporary child carrier technology and, therefore, is anticipated and/or obvious in view of the references cited in this Petition.

## **II. REQUIREMENTS FOR PETITION FOR *INTER PARTES* REVIEW**

### **A. Grounds for Standing (37 C.F.R. § 42.104(a))**

Petitioner certifies the ’055 Patent is available for *Inter Partes* review, and Petitioner is not barred from requesting *Inter Partes* review as set forth herein. Specifically: (1) Petitioner is not the owner of the ’055 Patent; (2) Petitioner has not filed a civil action challenging the validity of any ’055 Patent claims; and (3) this Petition is filed more than 9 months after the ’055 Patent issued.

### **B. Fee for *Inter Partes* Review (§ 42.15(a))**

The Director is authorized to charge the fee specified by 37 CFR § 42.15(a) to Deposit Account No. 04-1415.

### **C. Identification of Claims Being Challenged (37 C.F.R. § 42.104(b))**

- 1. Claims for Which *Inter Partes* Review Is Requested Under 37 C.F.R. § 42.104(b)(1) and Relief Requested under 37 C.F.R. § 42.22(a)(1)**

Petitioner requests *Inter Partes* review of Challenged Claims on the grounds set forth below and requests that each of the Challenged Claims be found unpatentable.

**2. The Specific Art and Statutory Grounds on Which the Challenge Is Based Under 37 C.F.R. § 42.104(b)(2)**

| <b>Ground</b>          | <b>'055 Patent Claims</b> | <b>Basis for Rejection of the Challenged Claims under 35 U.S.C. §§ 102 &amp; 103</b>            |
|------------------------|---------------------------|-------------------------------------------------------------------------------------------------|
| <b><u>Ground 1</u></b> | 1-15, 19-24, and 28-30    | Anticipated by the Synergy Manual, or obvious over the Synergy Manual alone or in view of Lundh |
| <b><u>Ground 2</u></b> | 1-15, 19-24, and 28-30    | Anticipated by Staten, or obvious over Staten alone or in view of Lundh                         |
| <b><u>Ground 3</u></b> | 1-15, 19-24, and 28-30    | Anticipated by Stomper-Rosam, or obvious over Stomper-Rosam alone or in view of Gray            |

The application leading to issuance of the '055 Patent was filed on April 20, 2023. Ex. 1001 & 1002. The '055 Patent claims priority to U.S. Provisional Application No. 62/248,745 filed October 30, 2015. Ex. 1001, 1:5-16. Without conceding any priority claim by Patent Owner, Petitioner treats the priority date for the Challenged Claims as not earlier than October 30, 2015. The following references are prior art to the Challenged Claims under 35 U.S.C. § 102:

- 1) BabyBjörn Baby Carrier Synergy Owners Manual (“Synergy Manual”) (published 2007). Ex. 1014.
- 2) International Patent Publication No. WO 2006116117A2 to Staten (“Staten”) (filed April 21, 2006; published November 2, 2006; priority date April 22, 2005). Ex. 1013.

- 3) Austrian Publication No. AT11620U2 to Stomper-Rosam (“Stomper-Rosam”) (filed July 21, 2010; published February 15, 2011). Ex. 1015.
- 4) U.S. Patent Publication No. 20180199730 to Lundh (“Lundh”) (filed January 4, 2018; published July 19, 2018; priority date July 17, 2015). Ex. 1008.
- 5) U.S. Patent Publication No. 20080190972 to Gray (“Gray”) (filed December 16, 2006; published August 14, 2008). Ex. 1009.

While Lundh was of record during the prosecution of the application that issued as the ’055 Patent, it was not specifically discussed or cited by the examiner in relation to the Challenged Claims. Ex. 1003, ¶ 76. The remaining references were not disclosed to or considered by the examiner. *Id.* The application was allowed after responding to only one office action and filing a terminal disclaimer to address a double patenting rejection. Ex. 1002. The examiner did not assert any Section 102 or Section 103 rejections. *Id.*

**D. Notice of Real Party in Interest (37 C.F.R. § 42.8(b)(1))**

Petitioner BabyBjörn AB is the real party in interest. Petitioner further identifies its wholly owned subsidiary BabyBjorn Inc. as a real party in interest.

**E. Notice of Related Matters (37 C.F.R. § 42.8(b)(2))**

Petitioner is the Defendant (and Counter-Plaintiff) in a pending action filed by Patent Owner alleging infringement of the ’055 Patent. That action is Case No. 6:24-cv-0083-DAE in the United States District Court for the Western District of

Texas, Waco Division. Petitioner is also filing a concurrent IPR challenge against this same patent, but that application has not yet been assigned a case number.

**F. Notice of Lead and Backup Counsel and Service Information (37 C.F.R. § 42.8(b)(3))**

| <b>Lead Counsel</b>                                                                                                                                                                       | <b>Back-Up Counsel</b>                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mark A. Miller, Reg. #44944</b><br>miller.mark@dorsey.com<br>Dorsey & Whitney LLP<br>111 South Main, 21 <sup>st</sup> Floor<br>Salt Lake City, Utah 84111<br>Telephone: (801) 933-4068 | <b>Elliot J. Hales, <i>pro hac vice</i> application forthcoming</b><br>hales.elliott@dorsey.com<br>Dorsey & Whitney LLP<br>111 South Main, 21st Floor<br>Salt Lake City, Utah 84111<br>Telephone: (801) 933-4069<br><br><b>Anthony J. Jones, Reg. #78475</b><br>jones.anthony@dorsey.com<br>Dorsey & Whitney LLP<br>701 Fifth Avenue, Suite 6100<br>Seattle, Washington 98104<br>Telephone: (206) 903-2381 |

Powers of Attorney accompany this Petition pursuant to 37 C.F.R. § 42.10(b). *See* Paper 2.

**G. Proof of Service and Service Information (37 C.F.R. §§ 42.6(e) and 42.105(a))**

Attached is proof of service of this Petition on the Patent Owner through counsel of record listed on Patent Center at the USPTO for the '055 Patent. Petitioner is also serving this Petition on Patent Owner's trial counsel from the pending district court case. Petitioner consents to electronic service in this proceeding.

Please address all correspondence and service for Petitioner to mil-ler.mark@dorsey.com, hales.elliott@dorsey.com, jones.anthony@dorsey.com, and stucki.sherri@dorsey.com, and thompson.vanessa@dorsey.com.

### **III. BACKGROUND AND OVERVIEW OF THE '055 PATENT**

#### **A. Brief Description**

The '055 Patent discloses an adjustable child carrier that allows a child to be carried in a manner that supports the child and maintains the child's pelvis and thighs in a preferred ergonomic position through a range of ages. Ex. 1001, 5:30-33. The disclosed child carrier is adjustable to accommodate children of various sizes, and to carry a child in different positions. Ex. 1001, 5:43-51. Specifically, the child carrier includes a bucket seat and "adjustment areas" to adjust a depth of the bucket seat and a height of the child carrier. Ex. 1001, 5:52-6:4. Additionally, the child carrier includes adjustment points to adjust the shape of the bucket seat area, including "base width adjusters" (e.g., element 150 of FIGs. 3A-3C) to adjust a bucket seat depth and "thigh width adjusters" (e.g., element 160 of FIGs. 4A-4C). Ex. 1001, 6:5-26. The child carrier further includes an "adjustable neck support" (e.g., 180 of FIGs. 7A-7C). Ex. 1001, 6:44-57. The child carrier can be adjusted (e.g., using the base width adjusters and thigh width adjusters) to position a child in a "spread-squat-position" through a range of sizes. Ex. 1001, 6:65-7:6; 12:45-60. This position is also known as the "frog leg," "frog," "squat spread," or

“M” position. Ex. 1001, 7:31-59.

### **B. Prosecution History of the '055 Patent**

The application that issued as the '055 Patent was filed on April 20, 2023. Ex. 1001 & 1002. The as-filed application included one claim, which was later canceled in a preliminary amendment, which added claims 2-21, with claims 2, 9, and 16 being independent. Ex. 1002, pp. 35, 46-53. Upon examining these claims, the examiner issued one non-final office action in which all claims were rejected for double patenting over U.S. Patent Nos. 10,426,275, 11,051,634, and 11,583,104. *Id.* at pp. 909-914. No other claim rejections were asserted. *Id.* In response to the non-final office action, the applicant filed a response including extensive claim amendments and new dependent claims, and the applicant filed a terminal disclaimer regarding U.S. Patent Nos. 10,426,275, 11,051,634, and 11,583,104. *Id.* at pp. 862-879. In the amendments, the applicant added features including “a bucket seat,” discrete “setting[s]” associated with the at least one thigh support adjuster, and new claims directed to “an infant mode” and “a toddler mode,” among other additions. *Id.* The examiner then allowed the claims. *Id.* at pp. 33-36.

### **IV. PERSON HAVING ORDINARY SKILL IN THE ART**

As of October 30, 2015, a person having ordinary skill in the art (“POSITA”) relevant to the '055 Patent would have had at least a four-year degree

in a design-based field, which may include fashion design, industrial design, mechanical engineering, or another technical field, or equivalent experience, and familiarity working with child products and/or adjustable products. Ex. 1003, ¶¶ 32-38.

## V. CLAIM CONSTRUCTION

### A. Claim Construction

Petitioner submits that the claimed “at least one thigh support adjuster” should be interpreted under 35 U.S.C. § 112(f) as a means-plus-function limitation. A means-plus-function limitation is a claim limitation “expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.” 35 U.S.C. § 112(f). A means-plus-function limitation “shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” *Id.*

The absence of the word “means” does not automatically prevent a claim element from being construed as a means-plus-function element. *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996); *see also Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1584 (Fed. Cir. 1996). Where a claim does not expressly use the term “means,” a claim element will nonetheless be interpreted as a means-plus-function limitation where the claim term fails to “recite[] sufficiently definite structure,” or where the claim recites “function without reciting sufficient

structure for performing that function.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000). A claim element will be interpreted as a means-plus-function limitation, for example, where it merely uses a “nonce word” that “reflect[s] nothing more than [a] verbal construct[]” because such generic terms do not connote sufficiently definite structure. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015).

Here, the “at least one thigh support adjuster” is defined solely by its intended function without any recitation of structure, material, class of known components, or acts to support that function. Indeed, courts have construed claim terms described as an “adjuster” to be subject to § 112(f) as means-plus-function terms. *See, e.g., Finesse Wireless LLC v. AT&T Mobility LLC*, 2022 U.S. Dist. LEXIS 152692 at \*37-38 (E.D. Tex. Aug. 24, 2022) (construing “phase and amplitude adjuster” as means-plus-function term); *Maxell, Ltd. v. VIZIO, Inc.*, 2022 U.S. Dist. LEXIS 225585 at \*36 (C.D. Cal. Dec. 13, 2022) (construing “contrast adjusting unit” as means-plus-function term). The term “adjuster” is merely a nonce word for anything capable of achieving adjustment, and does not connote sufficiently definite structure – in fact, it connotes no structure at all, and a POSITA would not understand the claimed “adjuster” as having any definite structure. Ex. 1003, ¶¶ 41-43 & 62-69.

The preceding terms (i.e., *thigh support* adjuster) do nothing to cure this failure. First, the term “thigh support adjuster” does not recite a specific structure or class of structures known to a POSITA. Ex. 1003, ¶ 63. This is evidenced at least by a web search for this term which returns hits largely for mechanical or electronically actuated car seat supports; the only hit in the field of children’s carriers is for the Challenged Patent itself. *Id.* at ¶ 42. Second, a POSITA attempting to intuit the structure invoked by the “thigh support adjuster” term from the context of the claim language and specification would not be able to ascribe this claim any definite structure meaning. For example, the term “thigh support adjuster” appears nowhere in the written specification or figures, and in the claims this component is not recited to perform any function relating to adjusting the amount of thigh support offered the child in the carrier. Ex. 1003, ¶ 63. Thus, neither the knowledge of a POSITA nor the patent ascribe any structural meaning to this claim term.<sup>4</sup>

Accordingly, “at least one thigh support adjuster,” as recited in the Challenged Claims, overcomes the *Williamson* presumption against Section 112(f) interpretation and must be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. Critically, however,

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<sup>4</sup> For at least the reasons explained in this section, Petitioner contends this term is indefinite, and reserves all rights to make this argument in a venue capable of reaching this conclusion.

the specification fails to disclose any “thigh support adjuster,” or clearly associate this claim term with a specific component described in the written description.<sup>5</sup> *Id.*

Instead, the specification discloses a pair of “base width adjusters” and a pair of “thigh width adjusters.” *Id.* at ¶¶ 47-53. Neither of these disclosures (nor any other disclosure of the specification) provides written description support for the “thigh support adjuster” term. For example, the “base width adjusters” are described as working together to increase or decrease the width of the seat—the X dimension of the seat. *Id.* This is not a claimed function in the asserted claims—the “thigh support adjuster” is described variously as adjusting the height and depth of the seat—the Y and Z dimensions of the seat. *Id.*

Similarly, the “thigh width adjusters” are described as being primarily adapted to the purpose of “adjusting the width of the bucket seat”—also a function not claimed in the asserted claims. *Id.* at ¶ 49. While there is disclosure in the specification about the base width adjusters collectively operating to adjust or control the depth of the bucket seat, the specification fails to describe a single adjuster of any kind coupled to both thigh supports and capable of lengthening the body of the carrier, which is how the single “thigh support adjuster” is claimed. *Id.* at ¶ 58. If the Board is inclined not to reject this Petition for inability to definitely construe

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<sup>5</sup> Again, this is a basis for another court to find this term indefinite.

this term<sup>6</sup>, the nearest corresponding structure would be the two base width adjusters disclosed in the specification and equivalents thereof.

While Petitioner contends that the term “thigh support adjuster” has no plain and ordinary (“P&O”) meaning, it nevertheless provides analysis under the nearest such definition available to it: “a component that can be adjusted to change the length, width, height, location or position of the thigh support.” Ex. 1003, ¶ 61. Petitioner and its expert declarant provide invalidity analysis under both § 112(f) and P&O constructions for the “thigh support adjuster” term. For all other terms, Petitioner and its declarant apply P&O constructions.

## **VI. CHALLENGED CLAIMS ARE UNPATENTABLE**

All Challenged Claims are invalid because they merely recite limitations that were known in the art and arranged as claimed as of the priority date of the '055 Patent. As a result, all Challenged Claims are anticipated over the prior art references discussed herein. Even if the Challenged Claims were not anticipated, they

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<sup>6</sup> The Board may terminate *inter partes* review proceedings or deny institution where it is unable to determine the scope of the claims without engaging in speculation (e.g., where the claims are indefinite). *See, e.g., Blackberry Corp. v. MobileMedia Ideas, LLC*, No. IPR2013-00036, Paper 65 (PTAB Mar. 7, 2014); *AMS AG v. 511 Innovations, Inc.*, No. IPR2016-01787, Paper 15 (PTAB Mar. 15, 2017); *Cochlear Bone Anchored Sols. AB v. Oticon Med. AB*, 958 F.3d 1348, 1359 (Fed. Cir. 2020); *Micron Tech., Inc. v. Innovative Memory Systems, Inc.*, No. IPR2016-00324, Paper 11 (PTAB June 13, 2016).

are nonetheless obvious in view of the knowledge of a POSITA and the combined teachings of the references.

**A. Conventional Knowledge of a POSITA**

Adjustable child carriers have been known and used for at least several decades. *See, e.g.*, Ex. 1006, U.S. Patent No. 4,009,808 to Sharp (“Sharp”). Indeed, Sharp itself notes that numerous child-carrier devices already existed in the prior art at that time, including fabric or plastic seats mounted on a metal frame and child carriers made entirely of fabric. Ex. 1006, 1:11-25. Moreover, the cited references illustrate that various means of adjusting a seat or pouch (e.g., the depth and/or width of a seat) were commonplace before the effective filing date of the ’055 Patent. *See, e.g.*, Ex. 1013, FIG. 6 & p. 10 (“adjusting the position of the seat 74 allows the wearer to select the desired position of the infant while carrying him or her”). As a further example, folding neck supports to adjust the height of the body of a child carrier were common and well known before the effective filing date of the ’055 Patent. Ex. 1003, ¶¶ 109-119.

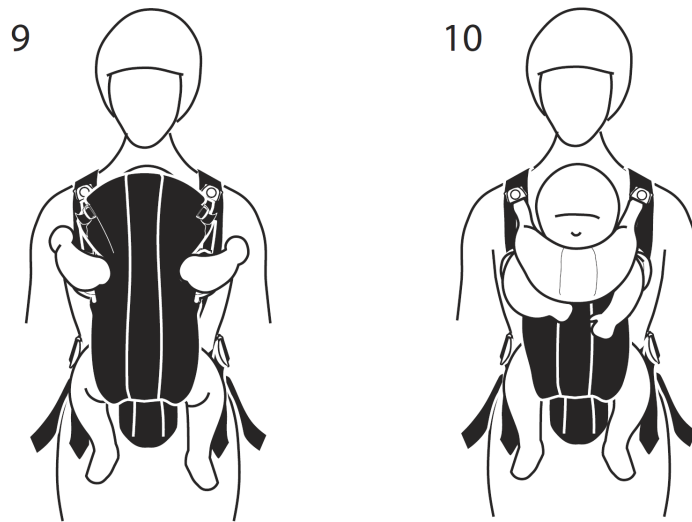
A POSITA would have knowledge of various components that can be incorporated in a child carrier to make the adjustments just discussed, such as draw-strings, cords, belt straps, buckles, Velcro, D-rings, O-rings, snaps, buttons, press studs, zippers, or the like. *Id.* at ¶¶ 106-108. A POSITA would appreciate that these

kinds of components are easily interchangeable, and further that both continuously adjustable (e.g., zippers) and discretely adjustable components (e.g., buttons) can be used. *Id.* Additionally, because adjustable child carriers are typically implemented using simple mechanical components, a POSITA would appreciate that features of different child carriers can be easily combined with at least a reasonable expectation of success, such as different kinds of adjustable components, different neck supports, different leg or thigh supports, different seat configurations, and so forth. *Id.* at ¶ 120.

## **B. Summary of Prior Art**

### **1. Synergy Manual**

The Synergy Manual is a consumer-facing product manual describing a soft baby carrier comprising straps and a front piece. Ex. 1014, pp. 2 & 4. The front piece comprises fabric, which forms a seat or pouch for carrying a child and a head support. *Id.* & Ex. 1003, ¶ 100. The front piece further includes a sliding buckle portion (*see* FIG. 2) and an adjustment label that directs the wearer to adjust the sliding buckle according to the child's height. *Id.* This sliding buckle adjustment varies the depth of the seat or pouch. *Id.* The head support can optionally be folded down (*see* FIGs. 9 & 10). Ex. 1014, pp. 3 & 5.



**FIGs. 9 & 10 of Synergy Manual (p. 5)**

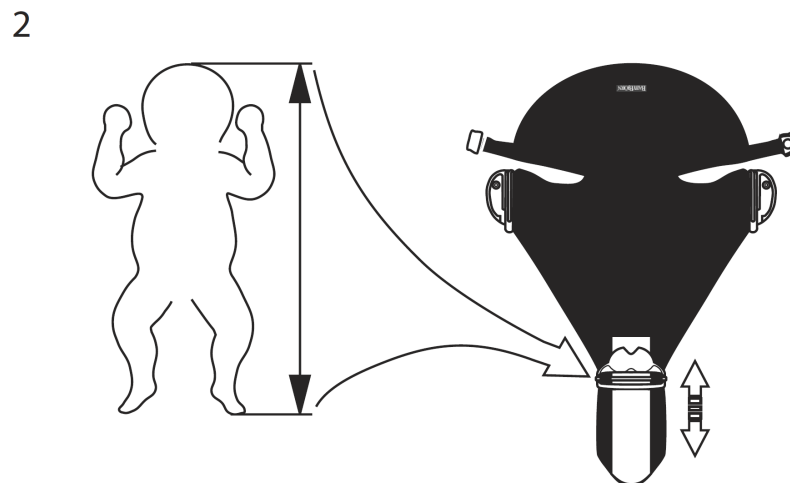
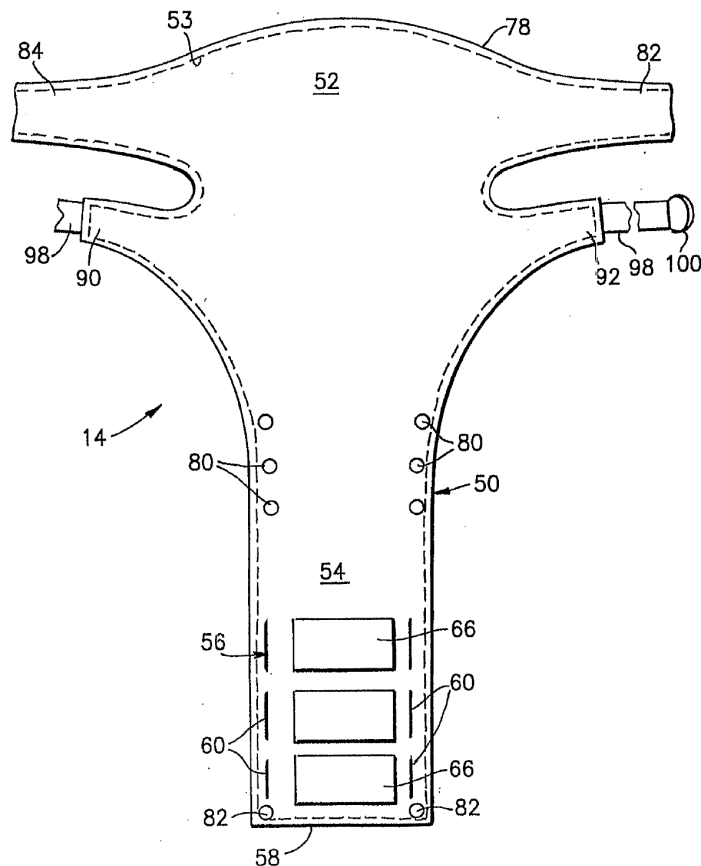


**FIG. 2 of Synergy Manual (p. 4)**

**2. Staten**

Staten discloses a harness-type baby carrier. Ex. 1013, p. 3. The disclosed carrier includes a harness coupled to an infant support (e.g., 14 of FIG. 6). *Id.* at p.

5. The infant support can be made from a piece of material and configured with a shell or body (e.g., 50 of FIG. 6). *Id.* at p. 9. As illustrated in FIG. 6, the disclosed carrier includes an interface (e.g., 56 of FIG. 6), which provides coupling between the harness and the infant support and adjusts a distance between the top and bottom regions of the shell or body to set the desired position of the child. *Id.* For example, the interface may include a column of pockets (e.g., 66 of FIG. 6) and/or slits (e.g., 60 of FIG. 6) that receive a tether (e.g., 47 of FIG. 8) to adjust a depth of the carrier. *Id.* at p. 10.

**FIG.6****FIG. 6 of Statin**

### 3. Stomper-Rosam

Stomper-Rosam discloses an adjustable baby and toddler carrier. Ex. 1015, Abstract. The carrier includes a fabric back panel (e.g., 7 of FIG. 1), a trapezoidal fabric headrest (e.g., 11 of FIG. 1), a hip belt (e.g., 6 of FIG. 1), and two shoulder straps (e.g., 12 of FIG. 1). Ex. 1015, ¶ [0022]. The disclosed carrier provides a bridge reduction feature, which uses drawstrings and/or straps (*see, e.g.*, 1 of FIG.

1), to adjust a seat bridge, ensuring that the seat bridge lies between the knees of a child to support a “squat-spread posture.” *Id.* at ¶ [0028]-[0029]. Use of the bridge reduction feature also adjusts the back panel vertically to accommodate a child at different sizes. *Id.* at ¶ [0030].

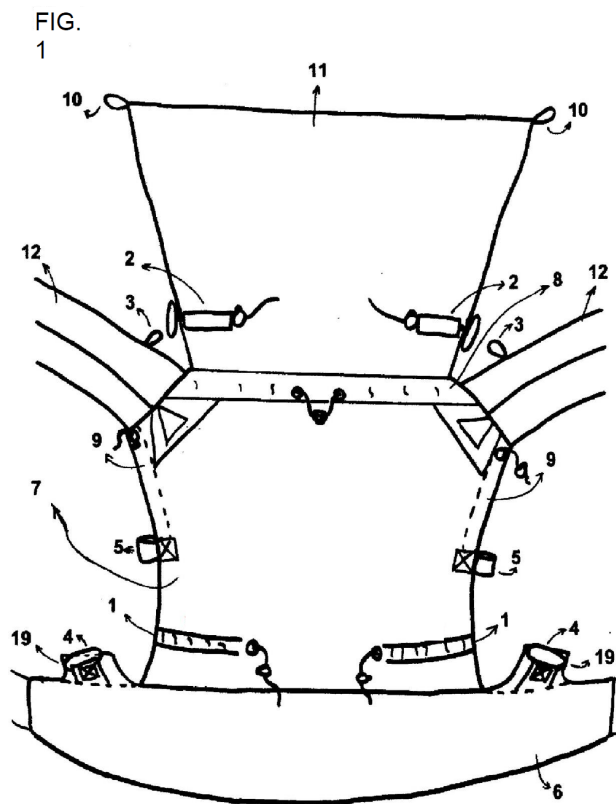


**FIG. 1 of Stomper-Rosam**

#### **4. Lundh**

Lundh discloses a baby carrier that includes a front portion, a stomach portion, two shoulder straps, and a waist strap. Ex. 1008, Abstract. The front portion

and the stomach portion are attached to the waist strap such that the stomach portion and front portion are at least partly detachable from the waist strap. *Id.* The stomach portion and the front portion can be disengaged (e.g., using one or more zippers) to provide support for the child's legs in a "frog position." *Id.* at ¶ [0043]. For example, detachable end parts B of the front portion 101 and stomach portion 118 can be disengaged by undoing a zipper, and the disengaged end parts provide support for the child's legs, as illustrated in FIG. 9. *Id.* at ¶ [0044]. In an embodiment, the zippers used to disengage the detachable end parts B are each coupled to a drawstring, and the drawstrings are coupled to a common drawstring (e.g., 113 of FIG. 1), which is used to adjust both zippers. *Id.* at ¶¶ [0033] & [0043].

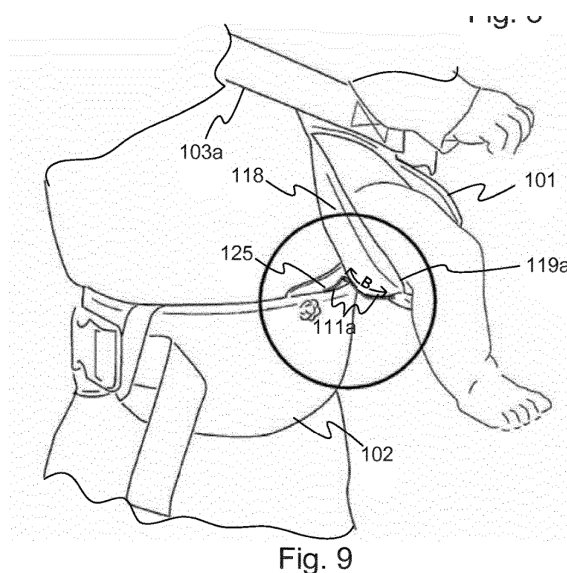


**FIG. 9 of Lundh**

In another aspect, the carrier of Lundh is adjustable to raise or lower a bottom portion (e.g., 109 of FIG. 6.). For example, a releasable part of the bottom portion (e.g., 116 of FIG. 6) can be attached in different modes, such as using a hook-and-eye connection, corresponding to higher or lower positions to accommodate children at different sizes. Ex. 1008, ¶¶ 41-42.

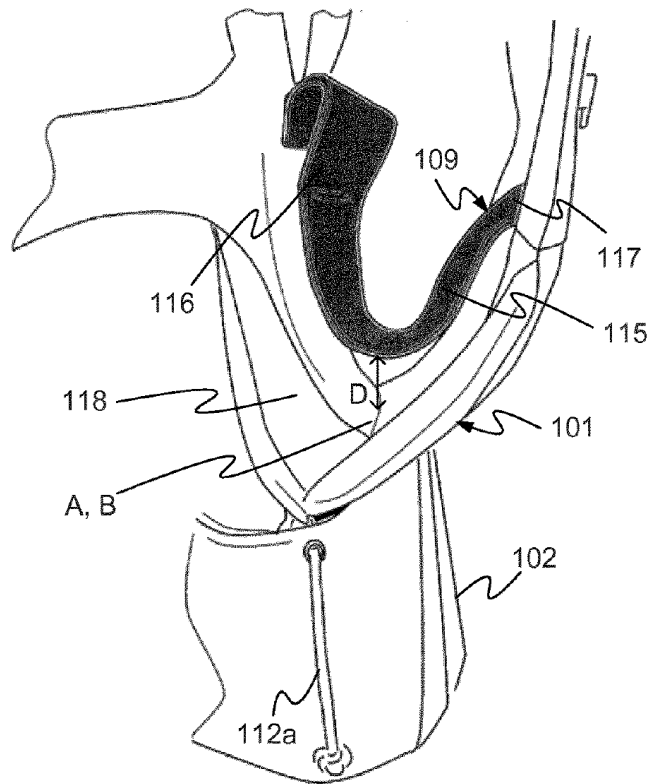


Fig. 6

**FIG. 6 of Lundh**

5. **Gray**

Gray discloses a baby carrier that includes a shoulder harness with a detachable adjustable pouch system (e.g., 300 of FIG. 4) that may be worn on the shoulder harness. Ex. 1009, Abstract. The pouch system of Gray can be adjusted using retractable drawstrings (e.g., 400 of FIG. 4) disposed in channels. Ex. 1009, ¶ [0026]. For example, the drawstrings may be coupled to a single pull tab (e.g., 402 of FIG. 4), and the drawstrings can be fastened in different locations using a self-adhesive material, such as Velcro. *Id.*

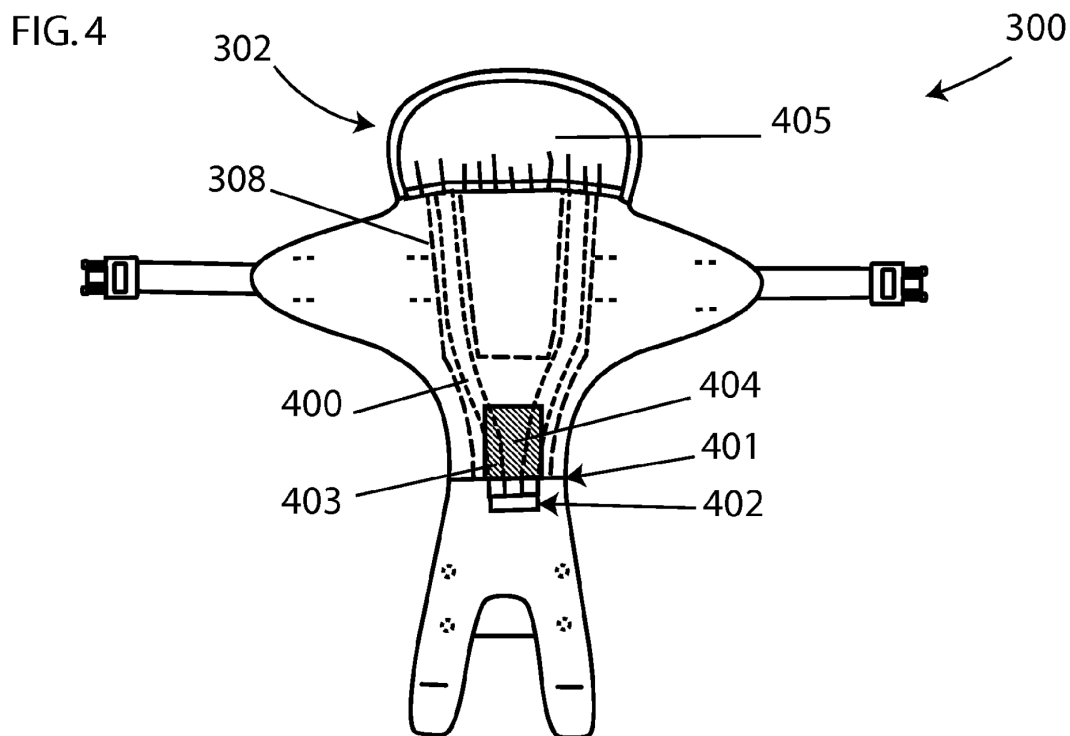


FIG. 4 of Gray

**VII. MANNER OF APPLYING CITED PRIOR ART TO EVERY CLAIM FOR WHICH *INTER PARTES* REVIEW IS REQUESTED**

Below, Petitioner presents excerpts from attached exhibits that more comprehensively compare the claim language with the disclosure of specific portions of the prior art as understood by a POSITA and showing that the Challenged Claims are unpatentable.

**A. Ground 1: The Challenged Claims are anticipated and obvious over the Synergy Manual, alone or in view of knowledge of a POSITA and/or Lundh.**

The Challenged Claims are anticipated and obvious over the Synergy Manual, alone or in view of knowledge of a POSITA and/or Lundh.<sup>7</sup> See Ex. 1003, Appx. A. Petitioner demonstrates anticipation and obviousness of the Challenged Claims by adopting the claim mapping set forth *supra* at pages i-vii and in the declaration of David Smith. See Ex. 1003, ¶ 31. Petitioner cites and incorporates Mr. Smith's more fulsome analysis of the Challenged Claims found at Appendix E of Ex. 1003, portions of which are excerpted and summarized below.

**1. Claim 1**

**a. Limitation [1pre]**

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<sup>7</sup> In the co-pending district court action, Patent Owner alleged infringement of the '055 Patent based on nearly identical BabyBjörn carrier manuals for subsequent carrier products that followed the Synergy carrier. See Ex. 1016, ¶¶ 15-18 & Exs. 2-5.

The Synergy Manual discloses limitation [1pre]. Ex. 1003, Appx. A, limitation [1pre]. The below figure depicts a child being supported using the carrier, and the carrier is adjustable as further discussed herein. *Id.*

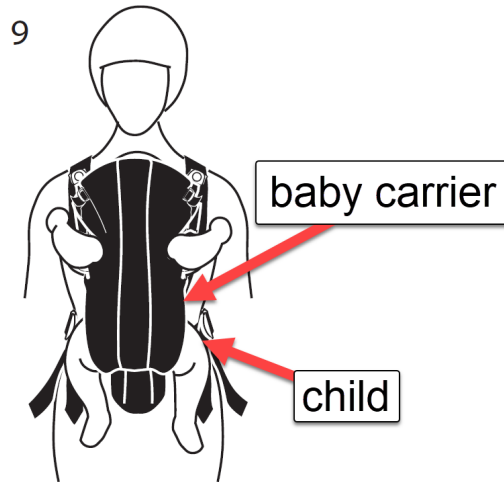
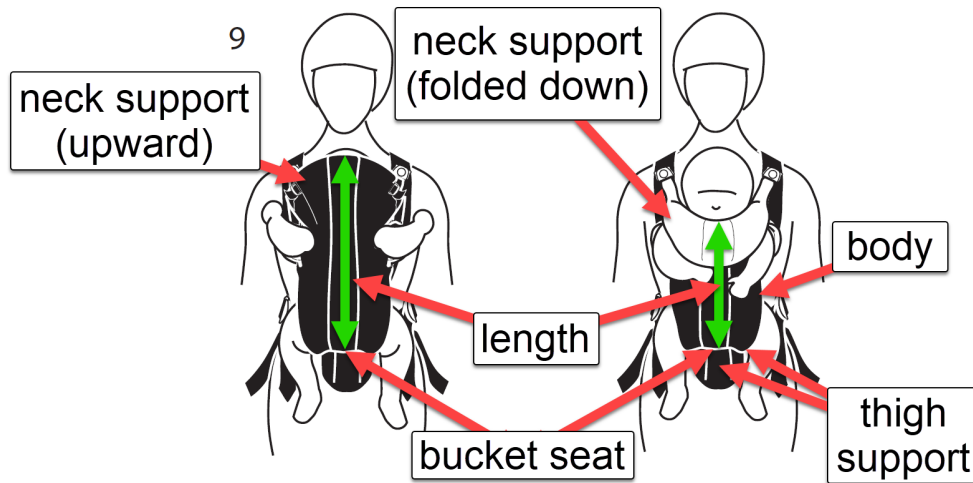


**FIG. 9 of Synergy Manual (annotated)**

**b. Limitation [1a]**

The carrier disclosed in the Synergy Manual includes a body configured to support the child, as illustrated in the below figures. Ex. 1003, Appx. A, limitation 1a.



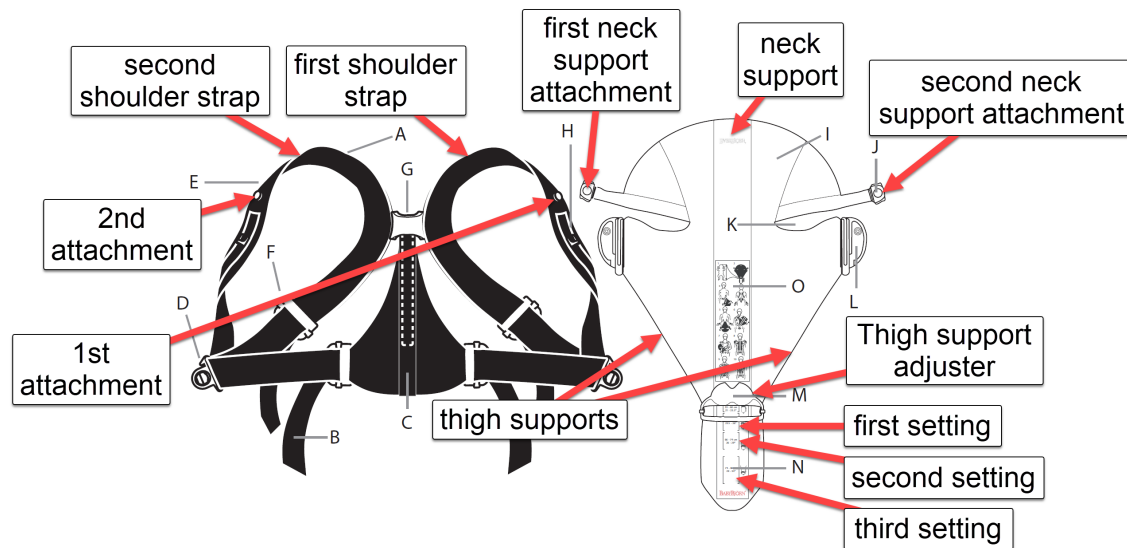
**FIGs. 9 and 10 of Synergy Manual (annotated)**

**c. Limitation [1b]**

The above annotations further illustrate that the carrier of the Synergy Manual includes limitation [1b]. Ex. 1003, Appx. A, limitation 1b. Specifically, the Synergy Manual discloses an adjustable child carrier including a front piece (i.e., a “body”) that forms a seat for a child. *Id.* The seat forms a recessed area or compartment (i.e., a “bucket seat”) to receive the child’s buttocks and at least a portion of the legs, such as to support at least the legs of the child when seated. *Id.*

**d. Limitation [1c]**

The Synergy Manual discloses limitation [1c] as illustrated in the below figures. Ex. 1003, Appx. A, limitation 1c. Specifically, the Synergy Manual describes a “head support” coupled to “head support buckles,” which can be fastened to head support knobs on each shoulder strap. Ex. 1014, p. 3.



### Overview FIGs. of Synergy Manual (annotated)

#### e. Limitation [1d]

The above figure also illustrates that the carrier of the Synergy Manual includes limitation [1d]. Ex. 1003, Appx. A, limitation 1d.

#### f. Limitation [1e]

The above figure further illustrates that the carrier of the Synergy Manual includes limitation [1e]. Ex. 1003, Appx. A, limitation 1e.

#### g. Limitation [1f]

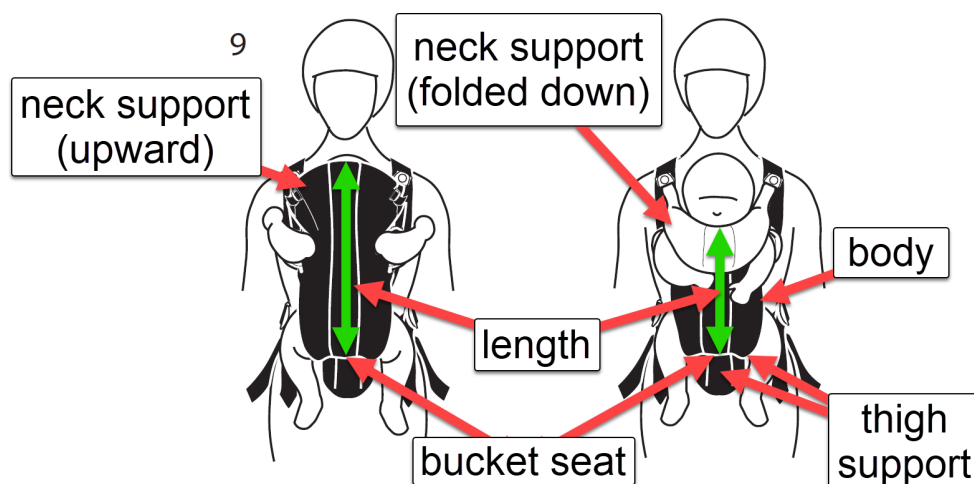
The carrier of the Synergy Manual further includes limitation [1f] as shown in the above figure. Ex. 1003, Appx. A, limitation 1f. As discussed at *supra* limitation [1c], head support knobs (i.e., attachments) are disposed on each shoulder strap and can be fastened to respective head support buckles (i.e., neck support attachments) coupled to the neck support. See Ex. 1014, p. 3.

### h. Limitation [1g]

The carrier of the Synergy Manual includes limitation [1g] for the same reasons discussed at *supra* limitation [1f]. Ex. 1003, Appx. A, limitation 1g.

### i. Limitation [1h]

As shown in the below figure, the neck support shown in the Synergy Manual is configured as recited in limitation [1h]. Ex. 1003, Appx. A, limitation 1h. In particular, the upward neck supporting position shown in FIG. 9 is in contrast to the folded-down position shown in FIG. 10. *See infra* limitation [11i].

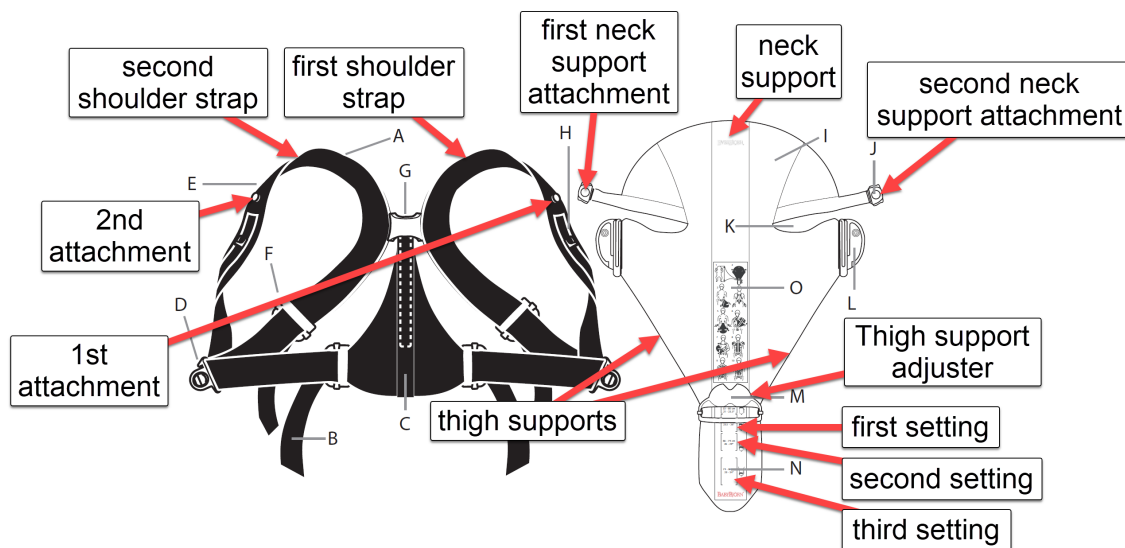


**FIGS. 9 and 10 of Synergy Manual (annotated)**

### a. Limitation [1i]

The carrier of the Synergy Manual includes limitation [1i] as shown in the figures above and below. Ex. 1003, Appx. A, limitation 1i. In particular, FIGS. 9 and 10 above illustrate that the child's thighs are supported above the knee such

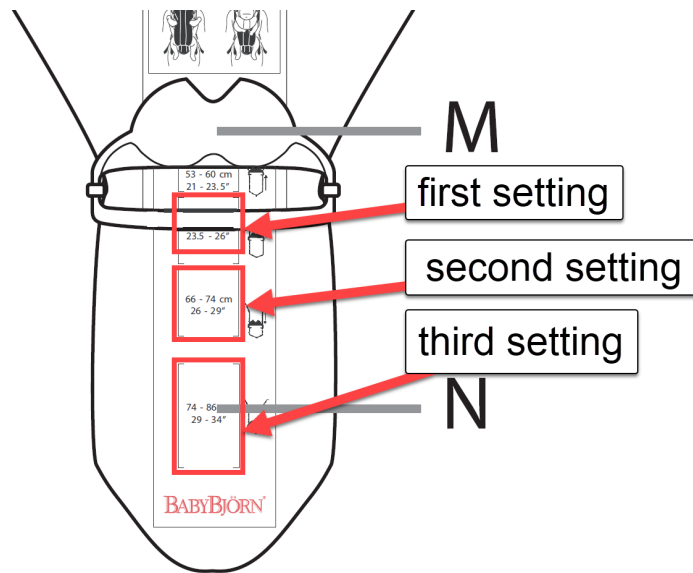
that the thighs and calves of the child roughly form a right angle instead of dangling straight down. *Id.* The above figure shows that the outermost areas of the seat provide thigh support. *Id.*



### Overview FIGs. of Synergy Manual (annotated)

#### b. Limitation [1j]

The carrier disclosed in the Synergy Manual includes limitation [1j] as illustrated in the below figure. Ex. 1003, Appx. A, limitation 1j. In particular, the carrier includes a “sliding buckle” that is adjustable, e.g., according to a child’s height. Ex. 1013, p. 2. The settings can correspond to different heights, including 21-23.5 inches, 23.5-26 inches, 26-29 inches, and 29-34 inches. Ex. 1003, Appx. A, limitation 1j.



### Excerpt of Overview FIGs. of Synergy Manual (annotated)

#### c. Limitation [1k]

As discussed *supra* at Section V(A), this limitation is likely indefinite. If not, the Synergy Manual discloses limitation [1k] under either a 112(f) or P&O construction. *See* Ex. 1003, Appx. A, limitation 1k. Namely, the sliding buckle discussed *supra* at limitation [1j] is a thigh support adjuster extending between the thigh supports, and having first, second, and third settings to adjust a depth and width of the seat that provides thigh support and accommodate a child at different sizes—the size of the child is even printed on the respective settings. *Id.*

#### d. Limitation [1m]

The Synergy Manual discloses limitation [1m] as illustrated in the below annotated figure. Ex. 1003, Appx. A, limitation 1m. As discussed at *supra* limitations

[1j] and [1k], the sliding buckle can be adjusted to first, second, and third settings based on a child's height – that is, to adjust a length of the body to the setting showing the current height of the child as the child ages. *See* Ex. 1014, p. 2.

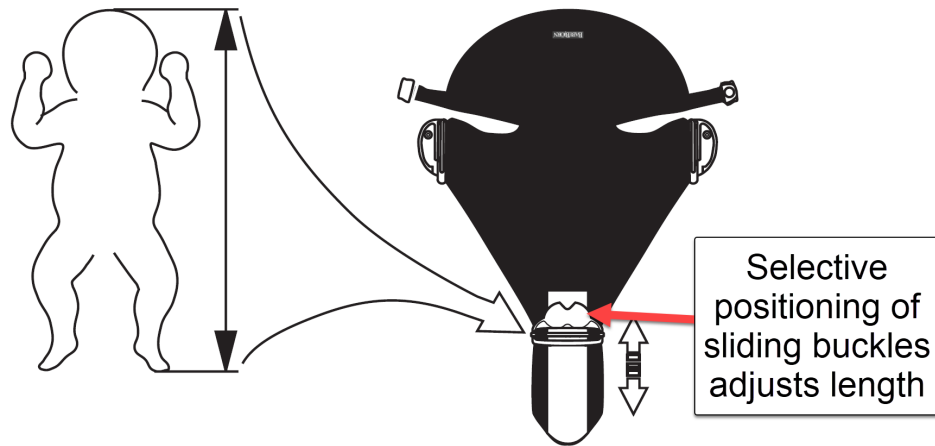


**FIG. 2 of Synergy Manual (annotated)**

**e. Limitation [1n]**

A POSITA would appreciate that the length that is adjusted using the thigh support adjuster of the Synergy Manual is the usable portion of the body defined as recited in limitation [1n]. Ex. 1003, Appx. A, limitation 1n.

**2. Claim 2**

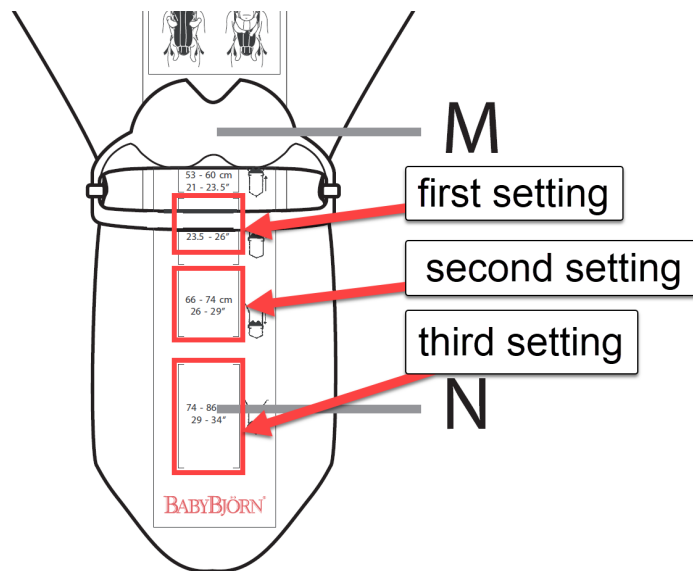
**a. Limitation [2pre]**

*See supra* limitation [1pre].

**b. Limitation [2a]**

The Synergy Manual discloses limitation [2a] for the reasons discussed at

*supra* limitation [1j] and as illustrated in the below figure. Ex. 1003, Appx. A, limitation 2a. The sliding buckle is adjustable according to a child's height, and settings of the sliding buckle can correspond to different heights, as printed on the carrier (*see* image below). Ex. 1014, p. 2.; *see also* Ex. 1003, Appx. A, limitation 1j. Positioning the sliding buckle to a first setting adjusts the body to a first length corresponding to a height of a child (e.g., 23.5-26 inches). *Id.*



### Excerpt of Overview FIGs. of Synergy Manual (annotated)

#### c. Limitation [2b]

The above figure also illustrates that the carrier of the Synergy Manual implements limitation [2b]. Ex. 1003, Appx. A, limitation 2b. Adjusting the sliding

buckle to the second setting adjusts the length of the body to a second length corresponding to a height of the child (e.g., 26-29 inches), the second length being longer than the first length. *Id.*

**d. Limitation [2c]**

When the sliding buckle of the Synergy Manual is adjusted to the third setting, as illustrated in the above figure, the length of the body is adjusted to a third length corresponding to a height of the child (e.g., 29-34 inches). Ex. 1003, Appx. A, limitation 2c.

**3. Claim 3**

**a. Limitation [3pre]**

*See supra* limitation [1pre].

**b. Limitation [3a]**

The Synergy Manual discloses limitation [3a] as illustrated in the below figure and for the reasons discussed at *supra* limitation [1m]. Ex. 1003, Appx. A, limitation 3a. Adjustment of the sliding buckle changes the height and depth of the bucket seat, such that the seat has more height and depth when the sliding buckle is at or toward the third setting (i.e., for a greater height) and less deep when the sliding buckle is at or closer to the first setting (i.e., for a lesser height). *Id.*

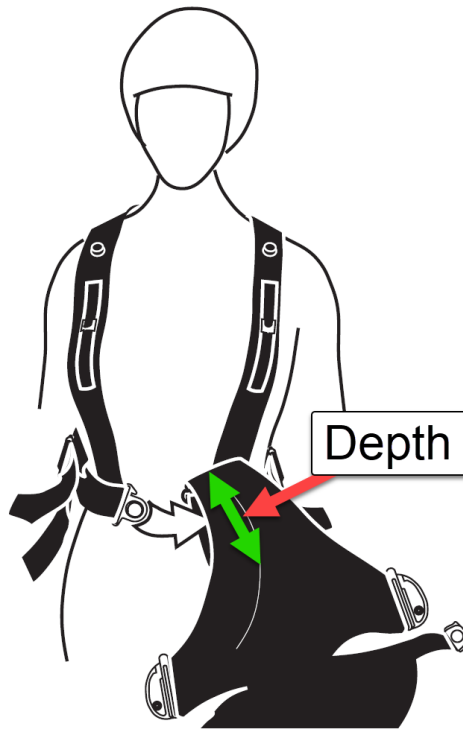


**FIG. 3 of Synergy Manual (annotated)**

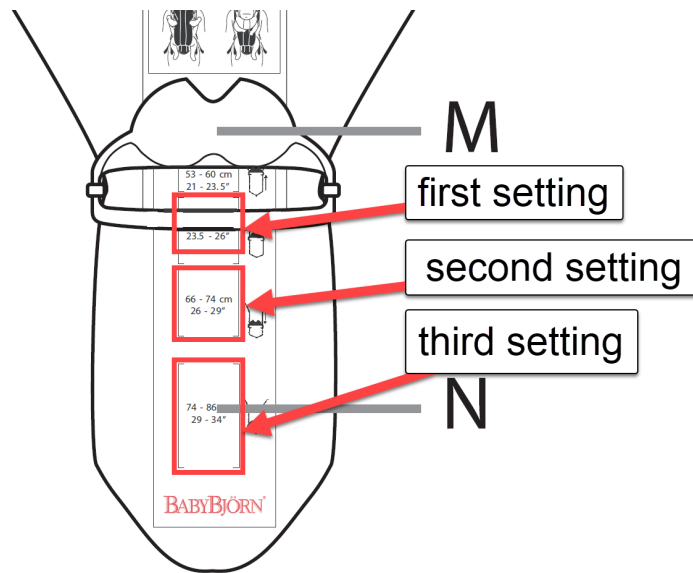
**4. Claim 4**

**a. Limitation [4pre]**

*See supra* limitation [1pre].

**b. Limitation [4a]**

The below figure illustrates limitation [4a] because the illustrated settings are distinct and arranged vertically along the tail of the body. Ex. 1003, Appx. A, limitation 4a.



**Excerpt of Overview FIGs. of Synergy Manual (annotated)**

**c. Limitation [4b]**

The above figure also illustrates limitation [4b]. Ex. 1003, Appx. A, limitation 4b.

**d. Limitation [4c]**

The above figure further illustrates limitation [4c]. Ex. 1003, Appx. A, limitation 4c.

**e. Limitation [4d]**

The second setting is between the first and third settings, as illustrated in the above figure. Ex. 1003, Appx. A, limitation 4d.

**5. Claim 5**

**a. Limitation [5pre]**

*See supra* limitation [1pre].

**b. Limitation [5a]**

A POSITA would appreciate that the carrier of the Synergy Manual is “in an infant mode” when the length of the body is adjusted to the first length corresponding to the first setting. Ex. 1003, Appx. A, limitation 5a. Specifically, the Synergy Manual discloses a setting corresponding to a height of 21-23.5 inches, which would correspond to a child under three months of age (i.e., an infant). *See* Exs. 1010 & 1011.

**c. Limitation [5b]**

The infant mode of the carrier of the Synergy Manual configures the carrier as recited in limitation [5b]. Ex. 1003, Appx. A, limitation 5b. As discussed at *supra* limitation [5a], the Synergy Manual includes a setting corresponding to a height of 21-23.5 inches which is within the claimed range.

**6. Claim 6****a. Limitation [6pre]**

*See supra* limitation [1pre].

**b. Limitation [6a]**

*See supra* limitation [1a].

**c. Limitation [6b]**

*See supra* limitation [1b].

**d. Limitation [6c]**

*See supra* limitation [1c].

**e. Limitation [6d]**

*See supra* limitation [1d].

**f. Limitation [6e]**

*See supra* limitation [1e].

**g. Limitation [6f]**

*See supra* limitation [1f].

**h. Limitation [6g]**

*See supra* limitation [1g].

**i. Limitation [6h]**

*See supra* limitation [1h].

**j. Limitation [6i]**

*See supra* limitation [1i].

**k. Limitation [6j]**

*See supra* limitation [1k].

**l. Limitation [6k]**

*See supra* limitation [1j].

**m. Limitation [6l]**

*See supra* limitation [1m].

**n. Limitation [6m]**

*See supra* limitation [1m].

**o. Limitation [6n]**

*See supra* limitation [1n].

**7. Claim 7**

**a. Limitation [7pre]**

*See supra* limitation [1pre].

**b. Limitation [7a]**

*See supra* limitations [2a] and [2b].

**c. Limitation [7b]**

*See supra* limitation [2b].

**d. Limitation [7c]**

*See supra* limitations [2b] and [2c].

**e. Limitation [7d]**

*See supra* limitation [2c].

**8. Claim 8**

**a. Limitation [8pre]**

*See supra* limitation [1pre].

**b. Limitation [8a]**

*See supra* limitation [3a].

**9. Claim 9**

**a. Limitation [9pre]**

*See supra* limitation [1pre].

**b. Limitation [9a]**

*See supra* limitation [4a].

**c. Limitation [9b]**

*See supra* limitation [4b]

**d. Limitation [9c]**

*See supra* limitation [4c].

**e. Limitation [9d]**

*See supra* limitation [4d].

**10. Claim 10**

**a. Limitation [10pre]**

*See supra* limitation [1pre].

**b. Limitation [10a]**

*See supra* limitation [5a].

**c. Limitation [10b]**

*See supra* limitation [5b].

**11. Claim 11**

**a. Limitation [11pre]**

*See supra* limitation [1pre].

**b. Limitation [11a]**

*See supra* limitation [1a].

**c. Limitation [11b]**

*See supra* limitation [1b].

**d. Limitation [11c]**

*See supra* limitation [1c].

**e. Limitation [11d]**

*See supra* limitation [1d].

**f. Limitation [11e]**

*See supra* limitation [1e].

**g. Limitation [11f]**

*See supra* limitation [1f].

**h. Limitation [11g]**

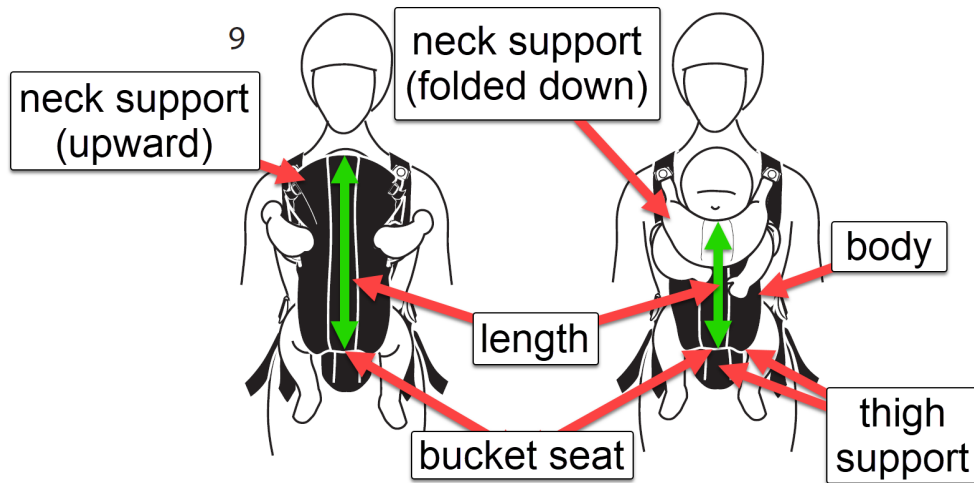
*See supra* limitation [1g].

**i. Limitation [11h]**

*See supra* limitation [1h].

**j. Limitation [11i]**

The Synergy Manual discloses limitation [11i] as illustrated in the below figures. Ex. 1003, Appx. A, limitation 11i. In particular, FIG. 10 illustrates the folded-down configuration, which is in contrast to the upward neck-supporting configuration of FIG. 9. *Id.* Folding the neck support down and away from the user results in the body length being reduced. *Id.*



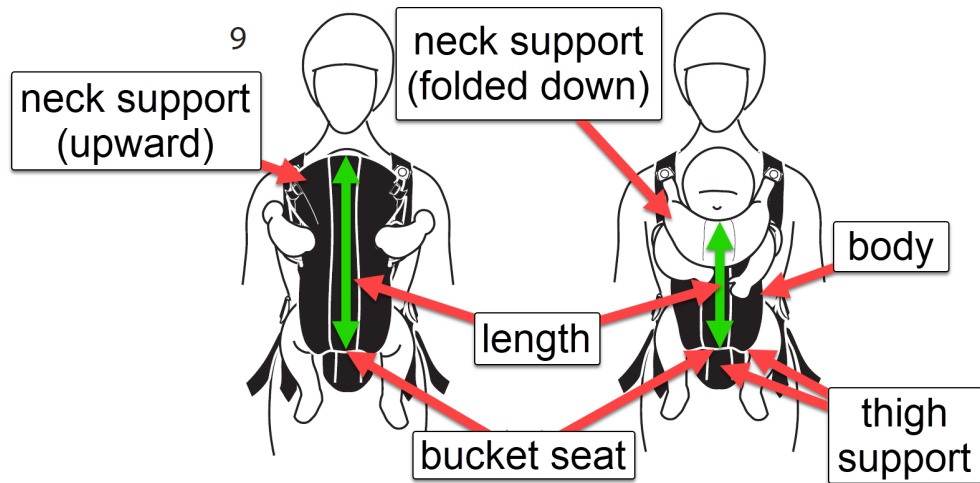
**FIGs. 9 and 10 of Synergy Manual (annotated)**

**k. Limitation [11j]**

*See supra* limitation [1i].

**l. Limitation [11k]**

The Synergy Manual discloses limitation [11k] as illustrated in the below figures. Ex. 1003, Appx. A, limitation 11k. As discussed at *supra* limitations [1b] and [1i], the carrier of the Synergy Manual forms a recessed area to support the child's buttocks and at least a portion of the child's legs, and the seat area includes first and second thigh supports. *Id.*



**FIGs. 9 and 10 of Synergy Manual (annotated)**

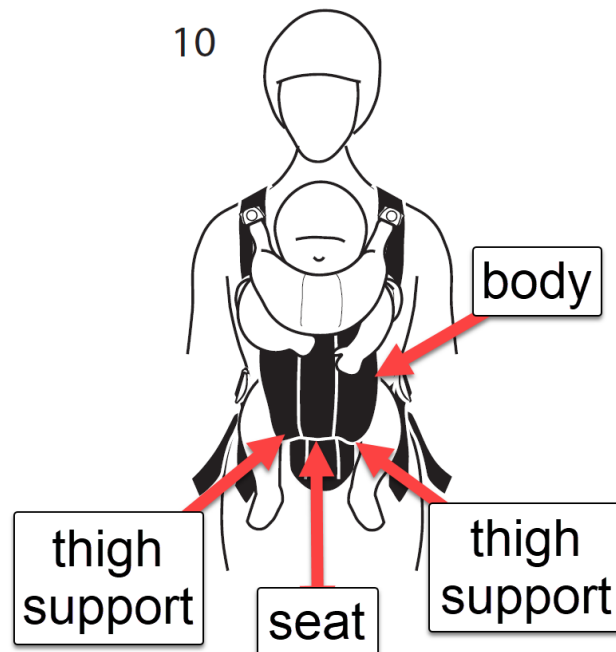


**FIG. 10 of Synergy Manual (annotated)**

**m. Limitation [11l]**

*See supra* limitation [1j].

**n. Limitation [11m]**

*See supra* limitation [1k].

**o. Limitation [11n]**

*See supra* limitation [1m].

**p. Limitation [11o]**

*See supra* limitation [1n].

**12. Claim 12**

**a. Limitation [12pre]**

*See supra* limitation [1pre].

**b. Limitation [12a]**

*See supra* limitation [3a].

**13. Claim 13**

**a. Limitation [13pre]**

*See supra* limitation [1a].

**b. Limitation [13a]**

*See supra* limitation [4a].

**c. Limitation [13b]**

*See supra* limitation [4b].

**d. Limitation [13c]**

*See supra* limitation [4c].

**e. Limitation [13d]**

*See supra* limitation [4d].

**14. Claim 14**

**a. Limitation [14pre]**

*See supra* limitation [1pre].

**b. Limitation [14a]**

*See supra* limitation [2a].

**c. Limitation [14b]**

*See supra* limitation [2b].

**d. Limitation [14c]**

*See supra* limitation [2c].

**15. Claim 15**

**a. Limitation [15pre]**

*See supra* limitation [1a].

**b. Limitation [15a]**

The seat of the carrier of the Synergy Manual is configured as recited in limitation [15a], as illustrated in the below figure. Ex. 1003, Appx. A, limitation 15a. Indeed, the position of the child in FIG. 9 of the Synergy Manual is identical to the illustrated spread squat position of FIG. 1 of the '055 Patent, in which the recited position is annotated using the line 101. *Id.*

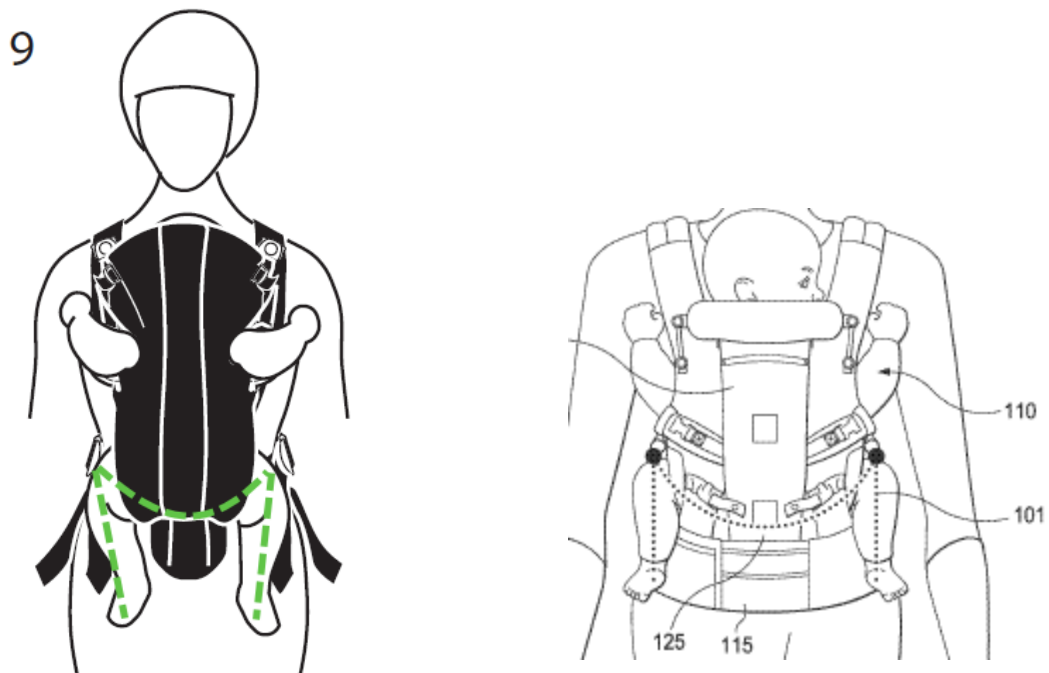


**FIG. 9 of the Synergy Manual (annotated) | FIG. 1 of the '055 Patent**

Even if this feature were not implemented by the carrier of the Synergy Manual, it would nonetheless be obvious in view of the knowledge of a POSITA and/or in view of Lundh. *Id.* The advantages of positioning a child in a spread squat position were well known before the effective filing date of the '055 Patent, as illustrated in Exhibit 1012. The International Hip Dysplasia Institute advised, well before the effective filing date of the '055 Patent, that “[t]he healthiest position for the hips is for the hips to fall or spread (naturally) apart to the side, with the thighs supported and the hips and knees bent,” also known as “the jockey position, straddle position, frog position, spread-squat position or human position.” Ex.

1012, p. 1. To the extent the Synergy Manual does not disclose this position, it would be obvious and simple to modify the Synergy carrier to achieve this through adjusting the length of the carrier to achieve a lower buttocks position and/or thigh supports configured to lift the thighs to this position. Ex. 1003, Appx. A, limitation 15a. Lundh also describes the advantages of carrying a child in a “frog-position” (i.e., the spread-squat position) and shows how to accomplish this through thigh support. Ex. 1008, ¶ [0016]. It would have been obvious to a POSITA to incorporate into the carrier of the Synergy Manual sufficient fabric at the outward tapered edges to allow for more support of the thighs, keeping them substantially parallel to the ground and at or above the knee, in view of Lundh and the knowledge of a POSITA regarding the advantages of the spread-squat position. Ex. 1003, Appx. A, limitation 15a.

**16. Claim 19**

**a. Limitation [19pre]**

*See supra* limitation [1pre].

**b. Limitation [19a]**

*See supra* limitation [15a].

**17. Claim 20**

**a. Limitation [20pre]**

*See supra* limitation [1pre].

**b. Limitation [20a]**

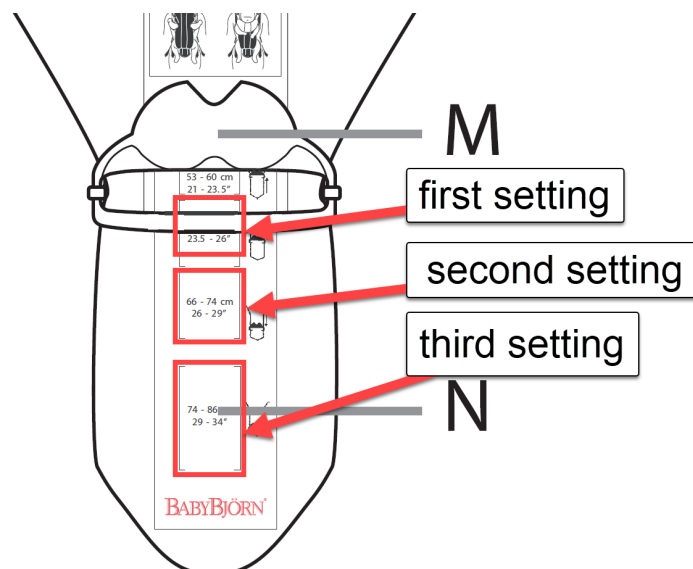
*See supra* limitation [15a].

**18. Claim 21****a. Limitation [21pre]**

*See supra* limitation [1pre].

**b. Limitation [21a]**

The carrier of the Synergy Manual implements limitation [21a]. Ex. 1003, Appx. A, limitation 21a. As discussed at *supra* limitations [2b] and [2c] and illustrated in the below figure, the sliding buckle is adjustable based on the height of a child, including settings for 26-29 inches and 29-34 inches (i.e., the third setting). Ex. 1003, Appx. A, limitation 21a. The third setting of between 29” and 34” is at least 28 inches. Ex. 1003, Appx. A, limitation 21a; *see also* Exs. 1010 & 1011.



**Excerpt of Overview FIGs. of Synergy Manual (annotated)**

19. **Claim 22**

**a. Limitation [22pre]**

*See supra* limitation [1pre].

**b. Limitation [22a]**

*See supra* limitation [21a].

20. **Claim 23**

**a. Limitation [23pre]**

*See supra* limitation [1pre].

**b. Limitation [23a]**

*See supra* limitations [5a] and [5b].

21. **Claim 24**

**a. Limitation [24pre]**

*See supra* limitation [1pre].

**b. Limitation [24a]**

*See supra* limitation [21a].

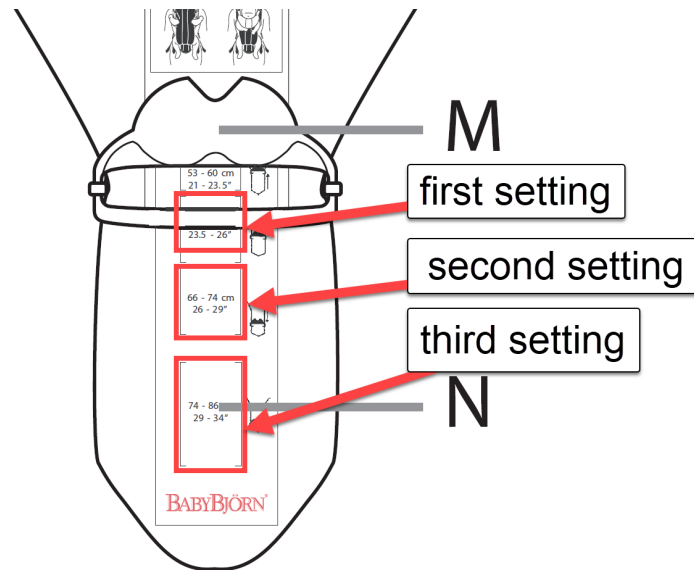
22. **Claim 28**

**a. Limitation [28pre]**

*See supra* limitation [1pre].

**b. Limitation [28a]**

The carrier of the Synergy Manual implements limitation [28a] Ex. 1003, Appx. A, limitation 28a. As shown in the below figure, each of the settings is visible to the user to guide their adjustment of the sliding buckle. *Id.*



**Excerpt of Overview FIGs. of Synergy Manual (annotated)**

**23. Claim 29**

**a. Limitation [29pre]**

*See supra* limitation [1pre].

**b. Limitation [29a]**

*See supra* limitation [28a].

**24. Claim 30**

**a. Limitation [30pre]**

*See supra* limitation [1pre].

**b. Limitation [30a]**

*See supra* limitation [28a].

**B. Ground 2: The Challenged Claims are anticipated and obvious over Staten, alone or in view of knowledge of a POSITA and/or Lundh.**

The Challenged Claims are anticipated and obvious over Staten, alone or in view of the knowledge of a POSITA and/or Lundh. *See* Ex. 1003, Appx. A. Petitioner demonstrates anticipation and obviousness of the Challenged Claims by adopting the claim mapping set forth *supra* at pages i-vii and in the declaration of David Smith. *See* Ex. 1003, ¶ 31. Petitioner cites and incorporates Mr. Smith’s more fulsome analysis of the Challenged Claims found at Appendix D of Ex. 1003, portions of which are excerpted and summarized below.

**1. Claim 1**

**a. Limitation [1pre]**

Staten discloses limitation [1pre]. Ex. 1003, Appx. A, limitation 1pre. The invention of Staten is described as a “harness-type baby carrier.” Ex. 1013, p. 2. The carrier is used to support a child, and the carrier is adjustable as further discussed *infra*.

**b. Limitation [1a]**

The carrier of Staten implements limitation [1a], as illustrated in the below annotations to FIG. 9. Ex. 1003, Appx. A, limitation 1a. The child is depicted as being supported by the annotated body of the carrier. *Id.*

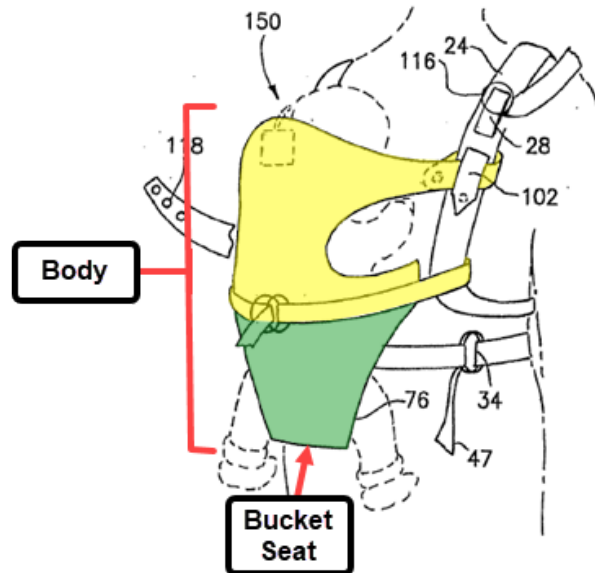


**FIG. 9 of Staten (annotated)**

**c. Limitation [1b]**

The above annotation also illustrates that Staten discloses limitation [1b]. Ex. 1003, Appx. A, limitation 1b. The bucket seat is shown in green, and it is depicted as supporting the upper part of the child's legs. *Id.* In particular, Staten describes that a bottom end region is folded over a front segment of a waistband and coupled to the waistband to form “a U-shaped infant seat” that is “flanked by two openings...for receiving respective legs of the infant.” Ex. 1013, p. 3; *see also* Ex. 1003, ¶¶ 70-73.

**d. Limitation [1c]**

Staten discloses limitation [1c]<sup>8</sup> as annotated in the below figure. Ex. 1003, Appx. A, limitation 1c. Upper flaps (e.g., 82 and 84 of FIG. 8) can be coupled to shoulder straps using a fastening assembly to secure the infant's rear upper torso and "the cervical region of the infant's spine and the back of the infant's head" (e.g., by the top region 52). Ex. 1013, p. 11.

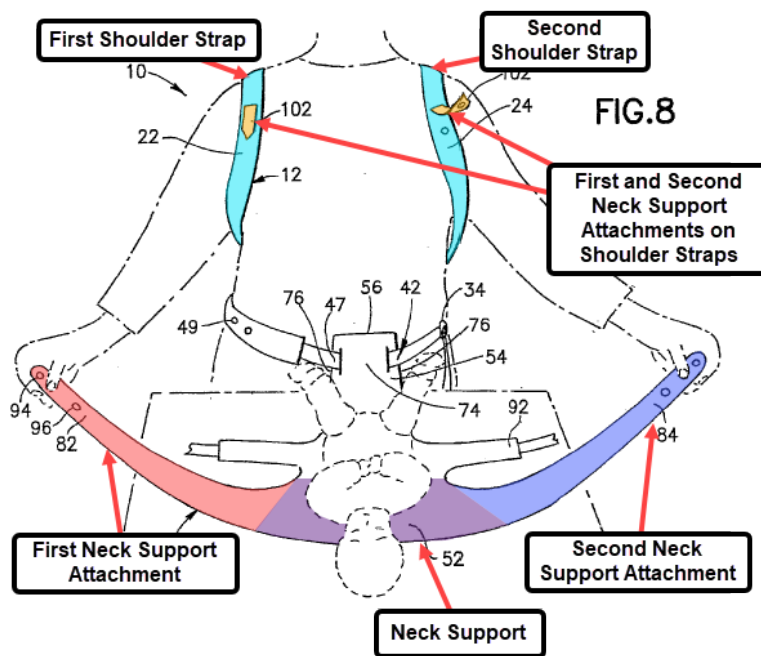


**FIG. 8 of Staten (annotated)**

**e. Limitation [1d]**

The above figure also illustrates that Staten discloses limitation [1d]. Ex. 1003, Appx. A, limitation 1d; *see also* Ex. 1013, p. 6 ("As seen in FIGS. 2 and 3,

<sup>8</sup> Petitioner makes this argument and all other arguments without prejudice to its ongoing claim construction disputes with Patent Owner in its district court case.

strap 18 is structured with a central support 20 and two shoulder straps 22 and 24.”).

**f. Limitation [1e]**

Staten discloses limitation [1e] for the same reasons discussed at *supra* limitation [1d]. Ex. 1003, Appx. A, limitation 1e.

**g. Limitation [1f]**

The above figure also illustrates that the carrier of Staten includes limitation [1f]. Ex. 1003, Appx. A, limitation 1f. The free ends of the upper flaps (i.e., the neck support attachments) are looped around the shoulder straps and secured using fastening elements. Ex. 1013, p. 11. Stoppers (e.g., 102 of FIG. 8) are disposed on each shoulder strap to prevent the upper flaps from slipping. Ex. 1013, p. 12. These stoppers are further illustrated in the annotations to FIG. 9 below. Ex. 1003, Appx. A, limitation 1f.

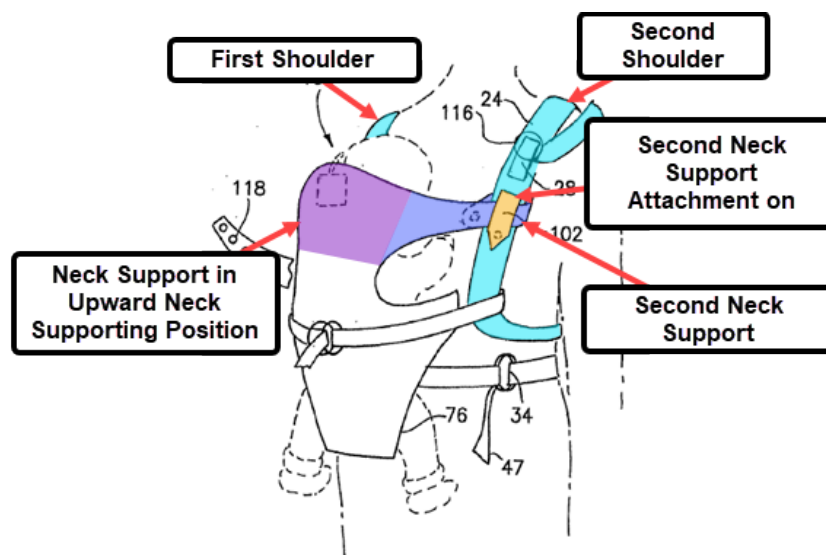


**FIG. 9 of Staten (annotated)****h. Limitation [1g]**

Staten discloses limitation [1g] for the same reasons discussed at *supra* limitation [1f]. Ex. 1003, Appx. A, limitation 1g.

**i. Limitation [1h]**

The annotations to FIG. 9 of Staten above illustrate that the neck support as recited in limitation [1h]. Ex. 1003, Appx. A, limitation 1h. When the upper straps are coupled to the attachments on each shoulder strap, the top region of the carrier supports the child's rear upper torso and "the cervical region of the infant's spine and the back of the infant's head" (e.g., by the top region 52). Ex. 1013, p. 11. Thus, the neck support is "in an upward neck supporting position." Ex. 1003, Appx. A, limitation 1h.

**j. Limitation [1i]**

Staten discloses limitation [1i] as illustrated in annotated FIGs. 8 and 9 below. Ex. 1003, Appx. A, limitation 1i. The body of the carrier of Staten forms a "U-shaped infant seat" that is "flanked by two openings...for receiving respective legs of the infant." Ex. 1013, p. 3. As depicted in the below figures, the child's thighs are supported by the illustrated seat. Ex. 1003, Appx. A, limitation 1i. In particular, FIG. 8 shows a portion of the seat positioned under the child's legs above the knee, which provides thigh support on either side. *Id.*

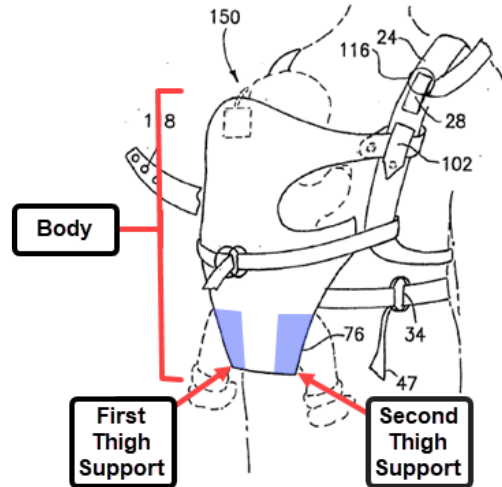


**FIG. 9 of Staten (annotated)**

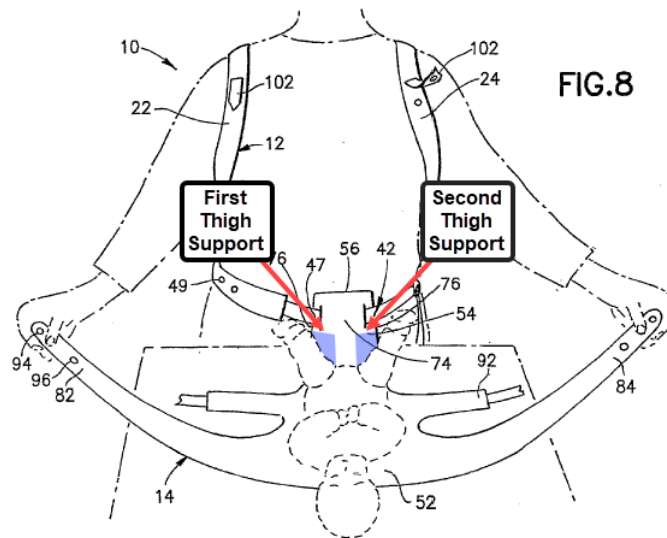


**FIG. 8 of Staten (annotated)**

**k. Limitation [1j]**

The below figure illustrates that the carrier of Staten includes limitation [1j].

Ex. 1003, Appx. A, limitation 1j. The carrier of Staten includes an interface (e.g.,

56 of FIG. 6), which provides coupling between the harness and the infant support and adjusts a distance between the top and bottom regions of the shell or body to set the desired position of the child. *Id.* The interface may include a column of pockets (e.g., 66 of FIG. 6) and/or slits (e.g., 60 of FIG. 6) that receive a tether (e.g., 47 of FIG. 8) to adjust a depth of the carrier. *Id.* at p. 10. The pockets and/or slits define first, second, and third settings. Ex. 1003, Appx. A, limitation 1j.

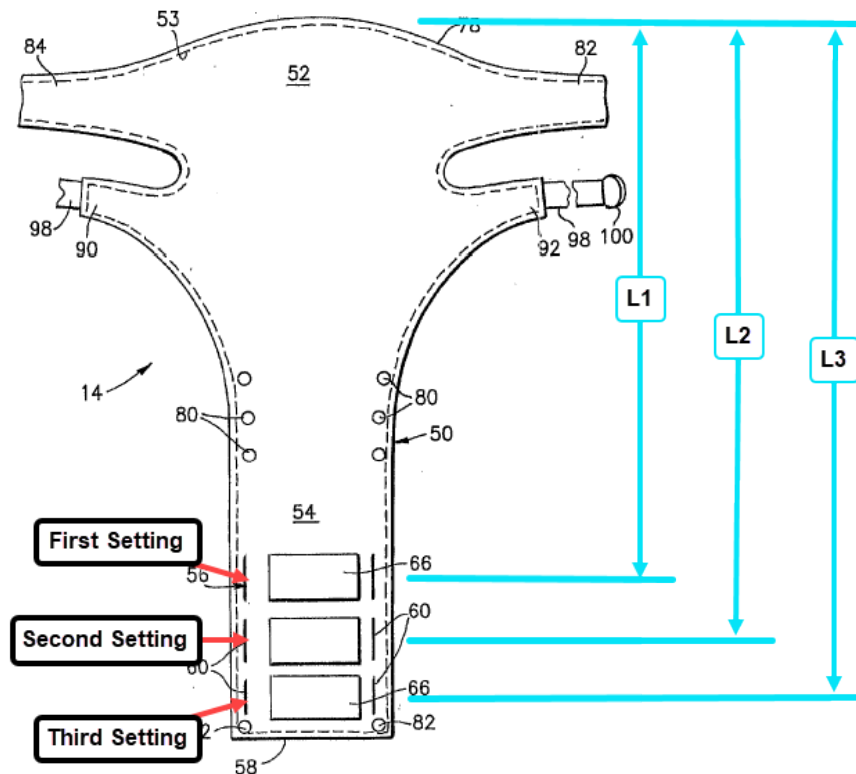


**FIG. 6 of Staten (annotated)**

### **I. Limitation [1k]**

As discussed at *supra* Section V(A) limitation [1k] is likely indefinite. But if not, it is a means-plus-function term corresponding to the “base width adjusters”

from the patent specification. Ex. 1003, ¶¶ 41-43, 54-59, & 64-69.

To the extent (if at all) that a meaning can be ascribed to this claim term, it is disclosed in Staten. Ex. 1003, Appx. A, limitation 1k. Alternatively, it would be obvious to a POSITA to modify the carrier of Staten to include “at least one thigh support adjuster” in view of the knowledge of a POSITA and/or in view of Lundh.<sup>9</sup> *Id.*

First, the below annotations to FIG. 8 illustrate that the disclosed carrier includes three thigh support adjusters, each of which extends between the thigh supports. Ex. 1003, Appx. A, limitation 1k. As discussed *supra* at limitation [1j], the interface of the carrier of Staten includes pockets and/or slits for receiving a tether (e.g., 47 of FIG. 8). For example, “[e]ach pocket 66 extends between the opposite sides of shell 50 and is configured to receive tether 47 of shoulder strap 24,” and “[t]he slits 60 each are dimensioned to allow tether 47 of shoulder strap 24 to slip through it.” Ex. 1013, p. 10. Accordingly, the tether provides thigh support adjustment by coupling to the pockets and/or tethers in each of the defined settings. Ex.

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<sup>9</sup> As discussed at *infra* Ground 3, Gray also discloses limitation [1k]. Ex. 1003, Appx. F, limitation 1k. A POSITA would appreciate that either Gray or Lundh can be used to modify any of the primary references discussed herein to implement “at least one thigh support adjuster.” Ex. 1003, ¶¶ 121-126. For example, either the common drawstring of Lundh or the pull tab of Gray can be implemented in combination with the inventions of the primary references to provide a single “thigh support adjuster” coupled to both first and second thigh supports. *Id.*

1003, Appx. A, limitation 1k.

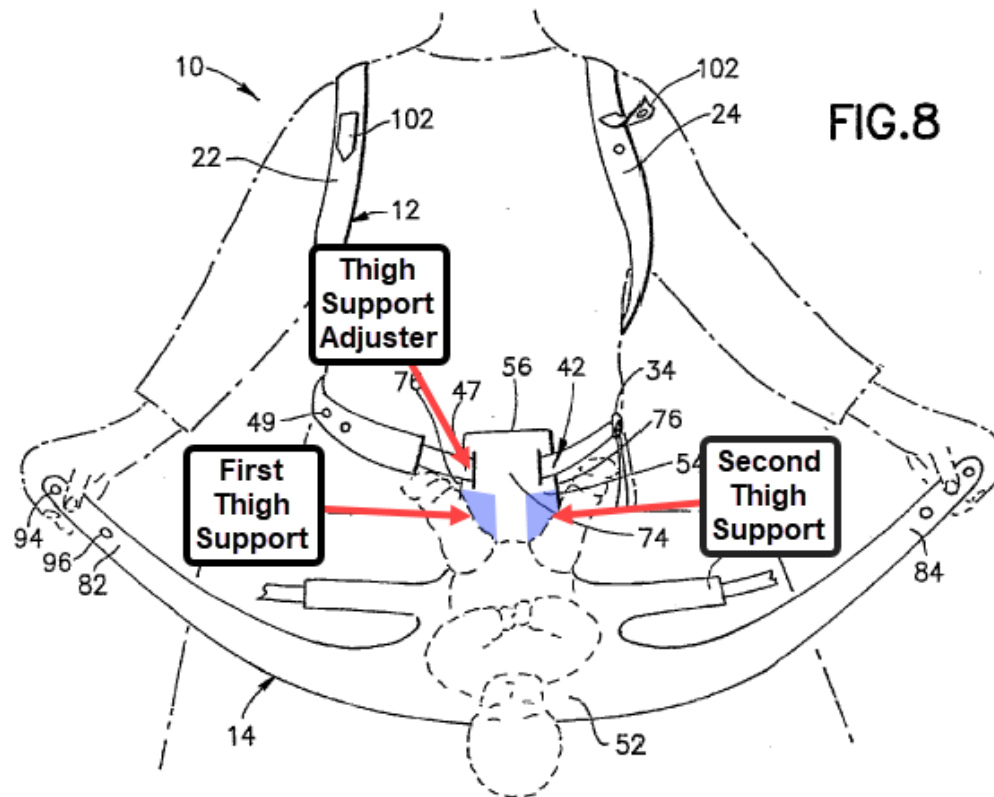


**FIG. 8 of Staten (annotated)**

Second, even if limitation [1k] were not disclosed in Staten, this feature is disclosed in Lundh, and it would be obvious for a POSITA to combine the “at least one thigh support adjuster” of Lundh with the carrier of Staten for the obvious benefit more convenient adjustment of the carrier (e.g., no more need to thread a strap through the slits). *Id.* As illustrated in the below annotations to FIG. 6 of Lundh, the carrier of Lundh includes a bottom portion 109 that is detachably connected to

the stomach portion 118 using a hook-and-eye connection (traversing between the thigh supports), and the bottom portion is adjustable between multiple positions to accommodate a child at different sizes. Ex. 1003, Appx. A, limitation 1k; *see also* Ex. 1008, ¶¶ [0041]-[0042]. Thus, the adjustable bottom portion of Lundh is also a “thigh support adjuster,” as in claim 1 of the ’055 Patent. Ex. 1003, Appx. A, limitation 1k. Incorporating this approach into Staten would be a simple task for a POSITA—simply insert element 109 in the same location in Staten, and operate it in the same way as in Lundh. *Id.*; *see also* Ex. 1003, ¶ 121. Doing so would allow the parent to adjust the height of the seat with one hand (i.e., lift the child with one hand and adjust the hook-and-eye engagement point with the other) instead of manually threading the strap through the slits as in Staten. Ex. 1003, Appx. A, limitation 1k. One-handed adjustment would be an obvious benefit to a POSITA and to parent users of the carrier. *Id.*

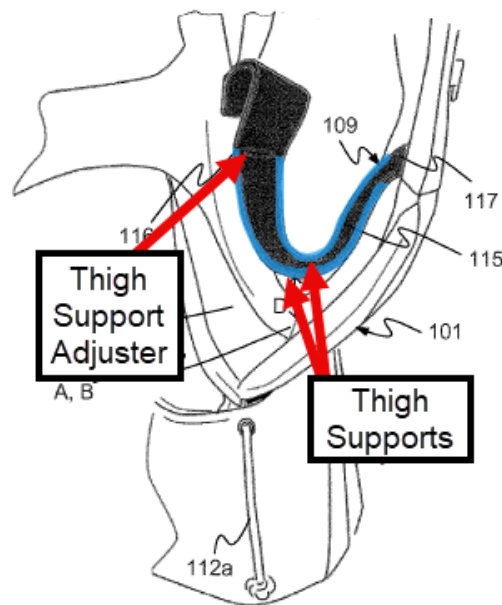


Fig. 6

**FIG. 6 of Lundh (annotated)****m. Limitation [1m]**

Staten discloses limitation [1m] for the reasons discussed at *supra* limitations [1j] and [1k]. Ex. 1003, Appx. A, limitation 1m. The interface of the carrier provides the pockets and/or slits to receive the tether at each of the settings, such that the interface is configured “to controllably adjust a distance between top and bottom regions 52 and 54, respectively, of the infant support.” Ex. 1013, p. 9. Thus, selectively positioning the thigh support adjuster to each of the settings adjusts a length of the body to accommodate various sizes of the child as the child ages. Ex. 1003, Appx. A, limitation 1m.

**n. Limitation [1n]**

The length that is adjusted using the thigh support adjusters of Staten are as recited in limitation [1n]. Ex. 1003, Appx. A, limitation 1n. In particular, each setting defined by the slits and/or pockets defines the seat at a different height, thus adjusting the length of the body between the bottom of the bucket seat to the top of the body. *Id.*

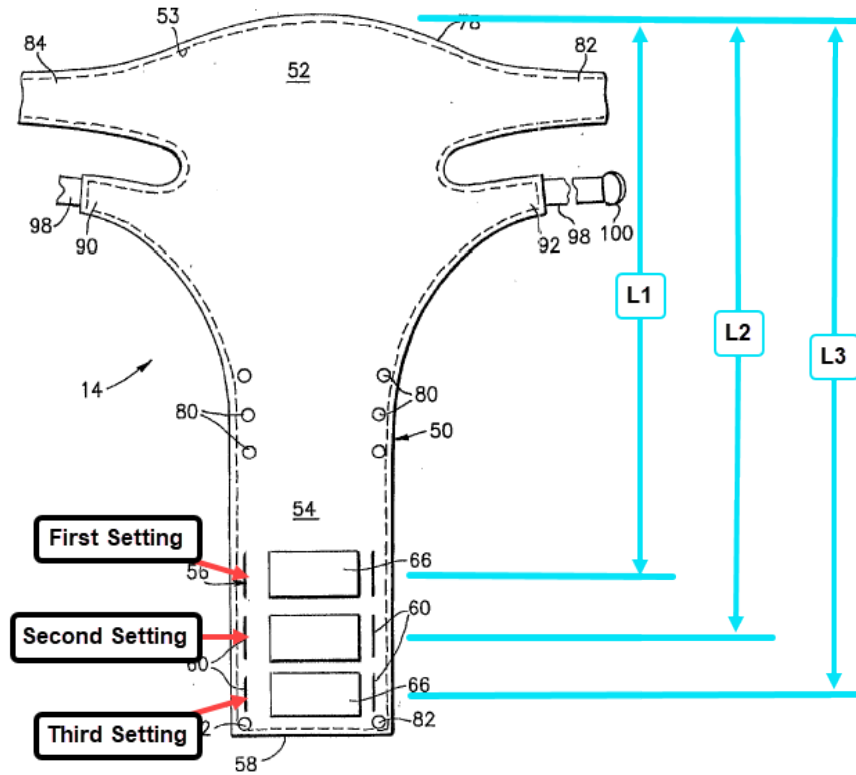
**2. Claim 2**

**a. Limitation [2pre]**

*See supra* limitation [1pre].

**b. Limitation [2a]**

Staten discloses limitation [2a] for the reasons discussed at *supra* limitation [1m]. Ex. 1003, Appx. A, limitation [2a]. When the tether is positioned at the first setting defined by a first pocket and/or slit, the body has a first length as illustrated in the below figure. *Id.*

**FIG. 6 of Staten (annotated)****c. Limitation [2b]**

The above figure and the features discussed at *supra* limitation [1m] also illustrate that Staten discloses limitation [2b]. Ex. 1003, Appx. A, limitation [2b]. When the tether is positioned at the second setting defined by a second pocket and/or slit, the body has a second length that is longer than the first length as illustrated in the above figure. *Id.*

**d. Limitation [2c]**

The above figure further illustrates that Staten discloses limitation [2c]. Ex. 1003, Appx. A, limitation [2b]. When the tether is positioned at the third setting

defined by a third pocket and/or slit, the body has a third length that is longer than the second length as illustrated in the above figure. *Id.*

**3. Claim 3**

**a. Limitation [3pre]**

*See supra* limitation [1pre].

**b. Limitation [3a]**

For the reasons discussed at *supra* limitation [1m], Staten discloses limitation [3a]. Ex. 1003, Appx. A, limitation [3a]. The depth of the bucket seat is adjustable by positioning the tether at different settings defined by different pockets and/or slits, thereby making more material and room available to accommodate the child. *Id.*

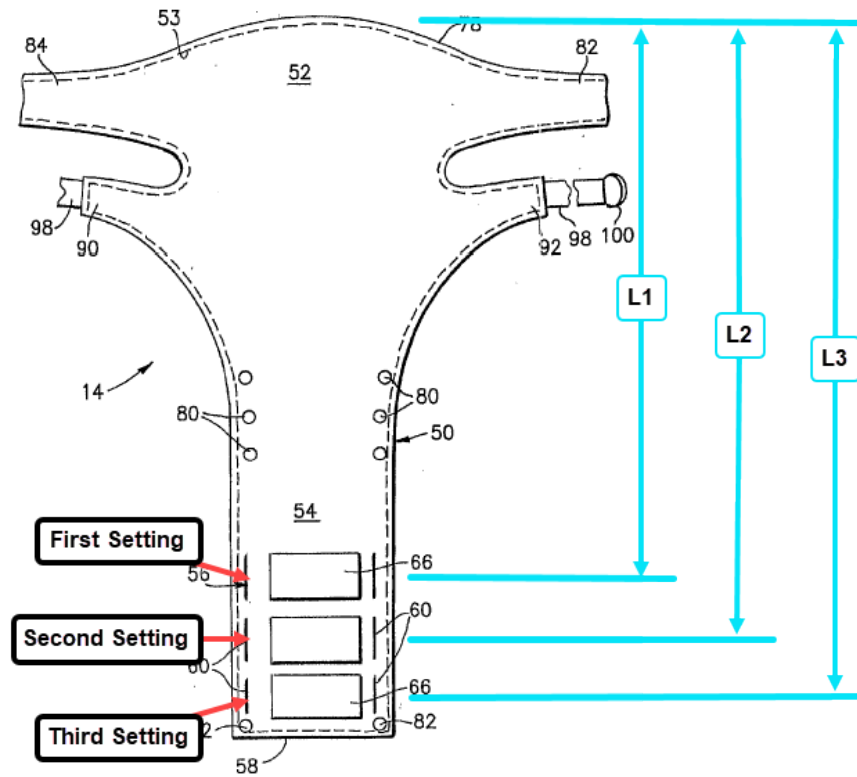
**4. Claim 4**

**a. Limitation [4pre]**

*See supra* limitation [1pre].

**b. Limitation [4a]**

Staten discloses limitation [4a] for the reasons discussed at *supra* limitations [1j], [1m], and [1n]. Ex. 1003, Appx. A, limitation [4a]. As illustrated in the below figure, the first setting is vertically displaced from the second setting. *Id.*

**FIG. 6 of Staten (annotated)****c. Limitation [4b]**

The above figure also illustrates limitation [4b]. Ex. 1003, Appx. A, limitation [4b].

**d. Limitation [4c]**

The above figure further illustrates limitation [4c]. Ex. 1003, Appx. A, limitation [4c].

**e. Limitation [4d]**

As further illustrated in the above figure, the second setting of the carrier of Staten is “between the first setting and the third setting.” Ex. 1003, Appx. A, limitation [4d].

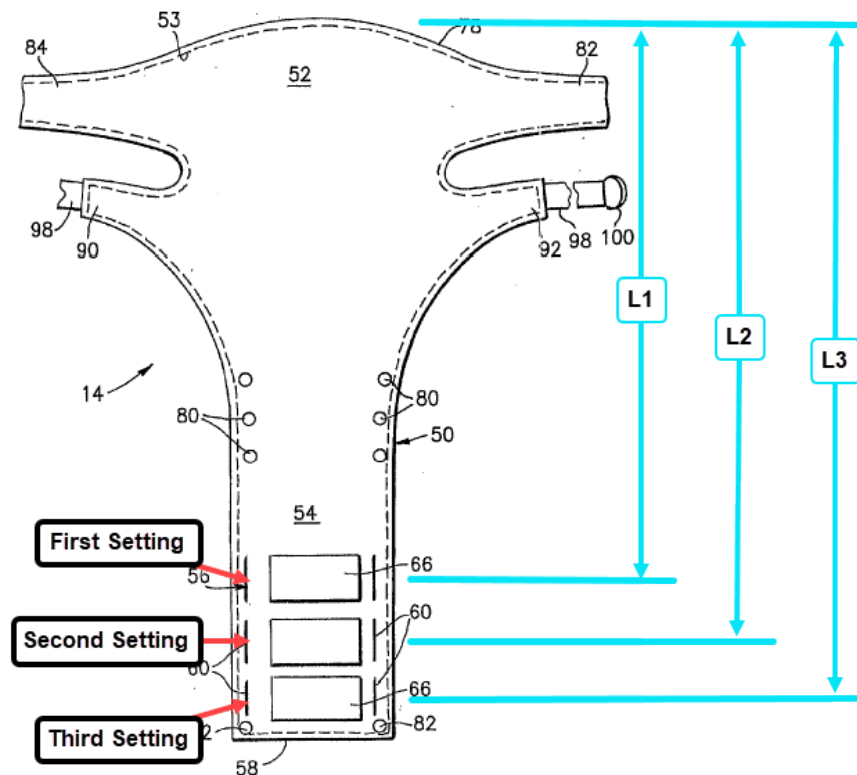
**5. Claim 5**

**a. Limitation [5pre]**

*See supra* limitation [1pre].

**b. Limitation [5a]**

As shown in the above figure, the first setting of Staten corresponds to a first length, which is shorter than a second length corresponding to a second setting and a third length corresponding to a third setting. Ex. 1003, Appx. A, limitation 5a. The purpose of providing different settings is to provide a carrier that is “securely adaptable to an infant size.” Ex. 1013, claim 4. Thus, a POSITA would appreciate that the smallest setting of the carrier of Staten (i.e., the first length) “configures the adjustable child carrier in an infant mode.” Ex. 1003, Appx. A, limitation 5a.

**FIG. 6 of Staten (annotated)****c. Limitation [5b]**

A POSITA would appreciate that a child in a height range of 20-24 inches would be an infant between 0 and 3 months of age. Ex. 1003, Appx. A, limitation 5b; *see also* Exs. 1010 & 1011. Accordingly, Staten limitation [5b]. *Id.*

**6. Claim 6****a. Limitation [6pre]**

*See supra* limitation [1pre].

**b. Limitation [6a]**

*See supra* limitation [1a].

**c. Limitation [6b]**

*See supra* limitation [1b].

**d. Limitation [6c]**

*See supra* limitation [1c].

**e. Limitation [6d]**

*See supra* limitation [1d].

**f. Limitation [6e]**

*See supra* limitation [1e].

**g. Limitation [6f]**

*See supra* limitation [1f].

**h. Limitation [6g]**

*See supra* limitation [1g].

**i. Limitation [6h]**

*See supra* limitation [1h].

**j. Limitation [6i]**

*See supra* limitation [1i].

**k. Limitation [6j]**

*See supra* limitation [1k].

**l. Limitation [6k]**

*See supra* limitation [1j].

**m. Limitation [6l]**

*See supra* limitation [1m].

**n. Limitation [6m]**

*See supra* limitation [1m].

**o. Limitation [6n]**

*See supra* limitation [1n].

**7. Claim 7**

**a. Limitation [7pre]**

*See supra* limitation [1pre].

**b. Limitation [7a]**

*See supra* limitations [2a] and [2b].

**c. Limitation [7b]**

*See supra* limitation [2b].

**d. Limitation [7c]**

*See supra* limitations [2b] and [2c].

**e. Limitation [7d]**

*See supra* limitation [2c].

**8. Claim 8**

**a. Limitation [8pre]**

*See supra* limitation [1pre].

**b. Limitation [8a]**

*See supra* limitation [3a].

**9. Claim 9**

**a. Limitation [9pre]**

*See supra* limitation [1pre].

**b. Limitation [9a]**

*See supra* limitation [4a].

**c. Limitation [9b]**

*See supra* limitation [4b]

**d. Limitation [9c]**

*See supra* limitation [4c].

**e. Limitation [9d]**

*See supra* limitation [4d].

**10. Claim 10**

**a. Limitation [10pre]**

*See supra* limitation [1pre].

**b. Limitation [10a]**

*See supra* limitation [5a].

**c. Limitation [10b]**

*See supra* limitation [5b].

**11. Claim 11**

**a. Limitation [11pre]**

*See supra* limitation [1pre].

**b. Limitation [11a]**

*See supra* limitation [1a].

**c. Limitation [11b]**

*See supra* limitation [1b].

**d. Limitation [11c]**

*See supra* limitation [1c].

**e. Limitation [11d]**

*See supra* limitation [1d].

**f. Limitation [11e]**

*See supra* limitation [1e].

**g. Limitation [11f]**

*See supra* limitation [1f].

**h. Limitation [11g]**

*See supra* limitation [1g].

**i. Limitation [11h]**

*See supra* limitation [1h].

**j. Limitation [11i]**

A POSITA would appreciate that the carrier of Staten can be used to implement limitation [11i] as illustrated in the below modifications to FIG. 9 of Staten. Ex. 1003, Appx. A, limitation 11i. In particular, the neck support can be folded in

accordance with known methods in the art with a reasonable expectation of success. *Id.* Staten discloses that the materials used to make the disclosed carrier can be, for example, leather, cotton, corduroy, or heavy-gauge nylon. Ex. 1013, p. 14. These exemplary materials make clear that both its shape and structure allow for the neck support to be folded. Ex. 1003, Appx. A, limitation 11i. Moreover, a POSITA would readily understand that the first and second neck support attachments are detachable and rotatable about a horizontal axis, such that they can be re-attached in their now-flipped orientation to hold the folded neck support in the folded-down position. *Id.* This folded-down position necessarily reduces the length of the body in relation to the upward neck supporting position. *Id.* Additionally, using the carrier of Staten in a folded-down configuration would have been obvious to a POSITA because folding neck supports were known and commonplace in the art before the effective filing date of the '055 Patent. Ex. 1003, ¶¶ 109-119.

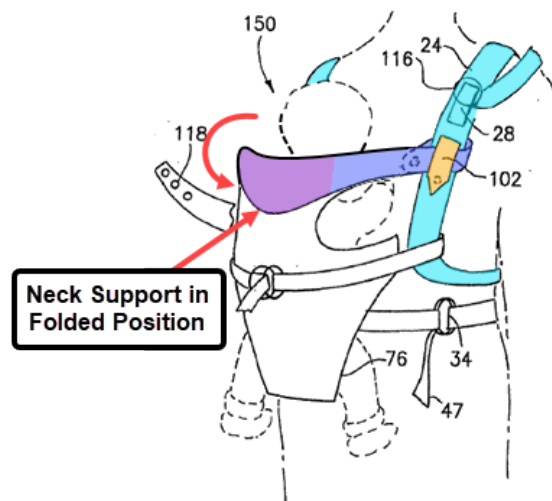


**FIG. 9 of Staten (modified and annotated)**

**k. Limitation [11j]**

*See supra* limitation [1i].

**l. Limitation [11k]**

The below figure illustrates that Staten discloses limitation [11k]. Ex. 1003, Appx. A, limitation 11k.

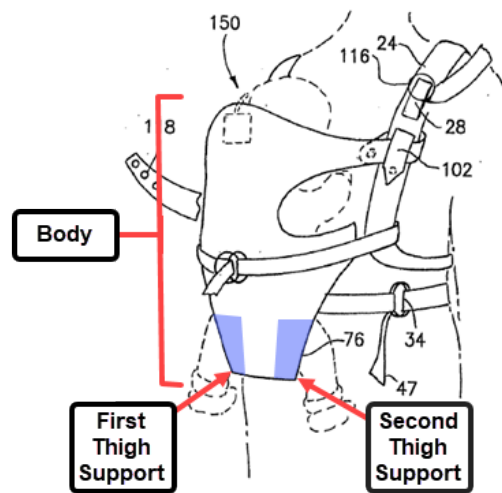


**FIG. 9 of Staten (annotated)**

**m. Limitation [11l]**

*See supra* limitation [1j].

**n. Limitation [11m]**

*See supra* limitation [1k].

**o. Limitation [11n]**

*See supra* limitation [1m].

**p. Limitation [11o]**

*See supra* limitation [1n].

**12. Claim 12**

**a. Limitation [12pre]**

*See supra* limitation [1pre].

**b. Limitation [12a]**

*See supra* limitation [3a].

**13. Claim 13**

**a. Limitation [13pre]**

*See supra* limitation [1a].

**b. Limitation [13a]**

*See supra* limitation [4a].

**c. Limitation [13b]**

*See supra* limitation [4b].

**d. Limitation [13c]**

*See supra* limitation [4c].

**e. Limitation [13d]**

*See supra* limitation [4d].

**14. Claim 14**

**a. Limitation [14pre]**

*See supra* limitation [1pre].

**b. Limitation [14a]**

*See supra* limitation [2a].

**c. Limitation [14b]**

*See supra* limitation [2b].

**d. Limitation [14c]**

*See supra* limitation [2c].

**15. Claim 15**

**a. Limitation [15pre]**

*See supra* limitation [1a].

**b. Limitation [15a]**

The carrier of Staten includes limitation [15a]. Ex. 1003, Appx. A, limitation 15a. Staten discloses that the design requirements of a carrier include “improved ergonomics conducive to the desired development of the infant.” Ex. 1013, p. 2. While not expressly discussed in Staten, the referenced improved ergonomics were well known to a POSITA and include the spread squat position. Ex. 1003, Appx. A, limitation 15a. The International Hip Dysplasia Institute advised, well before the effective filing date of the ’055 Patent, that “[t]he healthiest position for the hips is for the hips to fall or spread (naturally) apart to the side, with the thighs supported and the hips and knees bent,” also known as “the jockey position, straddle position, frog position, spread-squat position or human position.” Ex. 1012, p. 1.

Accordingly, in view of the disclosure of Staten regarding the need to provide improved ergonomics conducive to the desired development of the infant, as well as the knowledge of a POSITA regarding the spread squat position, a POSITA would understand that the seat of the carrier of Staten is or beneficially should be configured to support the child in a spread squat position. Ex. 1003, Appx. A, limitation 15a.

Additionally even if this limitation were not taught by Staten itself, it would have been obvious before the effective filing date of the '055 Patent, in view of the knowledge of a POSITA reflected in the teachings of Exhibit 1012 and Lundh. A POSITA would be aware of Lundh, which also teaches the advantages of carrying a child in a “frog-position” (i.e., the spread-squat position). Ex. 1008, ¶ [0016]; *see also* Ex. 1001, 7:31-36. In view of at least Lundh and the knowledge of a POSITA, it would have been obvious to incorporate into the carrier of Staten sufficient fabric around the child’s legs configured to allow for more support of the thighs (e.g., as in Lundh and as depicted by the Hip Dysplasia Institute), keeping them substantially parallel to the ground in the claimed spread-squat position. Ex. 1003, Appx. A, limitation 15a.

**16. Claim 19**

**a. Limitation [19pre]**

*See supra* limitation [1pre].

**b. Limitation [19a]**

*See supra* limitation [15a].

**17. Claim 20**

**a. Limitation [20pre]**

*See supra* limitation [1pre].

**b. Limitation [20a]**

*See supra* limitation [15a].

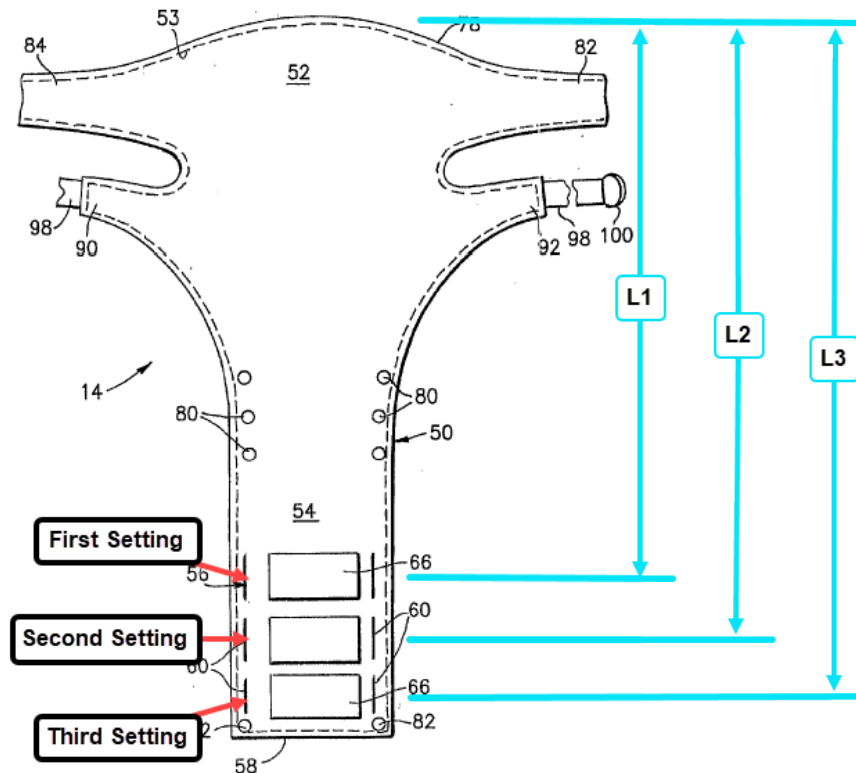
**18. Claim 21**

**a. Limitation [21pre]**

*See supra* limitation [1pre].

**b. Limitation [21a]**

As discussed *supra* at limitations [5a] and [5b], the carrier of Staten provides different settings so that the carrier is “securely adaptable to an infant size.” Ex. 1013, claim 4. A POSITA would appreciate that the largest setting of the carrier of Staten (i.e., the third length) corresponds to limitation [21a]. Ex. 1003, Appx. A, limitation 21a.

**FIG. 6 of Staten (annotated)**

A POSITA would appreciate that a child of at least 28 inches in height would be approximately 9-10 months of age. Ex. 1003, Appx. A, limitation 21a; *see also* Exs. 1010 & 1011. Staten would be understood to be directed to carrying children of this age and height. Ex. 1003, Appx. A, limitation 21a. To the extent Patent Owner may argue that Staten does not expressly disclose adjusting the disclosed carrier to carry a toddler, a toddler mode would have been obvious to a POSITA because carriers adaptable through the toddler stage were well known in the art and it would have been well within the abilities of a POSITA to configure a

carrier in a toddler mode. *Id.* Additionally, Staten shows varying height settings, and a POSITA would understand that the third setting could be designed to accommodate a child of at least 28 inches in height. *Id.* Accordingly, the carrier of Staten would be configured to carry a child with a height of 28 inches or more when the length of the body is adjusted to the third length by positioning the tether at the third setting. *Id.*

19. **Claim 22**

a. **Limitation [22pre]**

*See supra* limitation [1pre].

b. **Limitation [22a]**

*See supra* limitation [21a].

20. **Claim 23**

a. **Limitation [23pre]**

*See supra* limitation [1pre].

b. **Limitation [23a]**

*See supra* limitations [5a] and [5b].

21. **Claim 24**

a. **Limitation [24pre]**

*See supra* limitation [1pre].

b. **Limitation [24a]**

*See supra* limitation [21a].

**22. Claim 28**

**a. Limitation [28pre]**

*See supra* limitation [1pre].

**b. Limitation [28a]**

Staten discloses limitation [28a]. Ex. 1003, Appx. A, limitation 28a. As discussed at *supra* limitation [1j] and illustrated in the below figure, the tether of Staten can be positioned to a first, second, or third setting. Ex. 1003, Appx. A, limitation 1j. Each of these settings is visible to the user, for example, because the position of the tether can be easily viewed by the user and Staten teaches a wearer's use and adjustment of these settings. Ex. 1003, Appx. A, limitation 28a.

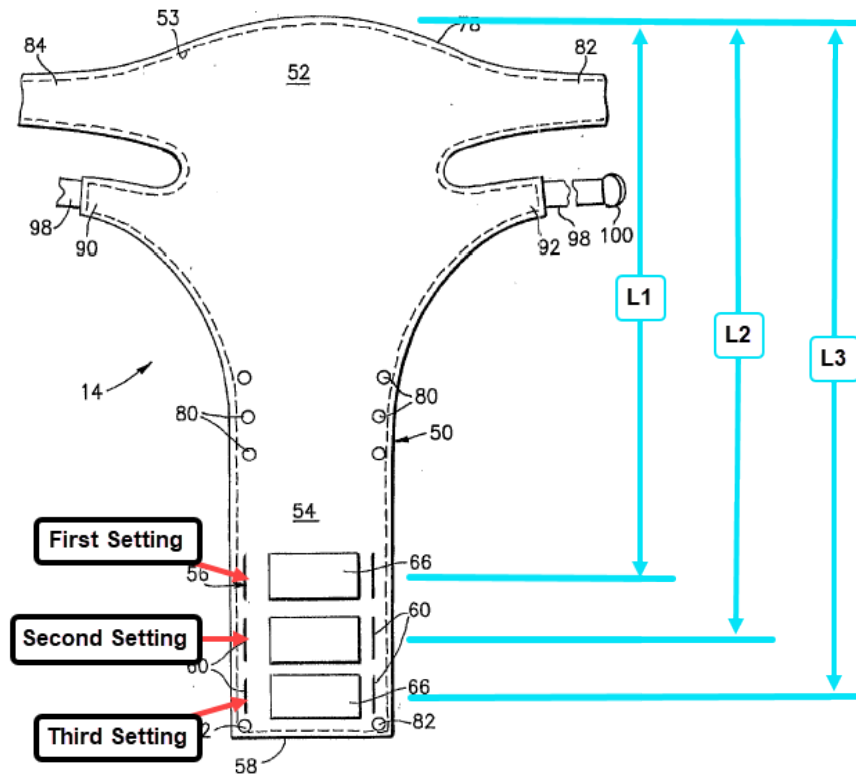


**FIG. 6 of Staten (annotated)**

### 23. Claim 29

**a. Limitation [29pre]**

*See supra* limitation [1pre].

### b. Limitation [29a]

*See supra* limitation [28a].

## 24. Claim 30

### a. Limitation [30pre]

*See supra* limitation [1pre].

**b. Limitation [30a]**

*See supra* limitation [28a].

**C. Ground 3: The Challenged Claims are anticipated and obvious over Stomper-Rosam, alone or in view of knowledge of a POSITA and/or Gray.**

The Challenged Claims are anticipated and obvious over Stomper-Rosam, alone or in view of the knowledge of a POSITA, Lundh, and/or Gray. *See* Ex. 1003, Appx. C. Petitioner demonstrates anticipation and obviousness of the Challenged Claims by adopting the claim mapping set forth *supra* at pages i-vii and in the declaration of David Smith. *See* Ex. 1003, ¶ 31. Petitioner cites and incorporates Mr. Smith's more fulsome analysis of the Challenged Claims found at Appendix F of Ex. 1003, portions of which are excerpted and summarized below.

**1. Claim 1**

**a. Limitation [1pre]**

Stomper-Rosam discloses an adjustable child carrier for supporting a child by a user, as illustrated in the below figure. Ex. 1003, Appx. C, limitation 1pre. The carrier is depicted supporting a child by a user, and the carrier is adjustable as further discussed herein. *Id.*

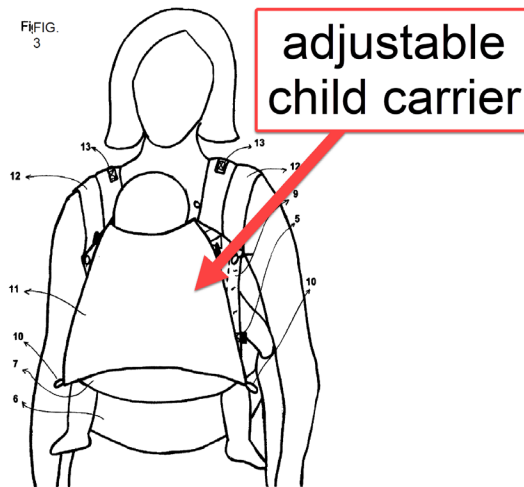


**FIG. 3 of Stomper-Rosam (annotated)**

**b. Limitation [1a]**

The carrier of Stomper-Rosam includes a body configured to support the child, as illustrated in the below figure. Ex. 1003, Appx. C, limitation 1a. The carrier of Stomper-Rosam includes a back panel (e.g., 7 of FIG. 1), which forms a body configured to support the child. *Id.*; *see also* Ex. 1015, ¶ [0024].

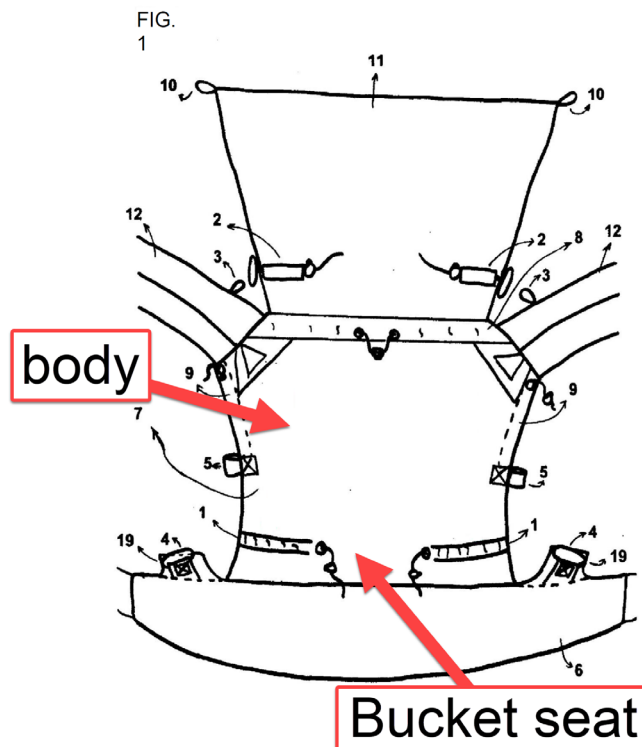


**FIG. 1 of Stomper-Rosam (annotated)**

**c. Limitation [1b]**

The above figure also illustrates limitation [1b]. Ex. 1003, Appx. C, limitation 1b. Specifically, the back panel forms a pouch (i.e., a bucket seat) that supports the child's legs in a "squat-spread posture," and the pouch may be more pronounced when a bridge reduction feature is used. Ex. 1015, ¶ [0030].

**d. Limitation [1c]**

The carrier of Stomper-Rosam includes limitation [1c] as illustrated in the below figure. Ex. 1003, Appx. C, limitation 1c. Specifically, Stomper-Rosam discloses "a trapezoidal headrest 11" (i.e., neck support) that is "raised and secured

using two loops 10 attached to the left and right outermost ends of the headrest 11.” Ex. 1015, ¶ [0034].

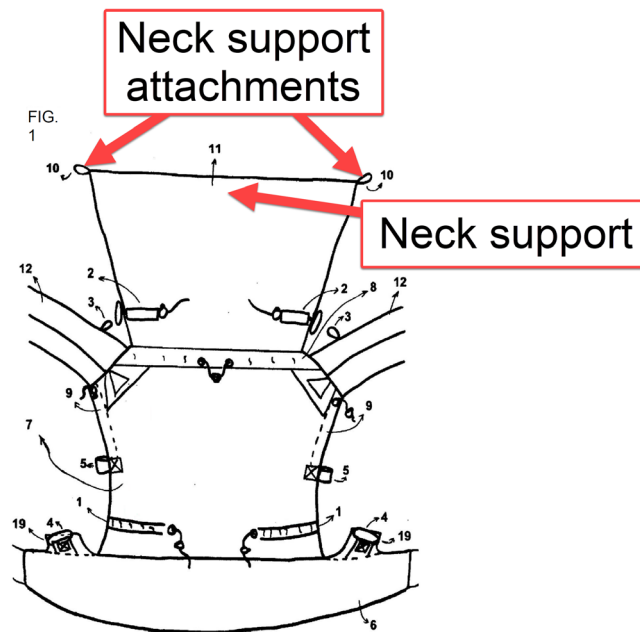


**FIG. 1 of Stomper-Rosam (annotated)**

**e. Limitation [1d]**

Stomper-Rosam discloses limitation [1d] as illustrated in the below figure.

Ex. 1003, Appx. C, limitation 1d; *see also* Ex. 1015, ¶ [0022].

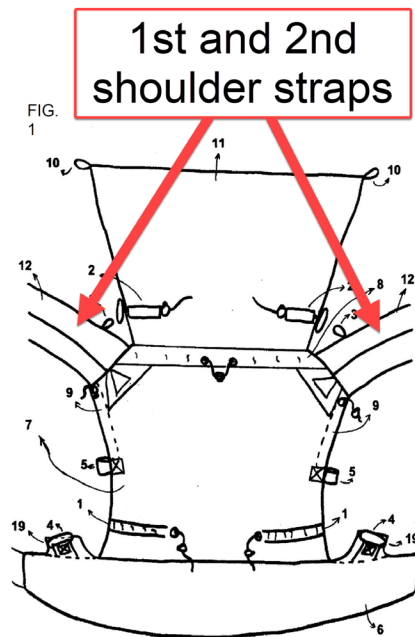


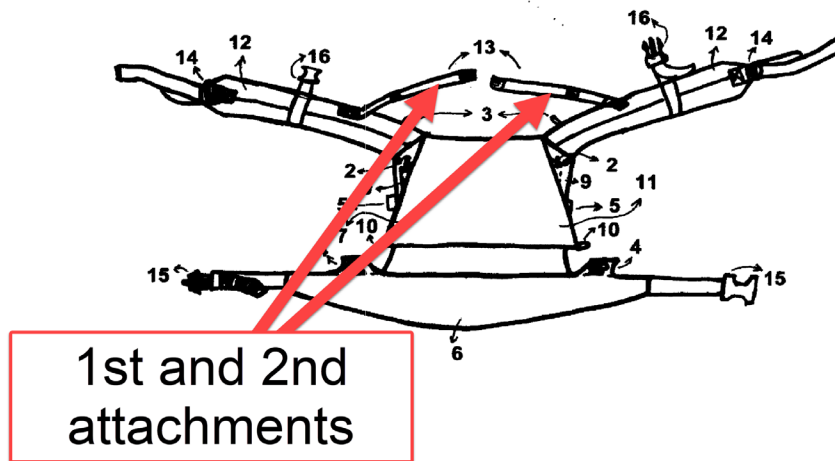
**FIG. 1 of Stomper-Rosam (annotated)**

**f. Limitation [1e]**

Stomper-Rosam discloses limitation [1c] for the same reasons discussed at *supra* limitation [1d]. Ex. 1003, Appx. C, limitation 1e.

**g. Limitation [1f]**

Stomper-Rosam discloses limitation [1f]. Ex. 1003, Appx. C., limitation 1f. Specifically, the loops at the outermost ends of the headrest (i.e., neck support) attach to straps (e.g., 13 of FIG. 2), which attach to the shoulder straps. Ex. 1015, ¶ [0034].

FIG.  
2

#### h. Limitation [1g]

Stomper-Rosam discloses limitation [1g] for the same reasons discussed at *supra* limitation [1g]. Ex. 1003, Appx. C, limitation 1g.

#### i. Limitation [1h]

Stomper-Rosam discloses limitation [1h] as illustrated in the below figure. Ex. 1003, Appx. C, limitation 1h. Namely, Stomper-Rosam discloses that the neck support discussed at *supra* limitation [1c] is “raised and secured using two loops 10 attached to the left and right outermost ends of the headrest 11.” Ex. 1015, ¶ [0034]. When connected to the shoulder straps and configured in the upward position, neck support is positioned behind the child’s head and neck for support. Ex. 1003, Appx. C, limitation 1h.

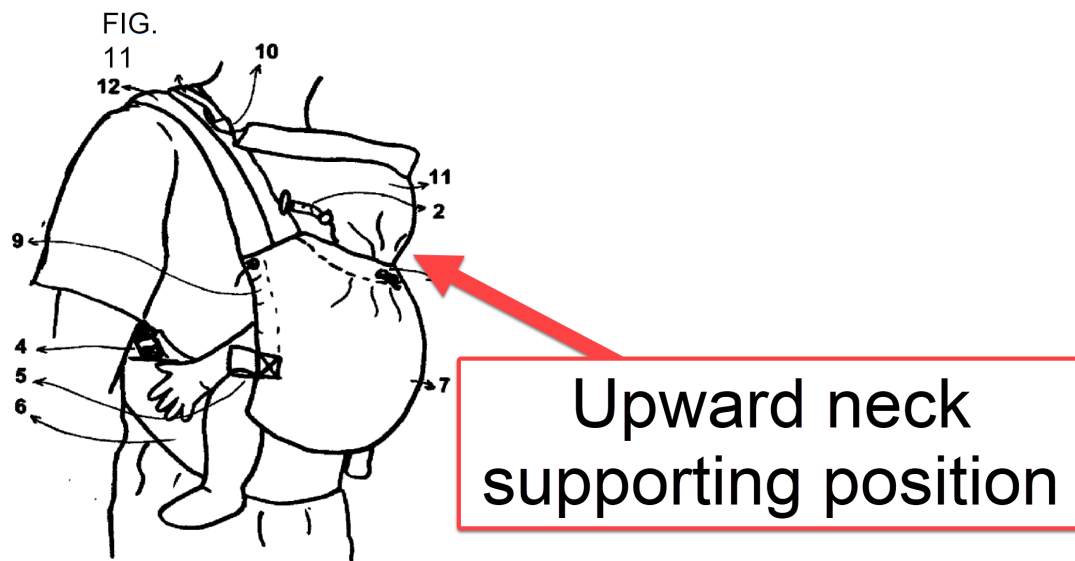


**FIG. 11 of Stomper-Rosam (annotated)**

**j. Limitation [1i]**

The body of the carrier of Stomper-Rosam forms “a first thigh support and a second thigh support,” as illustrated in the below figure. Ex. 1003, Appx. C, limitation 1i. Specifically, the seat bridge of the seat is adjustable to lie “exactly between the knees of smaller children,” and thus support a squad-spread posture by extending seat bridge “from knee pit to knee pit.” Ex. 1015, ¶ [0029]. Accordingly, the body of the carrier supports each of the child’s thighs. Ex. 1003, Appx. C, limitation 1i.

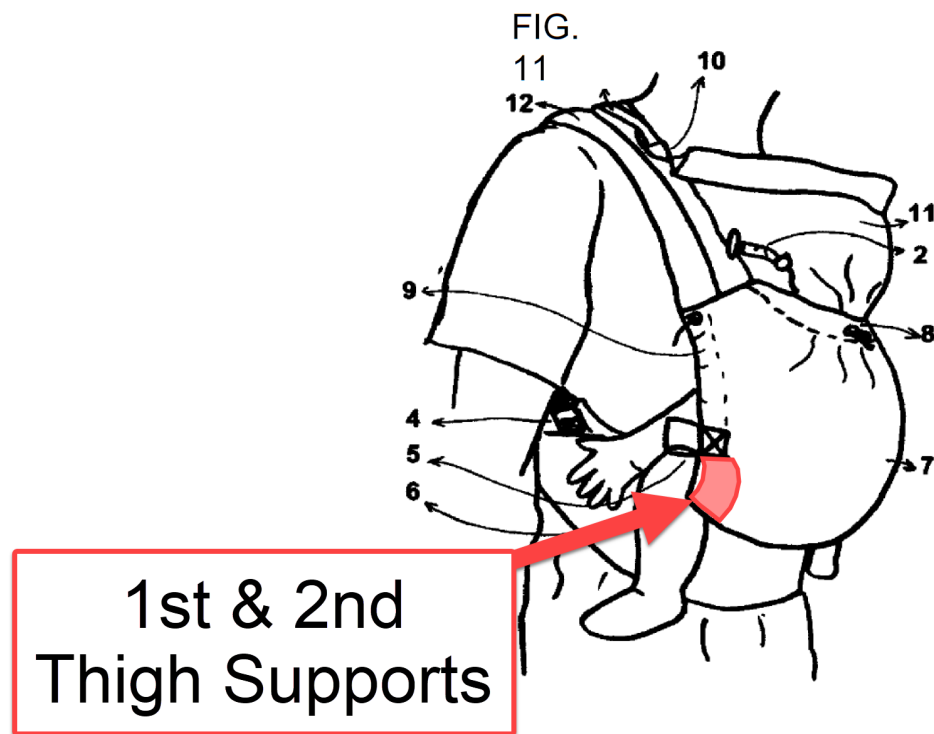
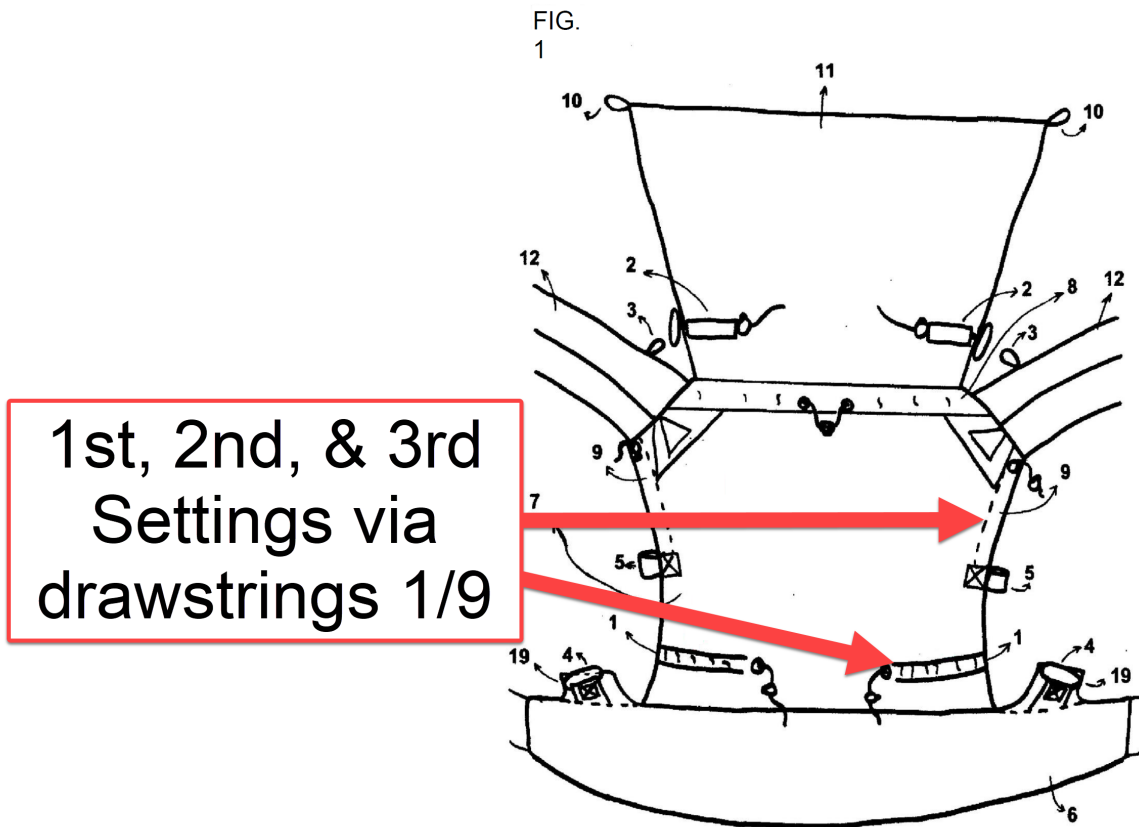


**FIG. 11 of Stomper-Rosam (annotated)**

**k. Limitation [1j]**

The carrier of Stomper-Rosam provides limitation [1j] using the bridge reduction feature (e.g., 1 of FIG. 11) and/or the drawstrings on either side of the upper area of the back panel (e.g., 9 of FIG. 11). Ex. 1003, Appx. C, limitation [1j]. The bridge reduction feature can use two drawstrings in the lower part of the back panel, which are disposed in channels and adjustable to both adjust the seat bridge and shorten the back panel vertically. Ex. 1015, ¶¶ [0028]-[0030]. Further adjustments can be made in the upper area of the back panel using the drawstrings 9, for

example. *Id.* at ¶ [0031]. While the illustrated bridge reduction feature and drawstrings provide continuous adjustment, Stomper-Rosam expressly discloses that other kinds of fastening systems can also be used, including discretely adjustable fasteners such as hooks or buttons. *Id.*



### I. Limitation [1k]

As discussed at *supra* Grounds 1 and 2, this feature is likely indefinite. Ex. 1003, Appx. C, limitation 1k. To the extent a meaning can be ascribed to limitation [1k] this feature is disclosed in Stomper-Rosam either under a Section 112(f) or P&O construction. *Id.* Alternatively, it would be obvious to a POSITA to modify

the carrier of Stomper-Rosam to include limitation [1k] in view of the knowledge of a POSITA or in view of Gray<sup>10</sup>. *Id.*

First, the figure below illustrates that Stomper-Rosam discloses thigh support adjusters. Ex. 1003, Appx. C, limitation 1k. As discussed at *supra* limitation [1j], the carrier of Stomper-Rosam includes a “bridge reduction” feature in the lower part of the back panel and/or drawstrings on either side of the upper area of the back panel. Ex. 1015, ¶¶ [0028]-[0031]. The bridge reduction feature and/or the drawstrings are thigh support adjusters, under either a P&O or a 112(f) interpretation. Ex. 1003, Appx. C, limitation 1k. While Patent Owner may argue that bridge reduction and/or drawstrings are not “coupled to the first thigh support *and* the second thigh support,” no such feature or structure connected to both thigh supports is disclosed in the ’055 Patent. *Id.* Put another way, the *pairs* of adjusters in Stomper-Rosam are an equivalent disclosure to the *pair* of base width adjusters described in the ’055 Patent specification. Ex. 1003, ¶ 50-53 & 66-69. When limitation [1k] is limited to this corresponding structure (i.e., comprising two components that fulfill the claimed function), it is clear that these features are thigh support adjusters, as in

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<sup>10</sup> As discussed at *supra* Grounds 1 and 2, Lundh also discloses limitation [1k]. A POSITA would appreciate that any of the primary references discussed herein can be modified to include the “at least one thigh support adjuster” of either Lundh or Gray. For example, the common drawstring of Lundh could also be combined with the carrier of Stomper-Rosam, similar to the pull tab of Gray. *See* Ex. 1003, ¶ 121.

claim 1 of the '055 Patent. Ex. 1003, Appx. C, limitation 1k. These features likewise meet this limitation under a P&O construction. *Id.*

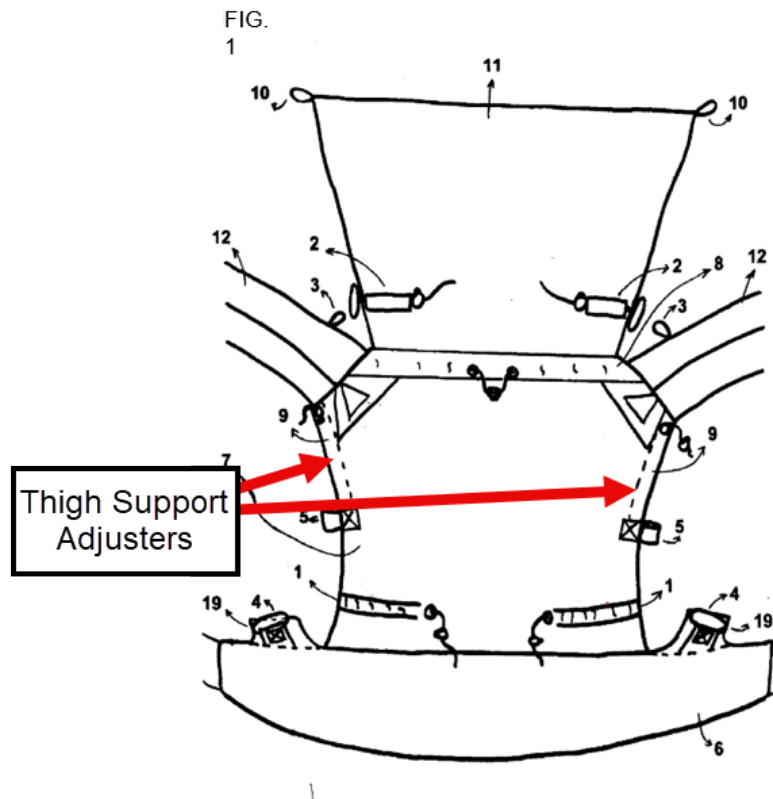


**FIG. 1 of Stomper-Rosam (annotated)**

Second, even if limitation [1k] were not disclosed in Stomper-Rosam, this feature is disclosed in Gray, and it would be obvious for a POSITA to combine the “at least one thigh support adjuster” of Gray with the carrier of Stomper-Rosam. Ex. 1003, Appx. C, limitation 1k. The pouch system of Gray includes retractable drawstrings (e.g., 400 of FIG. 4) disposed in channels. Ex. 1009, ¶ [0026]. The drawstrings may be coupled to a single pull tab (e.g., 402 of FIG. 4), and the drawstrings can be fastened in different locations using a self-adhesive material, such as

Velcro. *Id.* The drawstrings of Gray adjust the thigh support provided by the carrier (Ex. 1003, Appx. C, limitation 1k), and are “coupled to the first thigh support and the second thigh support.” It would be obvious to a POSITA to combine the thigh support adjuster of Gray with the carrier of Stomper-Rosam (e.g., by providing a pull tab as in Gray for adjusting the bridge reduction of Stomper-Rosam), and a POSITA would be motivated to so modify the carrier of Stomper-Rosam to provide a single adjuster to simultaneously adjust both thigh supports, thereby making adjustment quicker, symmetrical, and compatible with one-handed use. Ex. 1003, Appx. C, limitation 1k.

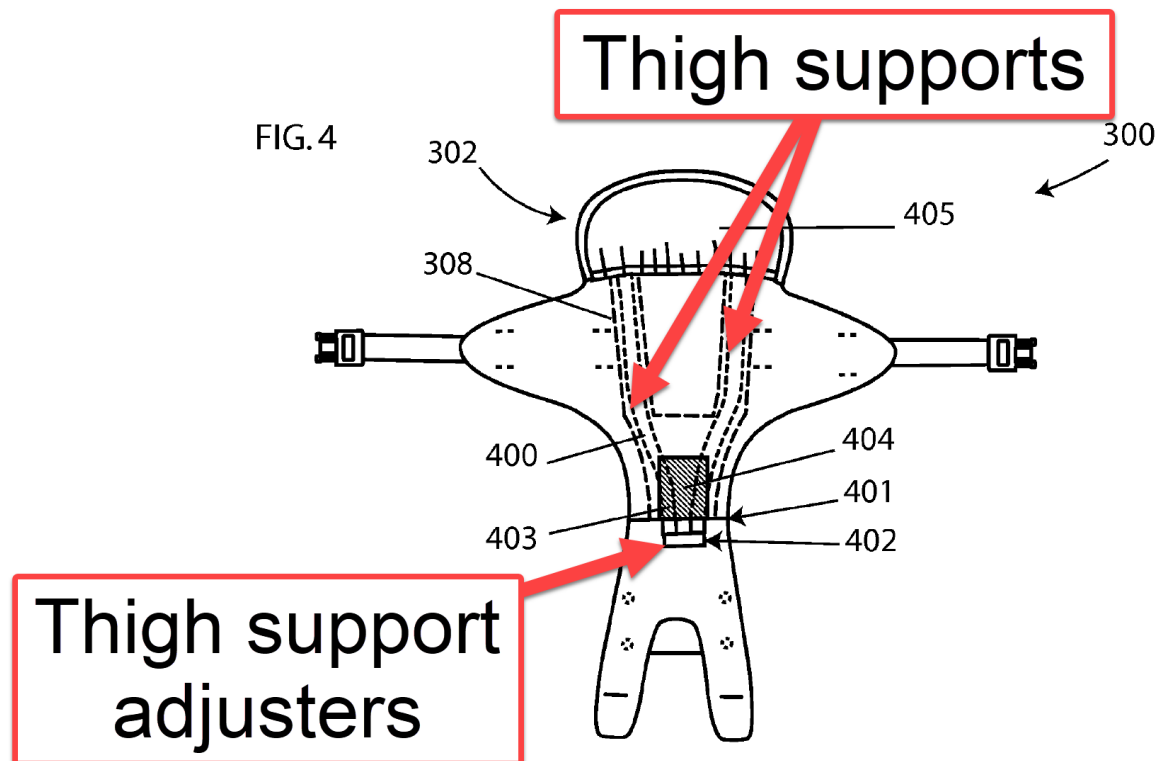


FIG. 4 of Gray (annotated)

**m. Limitation [1m]**

As discussed at *supra* limitation [1j], the length of the body can be adjusted using the bridge reduction feature in the lower part of the back panel and/or the drawstrings in the upper area of the back panel, which can be positioned to first, second, or third settings. Ex. 1015, ¶¶ [0028]-[0031]; *see also* Ex. 1003, Appx. C, limitation 1m. The length adjustment is illustrated in the below figure. Ex. 1003, Appx. C, limitation 1m.

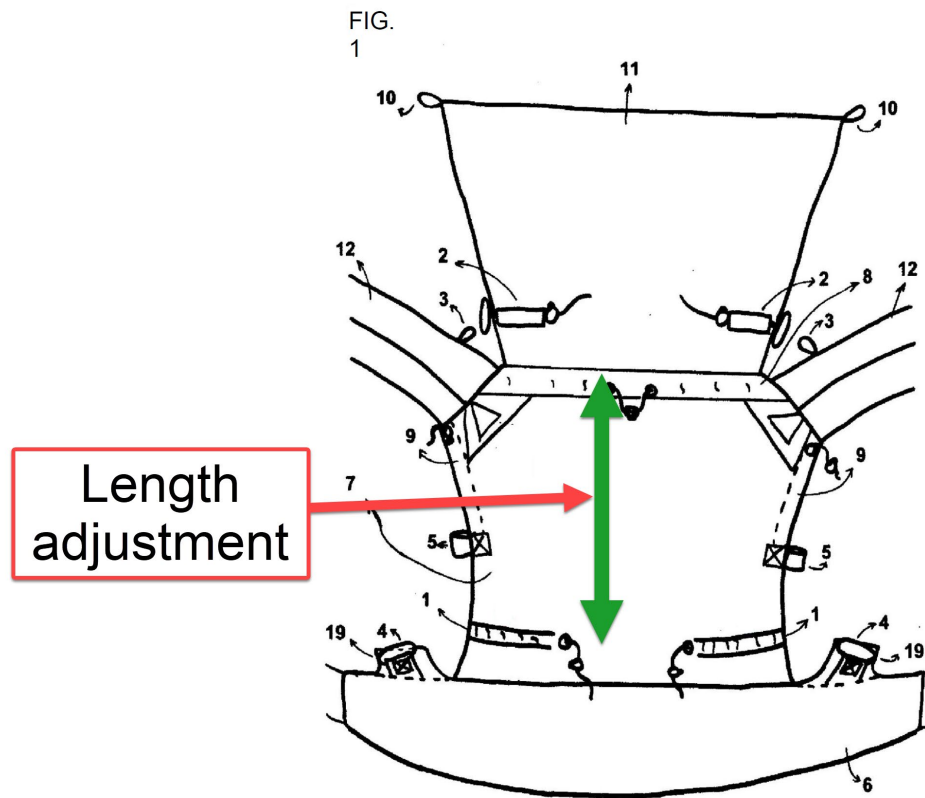


**FIG. 1 of Stomper-Rosam (annotated)**

**n. Limitation [1n]**

As illustrated in the above figure, the length that is adjusted using the thigh support adjusters of Stomper-Rosam can be defined as recited in limitation [1n].

Ex. 1003, Appx. C, limitation [1n].

**2. Claim 2**

**a. Limitation [2pre]**

*See supra* limitation [1pre].

**b. Limitation [2a]**

As discussed at *supra* limitations [1j] and [1k], the thigh support adjusters of Stomper-Rosam can adjust the length of the body according to different settings. Ex. 1003, Appx. C, limitation [2a]. A first length corresponding to the first setting may correspond, for example, to fully tightening the thigh support adjusters. *Id.*

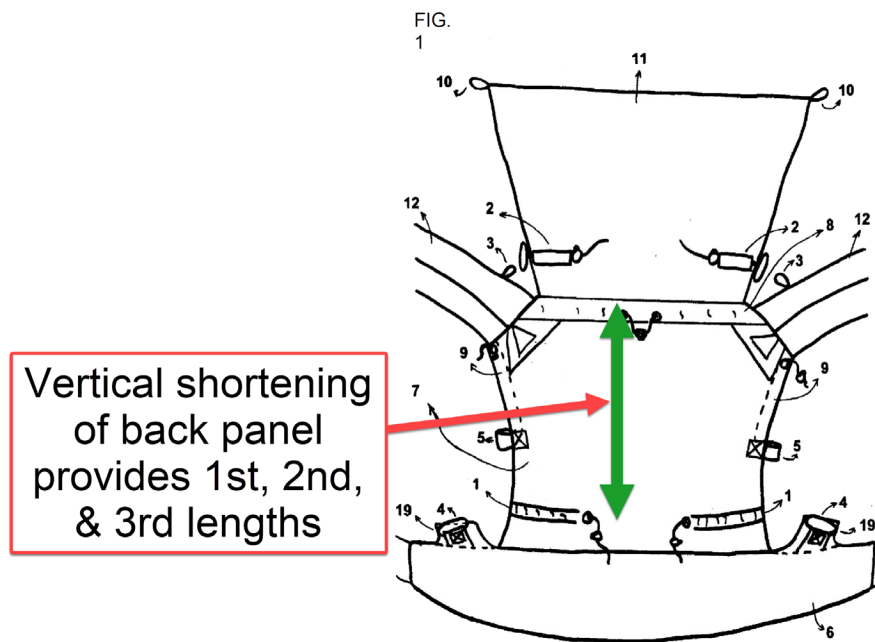


**FIG. 1 of Stomper-Rosam (annotated)**

**c. Limitation [2b]**

Stomper-Rosam discloses limitation [2b] for the same reasons discussed at *supra* limitations [1j], [1k], and [2a]. Ex. 1003, Appx. C, limitation [2b]. A second length corresponding to the second setting may correspond to, for example, partially tightening the thigh support adjusters. *Id.*

**d. Limitation [2c]**

Stomper-Rosam discloses limitation [2c] for the same reasons discussed at *supra* limitations [1j]-[1k] and [2a]-[2b]. Ex. 1003, Appx. C, limitation [2c]. A third length corresponding to the third setting may correspond to, for example, fully loosening the thigh support adjusters. *Id.*

**3. Claim 3**

**a. Limitation [3pre]**

*See supra* limitation [1pre].

**b. Limitation [3a]**

Stomper-Rosam discloses limitation [3a]. Ex. 1003, Appx. C, limitation 3a. Stomper-Rosam describes that the bridge reduction feature (i.e., thigh support adjusters) can be used to form a “more pronounced pouch” and support a squat-spread posture. Ex. 1015, ¶ [0030].

Even if this feature were not disclosed in Stomper-Rosam, Gray also discloses this feature, and it would be obvious to a POSITA to combine this feature with the carrier of Stomper-Rosam. Ex. 1003, Appx. C, limitation 3a. The draw-strings of Gray discussed at *supra* limitation [1k] can be used to “provide more or less depth and width for the infant.” Ex. 1009, ¶ [0006]. Moreover, as discussed above, it would be obvious to a POSITA to combine the thigh support adjuster of Gray with the carrier of Stomper-Rosam (e.g., by providing a pull tab as in Gray for adjusting the bridge reduction of Stomper-Rosam), and a POSITA would be

motivated to so modify the carrier of Stomper-Rosam to provide a single adjuster to simultaneously and symmetrically adjust both thigh supports, thereby making adjustment quicker and compatible with one-handed use. Ex. 1003, Appx. C, limitation 1k.

**4. Claim 4**

**a. Limitation [4pre]**

*See supra* limitation [1pre].

**b. Limitation [4a]**

Stomper-Rosam discloses limitation [4a] as illustrated in the below figure. Ex. 1003, Appx. C, limitation 4a. As discussed at *supra* limitation [1j], the bridge reduction feature can use two drawstrings in the lower part of the back panel to adjust the seat bridge and shorten the back panel vertically. Ex. 1015, ¶¶ [0028]-[0030]. Further adjustments can be made in the upper area of the back panel using the drawstrings 9, for example. *Id.* at ¶ [0031]. The first setting defined by these adjustable features is thus vertically displaced from the second setting. Ex. 1003, Appx. C, limitation 4a.

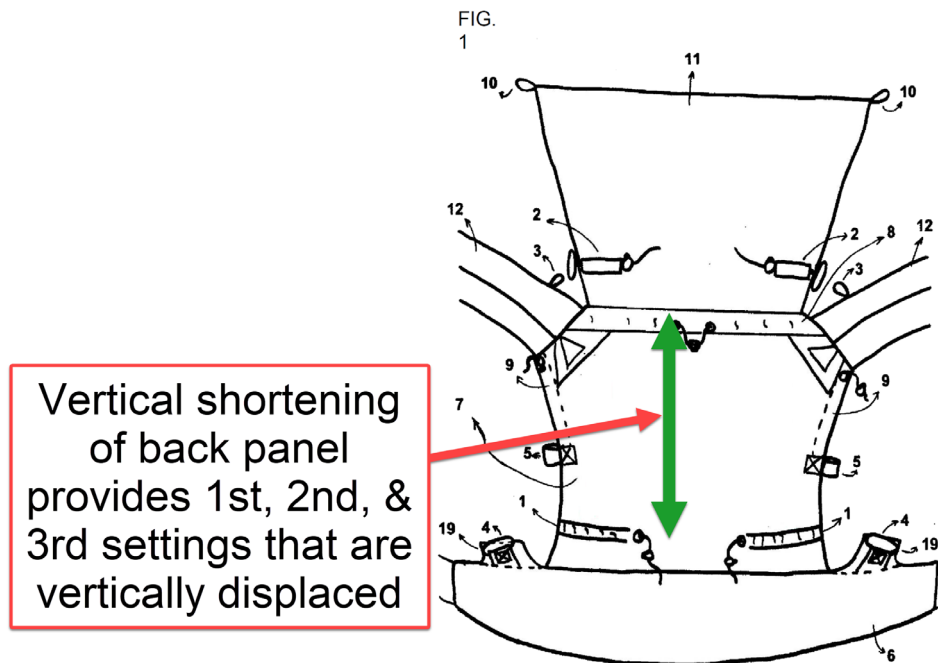


**FIG. 1 of Stomper-Rosam (annotated)**  
**c. Limitation [4b]**

Stomper-Rosam discloses limitation [4b] for the reasons discussed at *supra* limitation [4a] and as illustrated in the above figure. Ex. 1003, Appx. C, limitation [4b]. The adjustable features illustrated above define a second setting that is vertically displaced from the third setting. *Id.*

**d. Limitation [4c]**

Stomper-Rosam discloses limitation [4c] for the reasons discussed at *supra* limitations [4a] and [4b] and as illustrated in the above figure. Ex. 1003, Appx. C, limitation 4c. The adjustable features illustrated above further define a third setting that is vertically displaced from the first setting. *Id.*

**e. Limitation [4d]**

Stomper-Rosam discloses limitation [4d] for the reasons discussed at *supra* limitations [4a]-[4c] and as illustrated in the above figure. Ex. 1003, Appx. C, limitation 4d.

**5. Claim 5**

**a. Limitation [5pre]**

*See supra* limitation [1pre].

**b. Limitation [5a]**

Stomper-Rosam discloses limitation [5a]. Ex. 1003, Appx. C, limitation 5a. In particular, Stomper-Rosam describes that the disclosed carrying device is “adjustable to the respective developmental stage and size of *a baby or toddler* being carried.” Ex. 1015, Abstract (emphasis added). Moreover, in discussing problems addressed by the disclosed carrier, Stomper-Rosam describes the importance of a “squat-spread posture” for “small infants up to 7 months.” Ex. 1015, ¶ [0004]. A POSITA would appreciate that, when the thigh support adjusters discussed at *supra* limitations [1j] and [1k] are adjusted to the first setting corresponding to the first length, the carrier is in an infant mode for carrying a small infant. Ex. 1003, Appx. C, limitation 5a.

**c. Limitation [5b]**

A POSITA would appreciate that a child in a height range of 20-24 inches would be an infant between 0 and 3 months of age. Ex. 1003, Appx. C, limitation 5b; *see also* Exs. 1010 & 1011. Accordingly, Stomper-Rosam discloses limitation [5b]. *Id.*

**6. Claim 6**

**a. Limitation [6pre]**

*See supra* limitation [1pre].

**b. Limitation [6a]**

*See supra* limitation [1a].

**c. Limitation [6b]**

*See supra* limitation [1b].

**d. Limitation [6c]**

*See supra* limitation [1c].

**e. Limitation [6d]**

*See supra* limitation [1d].

**f. Limitation [6e]**

*See supra* limitation [1e].

**g. Limitation [6f]**

*See supra* limitation [1f].

**h. Limitation [6g]**

*See supra* limitation [1g].

**i. Limitation [6h]**

*See supra* limitation [1h].

**j. Limitation [6i]**

*See supra* limitation [1i].

**k. Limitation [6j]**

*See supra* limitation [1k].

**l. Limitation [6k]**

*See supra* limitation [1j].

**m. Limitation [6l]**

*See supra* limitation [1m].

**n. Limitation [6m]**

*See supra* limitation [1m].

**o. Limitation [6n]**

*See supra* limitation [1n].

**7. Claim 7**

**a. Limitation [7pre]**

*See supra* limitation [1pre].

**b. Limitation [7a]**

*See supra* limitations [2a] and [2b].

**c. Limitation [7b]**

*See supra* limitation [2b].

**d. Limitation [7c]**

*See supra* limitations [2b] and [2c].

**e. Limitation [7d]**

*See supra* limitation [2c].

**8. Claim 8**

**a. Limitation [8pre]**

*See supra* limitation [1pre].

**b. Limitation [8a]**

*See supra* limitation [3a].

**9. Claim 9**

**a. Limitation [9pre]**

*See supra* limitation [1pre].

**b. Limitation [9a]**

*See supra* limitation [4a].

**c. Limitation [9b]**

*See supra* limitation [4b]

**d. Limitation [9c]**

*See supra* limitation [4c].

**e. Limitation [9d]**

*See supra* limitation [4d].

**10. Claim 10**

**a. Limitation [10pre]**

*See supra* limitation [1pre].

**b. Limitation [10a]**

*See supra* limitation [5a].

**c. Limitation [10b]**

*See supra* limitation [5b].

**11. Claim 11**

**a. Limitation [11pre]**

*See supra* limitation [1pre].

**b. Limitation [11a]**

*See supra* limitation [1a].

**c. Limitation [11b]**

*See supra* limitation [1b].

**d. Limitation [11c]**

*See supra* limitation [1c].

**e. Limitation [11d]**

*See supra* limitation [1d].

**f. Limitation [11e]**

*See supra* limitation [1e].

**g. Limitation [11f]**

*See supra* limitation [1f].

**h. Limitation [11g]**

*See supra* limitation [1g].

**i. Limitation [11h]**

*See supra* limitation [1h].

**j. Limitation [11i]**

Stomper-Rosam discloses limitation [11i] as illustrated in the below figure. Ex. 1003, Appx. C, limitation 11i. Specifically the illustrated neck support is depicted in a hanging-down position such that the neck support is folded down and away, and the body is thereby shortened. *Id.*; *see also* Ex. 1015, FIG. 2 & corresponding description at p. 3 (“Overall view of the carrier with the headrest hanging down”).

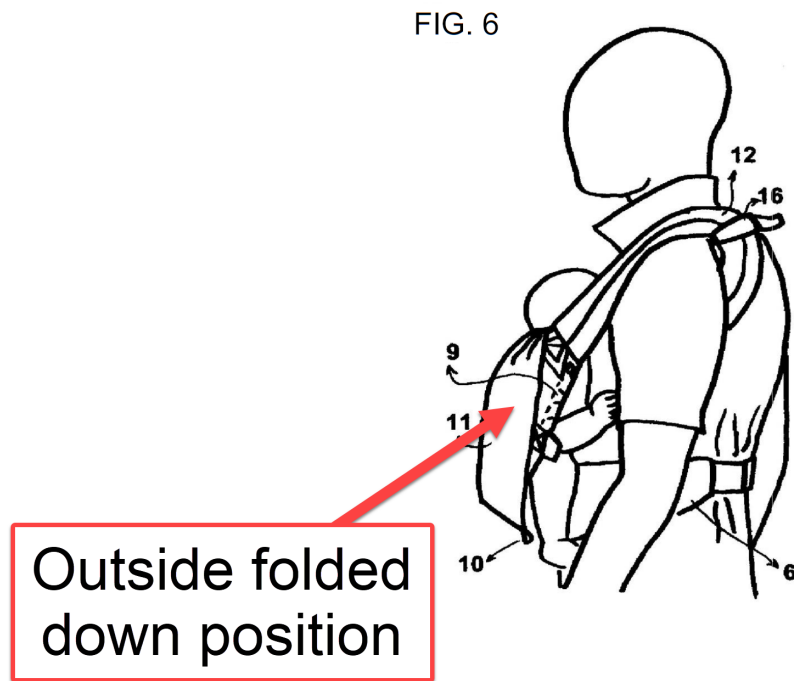


**FIG. 6 of Stomper-Rosam (annotated)**

**k. Limitation [11j]**

*See supra* limitation [1i].

**l. Limitation [11k]**

Stomper-Rosam discloses limitation [11k] as illustrated in the below figure.

Ex. 1003, Appx. C, limitation 11k.

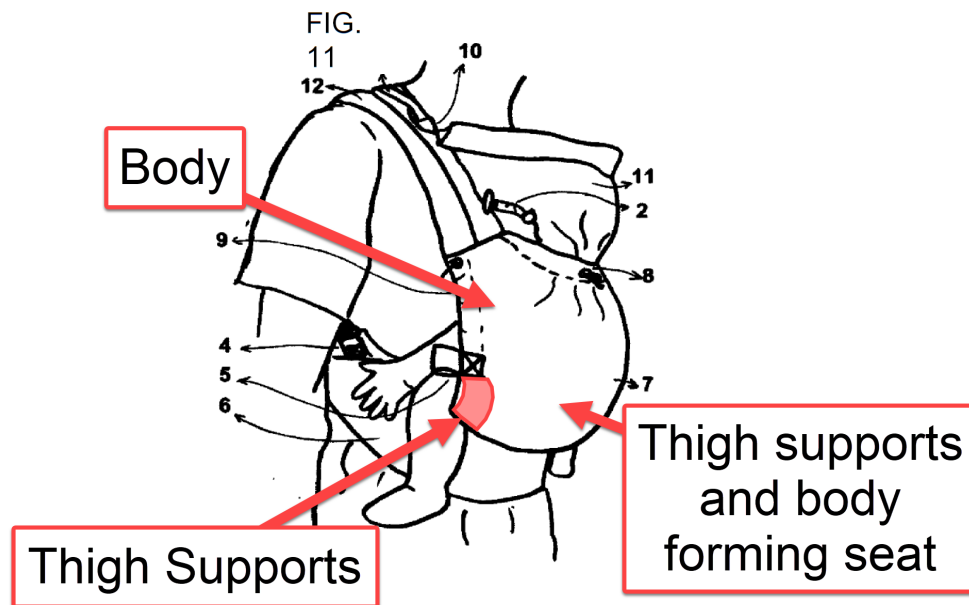


**FIG. 11 of Stomper-Rosam (annotated)**

**m. Limitation [11l]**

*See supra* limitation [1j].

**n. Limitation [11m]**

*See supra* limitation [1k].

**o. Limitation [11n]**

*See supra* limitation [1m].

**p. Limitation [11o]**

*See supra* limitation [1n].

**12. Claim 12**

**a. Limitation [12pre]**

*See supra* limitation [1pre].

**b. Limitation [12a]**

*See supra* limitation [3a].

**13. Claim 13**

**a. Limitation [13pre]**

*See supra* limitation [1a].

**b. Limitation [13a]**

*See supra* limitation [4a].

**c. Limitation [13b]**

*See supra* limitation [4b].

**d. Limitation [13c]**

*See supra* limitation [4c].

**e. Limitation [13d]**

*See supra* limitation [4d].

**14. Claim 14**

**a. Limitation [14pre]**

*See supra* limitation [1pre].

**b. Limitation [14a]**

*See supra* limitation [2a].

**c. Limitation [14b]**

*See supra* limitation [2b].

**d. Limitation [14c]**

*See supra* limitation [2c].

**15. Claim 15**

**a. Limitation [15pre]**

*See supra* limitation [1a].

**b. Limitation [15a]**

Stomper-Rosam discloses limitation [15a]. Ex. 1003, Appx. C, limitation 15a. In particular, Stomper-Rosam describes that the disclosed carrier provides “an ergonomic squat-spread posture, by means of a bridge and back reduction.” Ex. 1015, ¶ [0011].

Moreover, even if this feature were not implemented by the carrier of Stomper-Rosam, it would nonetheless be obvious in view of the knowledge of a POSITA. *Id.* As discussed at *supra* Grounds 1 and 2, limitation [15a], the advantages of positioning a child in a spread squat position were well known before the effective filing date of the ’055 Patent, as illustrated in Exhibit 1012. The International Hip Dysplasia Institute advised, well before the effective filing date of the ’055 Patent, that “[t]he healthiest position for the hips is for the hips to fall or spread (naturally) apart to the side, with the thighs supported and the hips and knees bent,” also known as “the jockey position, straddle position, frog position, spread-squat position or human position.” Ex. 1012, p. 1. It would have been obvious to a POSITA to incorporate into the carrier of Stomper-Rosam sufficient fabric

around the child's legs to allow for more support of the thighs, keeping them substantially parallel to the ground, in view of the knowledge of a POSITA regarding the advantages of the spread-squat position. Ex. 1003, Appx. C, limitation 15a.

16. **Claim 19**

**a. Limitation [19pre]**

*See supra* limitation [1pre].

**b. Limitation [19a]**

*See supra* limitation [15a].

17. **Claim 20**

**a. Limitation [20pre]**

*See supra* limitation [1pre].

**b. Limitation [20a]**

*See supra* limitation [15a].

18. **Claim 21**

**a. Limitation [21pre]**

*See supra* limitation [1pre].

**b. Limitation [21a]**

Stomper-Rosam discloses limitation [21a]. Ex. 1003, Appx. C, limitation 21a. As discussed at *supra* limitations [5a] and [5b], the carrier of Stomper-Rosam is “adjustable to the respective developmental stage and size of *a baby or toddler*

being carried.” Ex. 1015, Abstract (emphasis added). Accordingly, a POSITA would appreciate that adjusting the thigh support adjusters discussed at *supra* limitations [1j] and [1k] to the third setting corresponding to the third length would configure the carrier in a toddler mode. Ex. 1003, Appx. C, limitation 21a. Additionally, a POSITA would appreciate that a child of at least 28 inches in height would be approximately 9-10 months of age. Ex. 1003, Appx. C, limitation 21a; *see also* Exs. 1010 & 1011.

**19. Claim 22**

**a. Limitation [22pre]**

*See supra* limitation [1pre].

**b. Limitation [22a]**

*See supra* limitation [21a].

**20. Claim 23**

**a. Limitation [23pre]**

*See supra* limitation [1pre].

**b. Limitation [23a]**

*See supra* limitations [5a] and [5b].

**21. Claim 24**

**a. Limitation [24pre]**

*See supra* limitation [1pre].

**b. Limitation [24a]**

*See supra* limitation [21a].

**22. Claim 28**

**a. Limitation [28pre]**

*See supra* limitation [1pre].

**b. Limitation [28a]**

Stomper-Rosam discloses limitation [28a] because the thigh support adjusters are at least partially on an exterior surface of the carrier, such that a user can see the three settings when the carrier is positioned at the first setting. Ex. 1003, Appx. C, limitation 28a.

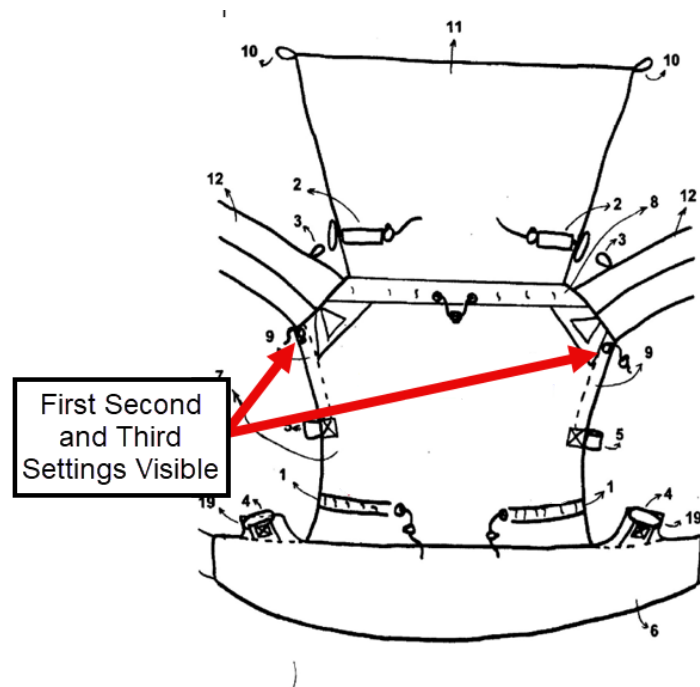


**FIG. 1 of Stomper-Rosam (annotated)**

**23. Claim 29**

**a. Limitation [29pre]**

*See supra* limitation [1pre].

**b. Limitation [29a]**

*See supra* limitation [28a].

**24. Claim 30**

**a. Limitation [30pre]**

*See supra* limitation [1pre].

**b. Limitation [30a]**

*See supra* limitation [28a].

**VIII. CONCLUSION**

The prior art references cited above are exemplary in nature and do not convey every way in which the references teach and disclose the claim limitations at issue. The cited references and this Petition show, however, that it is at least likely that the Challenged Claims of the '055 Patent are invalid for anticipation and obviousness over the cited references. Accordingly, Petitioner respectfully requests institution of *Inter Partes* review for the Challenged Claims for each presented ground.

Dated: October 29, 2024

Respectfully submitted,

/s/ Mark A. Miller

*Attorney for Petitioner*

**CERTIFICATION OF WORD COUNT UNDER 37 C.F.R. § 42.24(d)**

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 11,786,055 totals 13,274 words, excluding the parts exempted by 37 C.F.R. § 42.24(a). Accordingly, this Petition is under the word count limit of 14,000 words. This word count was made by using the built-in word count function tool in the Microsoft Word software used to prepare the document.

Dated: October 29, 2024

Respectfully submitted,

/s/ Mark A. Miller

Telephone: (801) 933-4068

*Attorney for Petitioner*

**CERTIFICATE OF SERVICE**

Pursuant to 37 CFR §§ 42.6(e)(4)(i) *et seq.* and 42.105(b), the undersigned certifies that on October 29, 2024, a complete and entire copy of this Petition for *Inter Partes* Review and all supporting exhibits were provided by UPS Overnight service, cost prepaid, to the Patent Owner by serving the correspondence address of record on USPTO Patent Center.

/s/ Mark A. Miller

*Attorney for Petitioner*