

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

Inter Partes Review No. IPR2025-00111

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

LISTING OF CLAIMS

Limitation¹	Claim 1
[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.

¹ 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).

Limitation	Claim 2
[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.
Limitation	Claim 3
[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.
Limitation	Claim 4
[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.
Limitation	Claim 5
[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.
Limitation	Claim 6
[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.
Limitation	Claim 7
[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.
Limitation	Claim 8
[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.
Limitation	Claim 9
[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.
Limitation	Claim 10
[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.
Limitation	Claim 11
[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.
Limitation	Claim 12
[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.
Limitation	Claim 13
[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.
Limitation	Claim 14
[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.
Limitation	Claim 15
[15pre]	15. The adjustable child carrier of claim 11,
[15a]	wherein the seat is configured to support the child in a spread squat position.
Limitation	Claim 19
[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.
Limitation	Claim 20
[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.
Limitation	Claim 21
[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.
Limitation	Claim 22
[22pre]	22. The adjustable child carrier of claim 10,

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

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EXHIBITS

Exhibit	Reference
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	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, https://www.medicalnewstoday.com/articles/324728 .
1011 ²	Centers for Disease Control and Prevention, <i>Data Table of Infant Length-for-age Charts</i> , August 24, 2001, https://web.archive.org/web/20150315044822/https://www.cdc.gov/growthcharts/html_charts/lenageinf.htm#expand .
1012	International Hip Dysplasia Institute, <i>Hip Health in Baby Carriers, Car Seats, Swings, Walkers, and Other Equipment</i> , https://web.archive.org/web/20140208144252/http://hipdysplasia.org/developmental-dysplasia-of-the-hip/prevention/baby-carriers-seats-and-other-equipment/ .
1013 ³	International Publication No. WO 2006116117A2 to Staten (“Staten”)
1014	BabyBjorn Baby Carrier Synergy Owners Manual (“Synergy Manual”)
1015	Austrian Publication No. AT11620U2 to Stomper-Rosam (“Stomper-Rosam”)

² 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.

³ Exs. 1013-1016 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.

Exhibit	Reference
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, https://www.pampers.com/en-us/baby/development/article/newborn-baby-toddler-age .
1019	YKK (U.S.A.) Inc., <i>The Difference Between Pin Lock Sliders and Auto Lock Sliders for Zippers</i> , 2022, https://ykkamericas.com/difference-between-pin-lock-sliders-and-auto-lock-sliders/ .
1020	Rodney Telford, LINKEDIN, https://www.linkedin.com/in/rodney-telford-18043378/ (last visited Oct. 25, 2024).
1021	Kevin Scheiferstein, LINKEDIN, https://www.linkedin.com/in/kevinscheiferstein/ (last visited Oct. 25, 2024).
1022	Thomas Aleblad, LINKEDIN, https://www.linkedin.com/in/thomas-aleblad-5b23ab40/ (last visited Oct. 25, 2024).
	U.S. Patent and Trademark Office, <i>Patents Official Gazette</i> , https://patentsgazette.uspto.gov/week42/OG/html/1515-3/US11786055-20231017.html (last visited Oct. 25, 2024).
1024	<i>Bucket seat</i> , MERRIAM-WEBSTER.COM DICTIONARY, https://www.merriam-webster.com/dictionary/bucket seat (last visited Oct. 25, 2024).
1025	<i>Bucket seat</i> , OXFORD ADVANCED LEARNER'S DICTIONARY, https://www.oxfordlearnersdictionaries.com/us/definition/english/bucket-seat (last visited Oct. 25, 2024).
1026	<i>Bucket seat</i> , COLLINS ENGLISH DICTIONARY, https://www.collinsdictionary.com/dictionary/english/bucket-seat#google_vignette (last visited Oct. 25, 2024).
1027	<i>Bucket seat</i> , WIKTIONARY.ORG, https://en.wiktionary.org/wiki/bucket_seat (last visited Oct. 25, 2024).
1028	<i>Bench seat</i> , COLLINS ENGLISH DICTIONARY, https://www.collinsdictionary.com/dictionary/english/bench-seat (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)

Ground	'055 Patent Claims	Basis for Rejection of the Challenged Claims under 35 U.S.C. §§ 102 & 103
<u>Ground 4⁴</u>	1-15, 19-24, and 28-30	Anticipated by Andren, or obvious over Andren alone or in view of Lundh
<u>Ground 5</u>	1-15, 19-24, and 28-30	Anticipated by Sharp, or obvious over Sharp alone or in view of Lundh
<u>Ground 6</u>	1-15, 19-24, and 28-30	Anticipated by Kalouskova, or obvious over Kalouskova alone or in view of Lundh

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) U.S. Patent Publication No. 20140014692 to Andren et al. (“Andren”)
(filed July 9, 2013; published January 16, 2014; priority date July 12,

⁴ Petitioner numbers its Grounds in this Petition to accord with the Grounds found in its earlier-filed IPR No. 2025-00110. Should the Board institute these petitions, Petitioner will seek to have the two reviews consolidated.

2012). Ex. 1005.

- 2) U.S. Patent No. 4,009,808 to Sharp (“Sharp”) (filed July 7, 1975; granted March 1, 1977). Ex. 1006.
- 3) Czech Republic Publication No. CZ2010531A3 to Kalouskova (“Kalouskova”) (filed July 2, 2010; published January 11, 2012). Ex. 1007.
- 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 and Sharp were of record during the prosecution of the application that issued as the '055 Patent, they were 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))

Lead Counsel	Back-Up Counsel
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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 mler.mark@dorsey.com, hales.elliott@dorsey.com, jones.anthony@dorsey.com, 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. 2435-2442 & 2490. 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.⁵

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, the specification fails to disclose any “thigh support adjuster,” or clearly associate this claim term with a specific component described in the written description.⁶ *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

⁵ 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.

⁶ Again, this is a basis for another court to find this term indefinite.

“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 this term⁷, 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

⁷ 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).

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 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, as evidenced by Sharp, which was filed in 1975. Ex. 1006. 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. 1005, ¶¶ [0021]&[0029]. 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 drawstrings, 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 ¶ 121. Each combination proposed below is done from this perspective and without the need for hindsight—a POSITA seeing a benefit in one carrier product and finding it obvious to try and achieve that same benefit in another product lacking that same feature or functionality, for the obvious benefit that additional feature or function provides to the primary reference.

B. Summary of Prior Art**1. Andren**

Andren discloses an adjustable child carrier with a shoulder strap arrangement that allows the wearer to move the child from the wearer's chest to the wearer's back, and vice versa, without removing the child from the carrier or removing the child and carrier combination from the wearer. Ex. 1005, Abstract & ¶ [0005]. The child carrier of Andren comprises a bag or pouch coupled to chest straps at the top and a waist belt at the bottom, and includes a front piece and seat supports on either side of the front piece. Ex. 1005, ¶¶ [0021]-[0022]. The lower portion of the front piece and the waist belt form a seat support (e.g., 22 of FIG. 1), which can be adjustable in a height direction to modify a depth of the carrier pouch to adapt to the size of a child. Ex. 1005, ¶¶ [0021]&[0029]. The upper portion of the front piece can be folded down, and the seat supports can be adjusted to allow the child to face away from the wearer. Ex. 1005, ¶[0018] & FIG. 10.

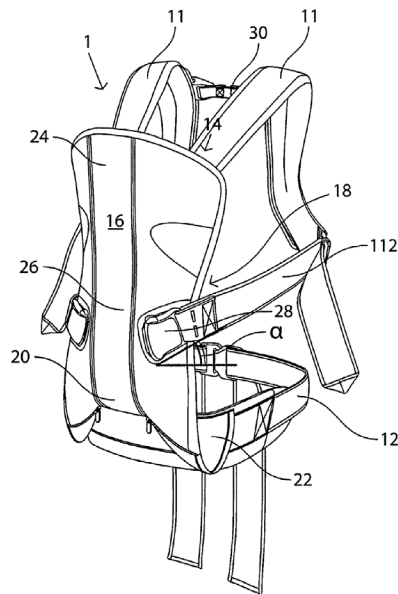
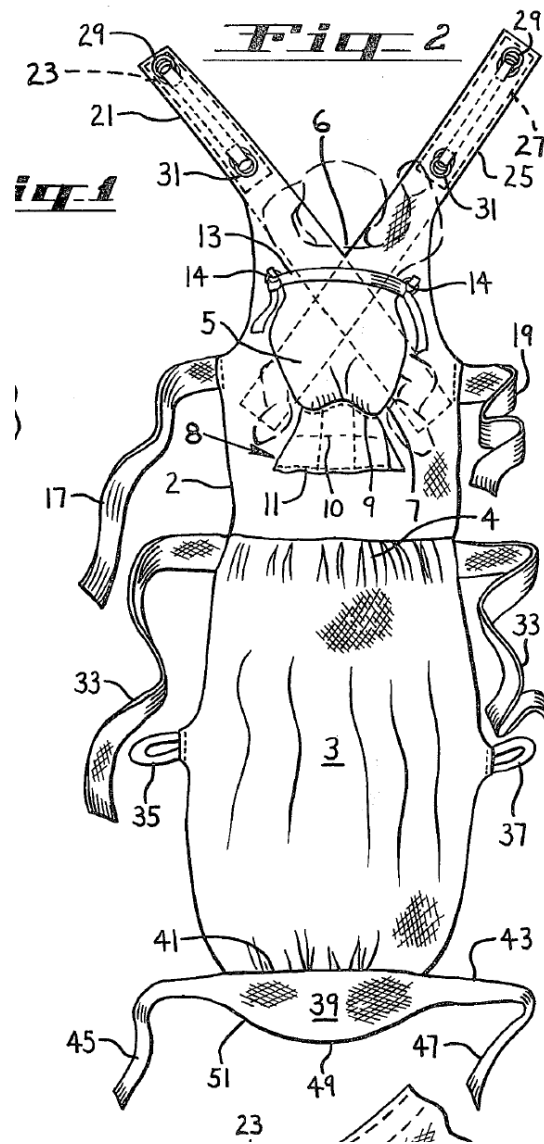


FIG. 1

FIG. 1 of Andren

2. Sharp

Sharp discloses an adjustable child carrier that can be worn on a user's back or front, which includes a seat member that can be lowered to adjust to a child's height as the child grows. Ex. 1006, Abstract. The adjustable child carrier of Sharp also includes an adjustable head support. *Id.* As illustrated in FIG. 2 of Sharp, a small infant may be placed in the child carrier such that the infant's back and buttocks are supported by a narrow section of the carrier (e.g., 7 of FIG. 2), and progressively wider sections can be used to support the infant's back and buttocks as the child grows by removing seams (e.g., 9, 10, and 11 of FIG. 2).

**FIG. 2 of Sharp**

3. **Kalouskova**

Kalouskova discloses a child carrier that includes a back support, a head rest, a hip belt, shoulder straps, and safety components, which can be press buttons, buttons, clips, or the like. Ex. 1007, Abstract. The safety components (e.g., 10 of

FIG. 1) can be used to make the back support area of the child carrier narrower or wider to accommodate a child at different stages of growth. Ex. 1007, p. 2.

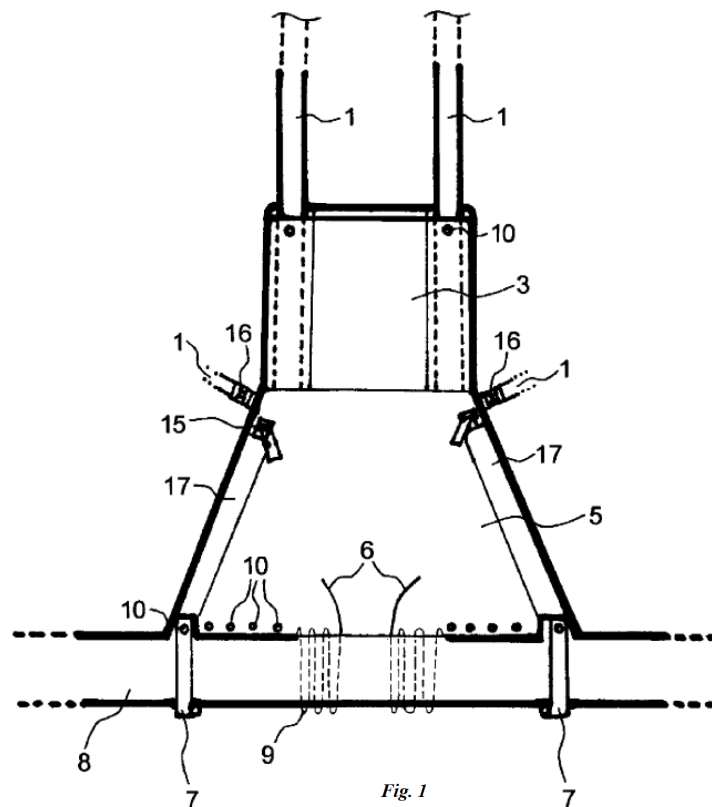


Fig. 1 of Kalouskova

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].

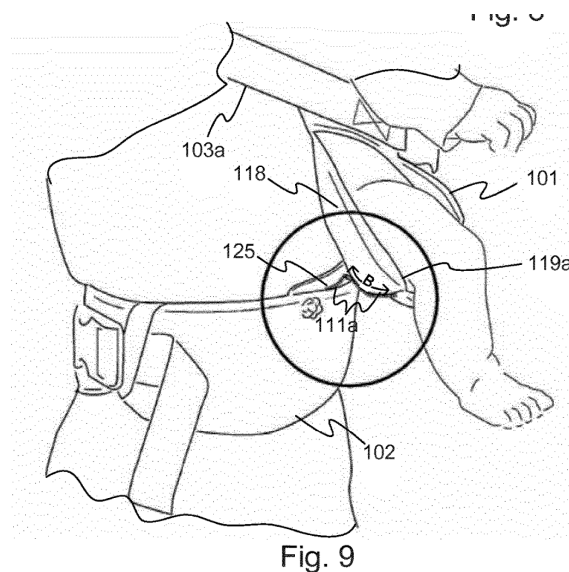


FIG. 9 of Lundh

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

FIG. 6 of Lundh

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.*

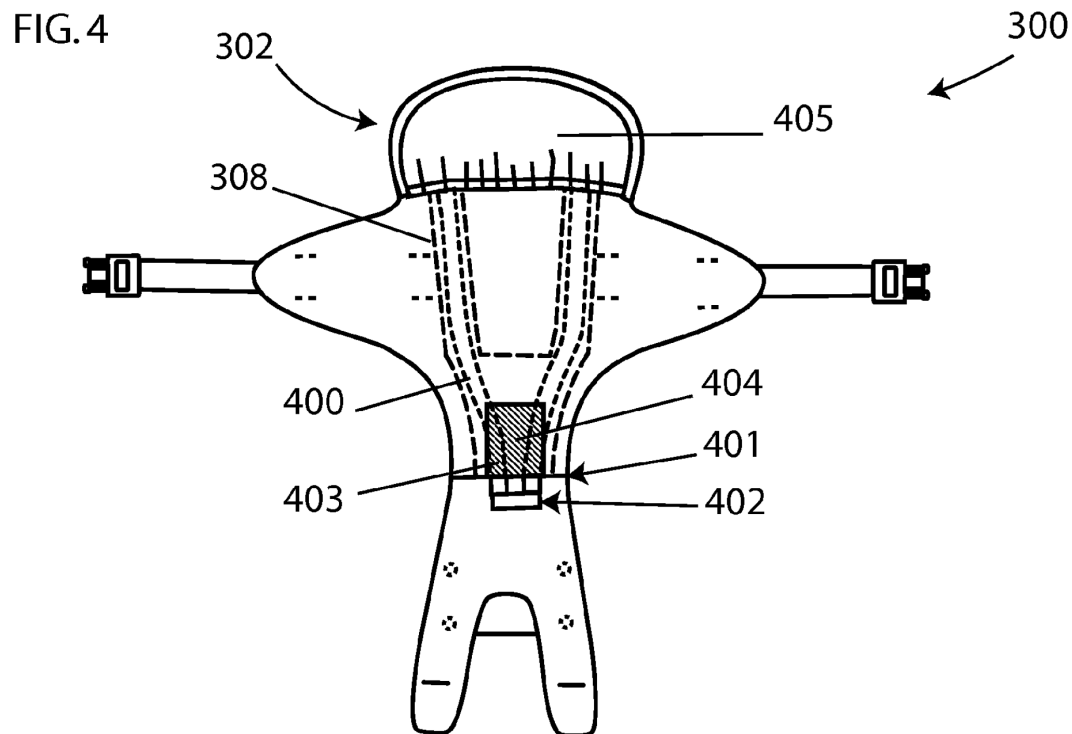


FIG. 4 of Gray

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 4: The Challenged Claims are anticipated and obvious over Andren, alone or in view of knowledge of a POSITA and/or Lundh.

The Challenged Claims are anticipated and obvious over Andren, alone or in view of the knowledge of a POSITA and/or Lundh. *See* Ex. 1003, Appx. D. 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]

Andren discloses limitation [1pre]. The title of Andren is “Baby Carrier,” and FIGs. 3-8 of Andren illustrate a user wearing the disclosed carrier.

b. Limitation [1a]

The carrier of Andren implements limitation [1a], as illustrated in the below annotated figure. Ex. 1003, Appx. D, limitation 1a. Additional figures of Andren depict the carrier being used such that the body is supporting a child. *See, e.g.*, Ex. 1005, FIG. 3. Moreover, Andren describes that “a carrier pouch 18 for a child is formed between the front piece and the body of the wearer. Ex. 1005, ¶ [0021].

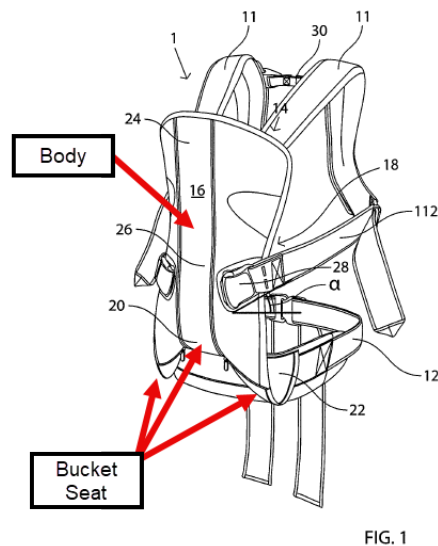
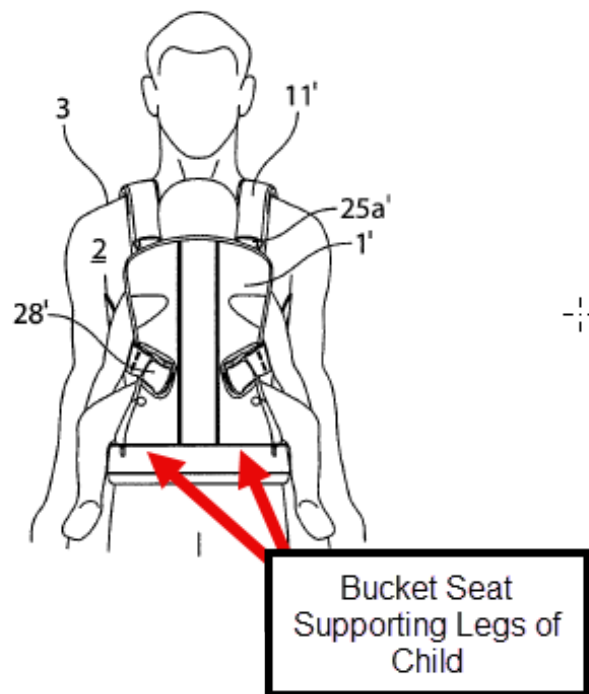


FIG. 1

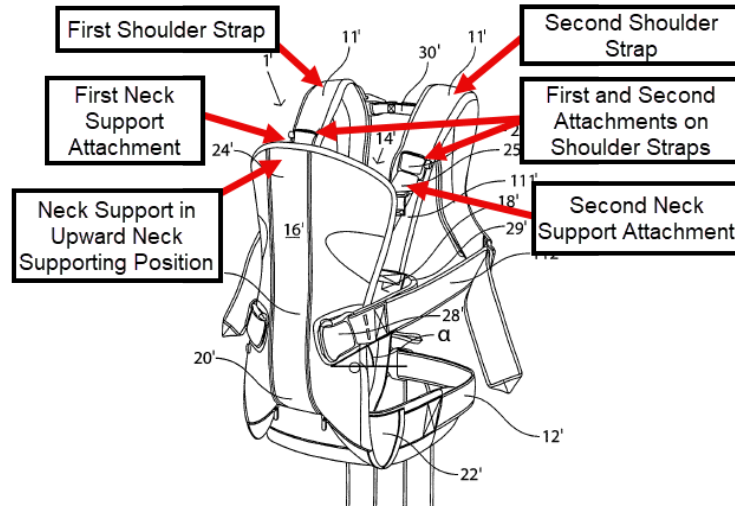
FIG. 1 of Andren (annotated)**c. Limitation [1b]**

The above annotation also illustrates limitation [1b]. Additionally, the below annotations to FIG. 3 of Andren further demonstrate that the bucket seat is configured to support legs of the child. Ex. 1003, Appx. D, limitation 1b. As can be seen in FIG. 3, the child's legs do not hang straight down, they wrap around the adult, are bent at the knee, and the upper portions of the child's legs are supported just above the knee by the annotated bucket seat.

**FIG. 3 of Andren (annotated)****d. Limitation [1c]**

As illustrated in the below annotations to FIG. 2 of Andren, the disclosed carrier includes limitation [1c].⁸ Ex. 1003, Appx. D, limitation 1c. In particular, Andren describes an upper portion of the front piece (e.g., 24' of FIG. 2) detachably connected to a chest strap on either side (e.g., using strap 25' of FIG. 9). *See* Ex. 1005, ¶ [0022] & FIG. 9.

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

**FIG. 2 of Andren (annotated)****e. Limitation [1d]**

Andren discloses limitation [1d], as illustrated in the above annotations to FIG. 2 of Andren. Ex. 1003, Appx. D, limitation 1d. Specifically, Andren discloses that the chest straps 11' are adapted to extend around both shoulder areas of the wearer. Ex. 1005, ¶ [0022].

f. Limitation [1e]

Andren discloses limitation [1e]. Ex. 1003, Appx. D, limitation 1e. As discussed above with reference to limitation [1d], the chest straps 11' of Andren are adapted to extend around both shoulder areas of the wearer. Ex. 1005, ¶ [0022].

g. Limitation [1f]

Andren discloses limitation [1f]. Ex. 1003, Appx. D, limitation 1f. For example, the strap 25' that detachably connects the upper portion of the front piece to

the shoulder strap is “detachably connected to respective chest strap 11’ by a connecting device 25’a.” Ex. 1005, ¶ [0022].

h. Limitation [1g]

Andren discloses limitation [1g] for the reasons discussed above with reference to limitation [1f]. Each strap 25’ is detachably connected to a respective chest strap by “a connecting device 25’a.” *Id.*

i. Limitation [1h]

Andren discloses limitation [1h]. Ex. 1003, Appx. D, limitation 1h. The “upward neck supporting position” can be seen, for example, in FIG. 9 of Andren, which is contrasted with the configuration of FIG. 10, where the upper portion of the front piece is detached (e.g., at each connecting device 25’a) and folded down. Ex. 1005, ¶¶ [0017]-[0018].

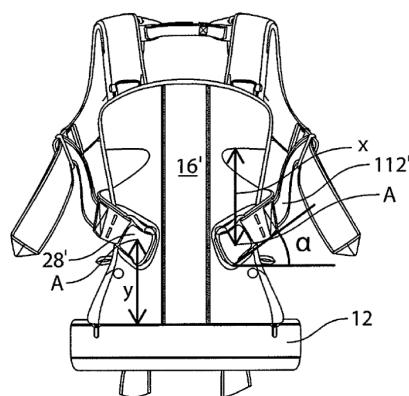


FIG. 9

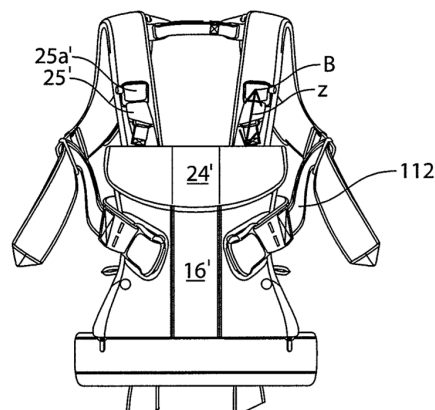
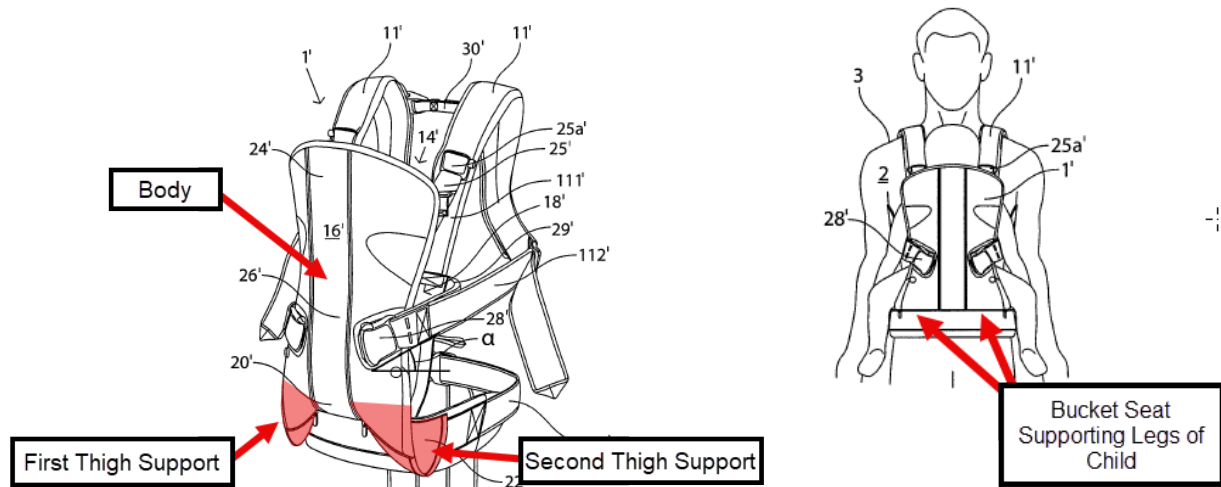


FIG. 10

FIGs. 9 & 10 of Andren

j. Limitation [1i]

Andren discloses limitation [1i] as illustrated in the below annotations to FIG. 2. Ex. 1003, Appx. D, limitation 1i. Andren describes that “[a] lower portion 20’ of the front piece is connected to the waist belt and forms at least one seat support 22’ for a child sitting in the baby carrier, which seat support may be adjustable in the height direction.” Ex. 1005, ¶ [0022]. As can be seen in annotated FIG. 3 above (*supra* limitation [1b]), the body of the carrier supports the child’s thighs on either side.



FIGS. 2 & 3 of Andren (annotated)

k. Limitation [1j]

As illustrated in the below annotations to FIGS. 2 and 3, Andren limitation [1j]. Ex. 1003, Appx. D, limitation 1j. Based on the figures and specification of Andren, a POSITA would understand that the disclosed adjustable seat support

uses a zipper or a similar device, which can be fully closed (as in FIG. 3), fully open (as in FIG. 2), or partially closed (e.g., any position between the foregoing positions). *Id*; see also Ex. 1005, ¶ [0022].

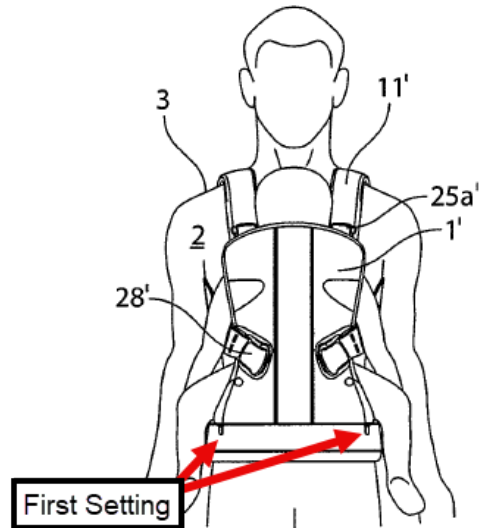


FIG. 3 of Andren (annotated)

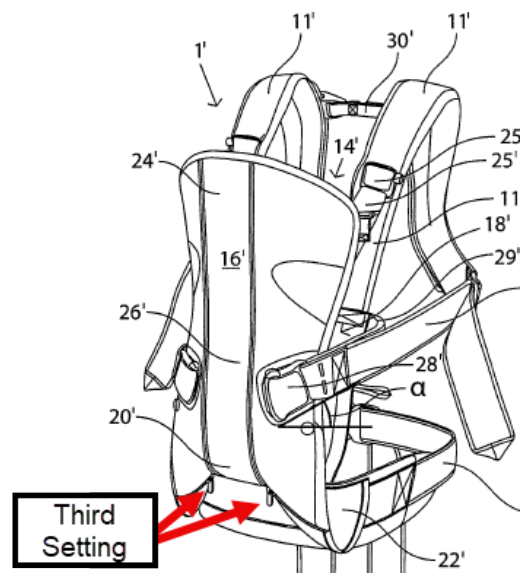


FIG. 2 of Andren (annotated)

To the extent that Patent Owner may argue that a “second setting” is not expressly disclosed in Andren, it is inherent or would be obvious to a POSITA that Andren can be used or modified to have a second setting between the expressly disclosed first and third settings because a POSITA would have knowledge of various well-known components for making adjustments to child carriers, including zippers. Ex. 1003, ¶¶ 106-108.

Patent Owner may also argue that the zippers depicted in Andren do not provide “a first setting, a second setting, and a third setting” because a zipper provides a continuous adjustment, rather than settings at discrete intervals. This argument fails because dependent claim 25 requires that each setting “is a discrete location on the child carrier at which the user selectively positions the at least one thigh support adjuster.” If dependent claim 25 requires discrete settings/locations, it follows that claim 1 must be broader in scope to include both discrete and non-discrete (i.e., continuously adjustable) settings/locations. *See Intamin Ltd. v. Magnetar Techs., Corp.*, 483 F.3d 1328, 1335 (Fed. Cir. 2007) (“An independent claim impliedly embraces more subject matter than its narrower dependent claim”). Second, even if claim 1 were interpreted such that the “first setting,” “second setting,” and “third setting” must be discrete, rather than continuously adjustable, a POSITA

would appreciate that such a feature could be implemented (or an equivalent effect could be achieved) using a locking zipper. Ex. 1003, Appx. D, limitation 1j. Furthermore, it would be obvious to a POSITA to modify the carrier of Andren to use a different component in place of a zipper, if desirable to provide discrete settings, such as buttons, snaps, or the like. Ex. 1003, ¶¶ 106-108.

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, & 62-69.

To the extent (if at all) that a meaning can be ascribed to this claim term, it is disclosed in Andren. Alternatively, it would be obvious to a POSITA to modify the carrier of Andren to include limitation [1k] in view of the knowledge of a POSITA and/or in view of Lundh.⁹

First, the below annotations to FIG. 2 of Andren illustrate that the disclosed

⁹ As discussed at paragraphs 122-127 of the Declaration of David Smith (Ex. 1003), Gray also discloses “at least one thigh support adjuster.” 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, ¶¶ 122-127. 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.*

carrier includes thigh support adjusters. As discussed at *supra* limitation [1j], the disclosed adjustable seat support of Andren uses a zipper or similar device, which can be fully closed, fully open, or partially closed. Ex. 1003, Appx. D, limitation 1j; *see also* Ex. 1005, ¶ [0022]. While Patent Owner may argue that neither zipper is “coupled to the first thigh support **and** the second thigh support,” no such feature or structure is supported in the ’055 Patent, either. Rather, as described in the Declaration of David Smith, a POSITA is left to guess as to the corresponding structure of the “at least one thigh support adjuster,” which most closely corresponds 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 the annotated zippers of Andren are thigh support adjusters, as in claim 1 of the ’055 Patent. If the disclosure of the separate base width adjusters in the ’055 patent is sufficient to disclose to a POSITA a thigh support adjuster “coupled to the first thigh support **and** the second thigh support,” that same result should follow for the separate zipper adjusters in Andren. *In re Donaldson Co., Inc.*, 16 F.3d 1189, 1193 (Fed. Cir. 1994) (en banc) (“[O]ne construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents

thereof, to the extent that the specification provides such disclosure.”); *see also Fresenius USA, Inc. v. Baxter Int’l, Inc.*, 582 F.3d 1288, 1299 (Fed. Cir. 2009) (“[A] challenger who seeks to demonstrate that a means-plus-function limitation was present in the prior art must prove that the corresponding structure--or an equivalent--was present in the prior art.”).

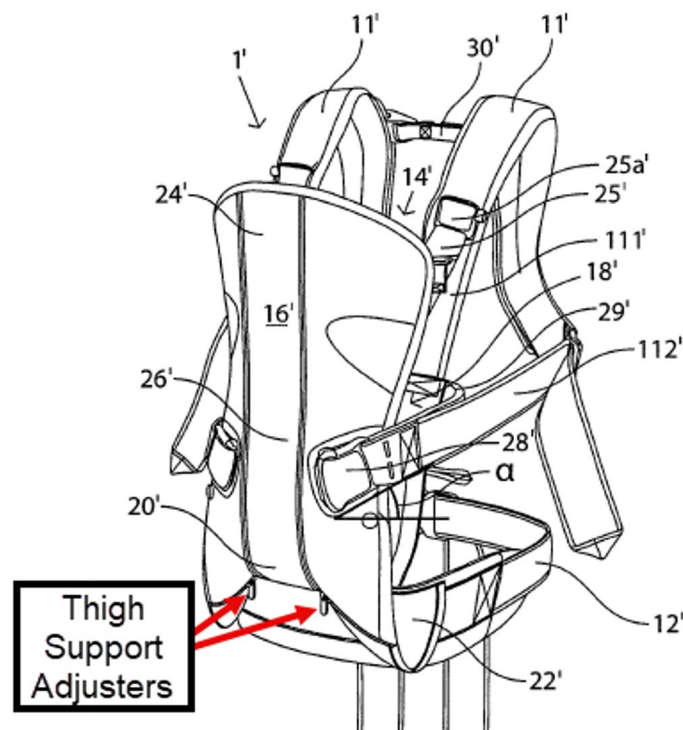


FIG. 2 of Andren (annotated)

Second, even if limitation [1k] were not disclosed in Andren, 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 Andren for the obvious

benefit of one-handed adjustment of both thigh supports. 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. D, 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.

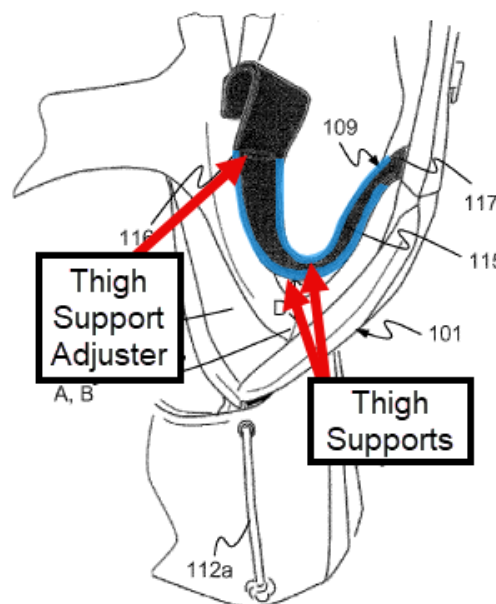


Fig. 6

FIG. 6 of Lundh (annotated)

Moreover, assuming *arguendo* that limitation [1k] requires a single adjuster that can simultaneously adjust **both** a first and second thigh support (a feature

which is nowhere described in the '055 Patent), this feature is performed by the common drawstring disclosed in Lundh (e.g., 113 of FIG. 10 of Lundh). The common drawstring of Lundh is coupled to two detachable end parts B that, when disengaged by undoing each zipper, provide support for the child's legs in a "frog position." Ex. 1008, ¶¶ [0034] & [0044]. Accordingly, Lundh also discloses a thigh support adjuster "coupled to the first thigh support and the second thigh support."

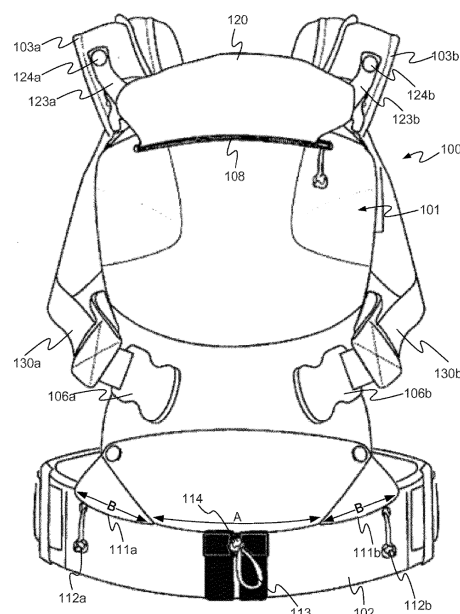


Fig. 10

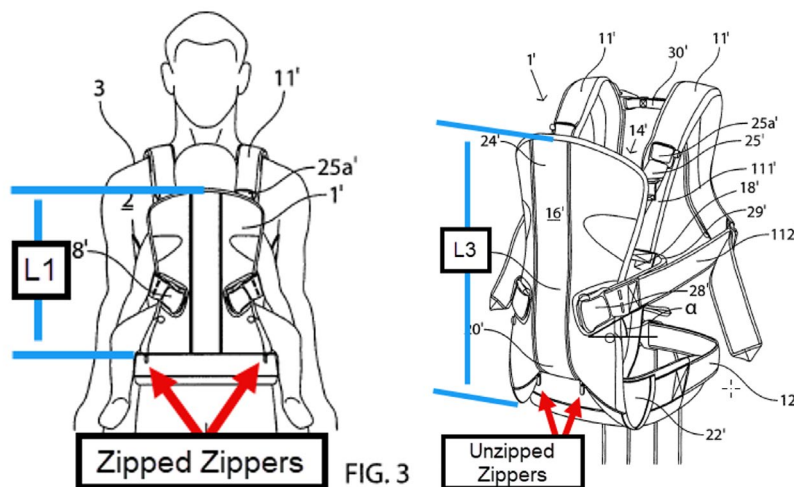
FIG. 10 of Lundh

For the foregoing reasons, Andren discloses limitation [1k]. Moreover, even if this feature were not expressly disclosed in Andren, it would be obvious to modify the carrier of Andren to include this feature based on the knowledge of a

POSITA and/or the teachings of Lundh. One or more thigh support adjusters, as disclosed in Lundh, could easily be added to the carrier of Andren, and a POSITA would have been motivated to make such a modification to allow for one-handed adjustment, to more easily accommodate a child at different sizes and/or to encourage a desirable “frog position.” Ex. 1008, ¶¶ [0042] & [0044].

m. Limitation [1m]

As illustrated in the below annotations to FIGs. 2 and 3, Andren further discloses limitation [1m]. Ex. 1003, Appx. D, limitation 1m. Specifically, the zippers discussed at *supra* limitation [1j] are adjustable to vary a height of the carrier. *Id.*



FIGs. 2 & 3 of Andren (annotated)

Additionally, even if this feature were not disclosed in Andren, it would be obvious to modify the carrier of Andren to include such a feature, for example, using the one or more thigh support adjusters of Lundh discussed above. *See supra*

limitation [1k].

n. Limitation [1n]

As illustrated in the annotations to FIGs. 2 and 3 of Andren above, the length of the body that is adjusted using the thigh supporter adjusters is defined “from a bottom of the bucket seat to a top of the body.” Ex. 1003, Appx. D, limitation [1n].

2. Claim 2

a. Limitation [2pre]

See supra limitation [1pre].

b. Limitation [2a]

Andren discloses limitation [2a] for the reasons discussed at *supra* limitation [1m]. When the illustrated zippers are fully zipped, the body of the carrier has a first length. Ex. 1003, Appx. D, limitation 2a.

c. Limitation [2b]

Andren also discloses limitation [2b] for the reasons discussed at *supra* limitations [1j] and [1m]. When the illustrated zippers are partially closed, the body of the carrier has a second length, which is greater than the first length and less than the third length. Ex. 1003, Appx. D, limitation 2b.

d. Limitation [2c]

Andren discloses limitation [2c] for the reasons discussed at *supra* limitations [1j] and [1m]. When the illustrated zippers are fully open, the body of the carrier has a third length that is greater than the second length. Ex. 1003, Appx. D, limitation 2c.

3. Claim 3

a. Limitation [3pre]

See supra limitation [1pre].

b. Limitation [3a]

For the reasons discussed at *supra* limitation [1m], Andren discloses limitation [3a]. The depth of the bucket seat is adjustable by zipping and unzipping the illustrated zippers, such that the bucket seat is deeper when the zippers are in an unzipped position (thereby allowing the thigh supports to extend backward and down) and less deep when the zippers are in a zipped position. Ex. 1003, Appx. D, limitation 3a.

4. Claim 4

a. Limitation [4pre]

See supra limitation [1pre].

b. Limitation [4a]

For the reasons discussed at *supra* limitations [1j] and [1m], Andren discloses limitation [4a]. When the illustrated zippers are fully zipped, the carrier has

a first setting that is vertically displaced from the second setting in which the zip-pers are partially closed. Ex. 1003, Appx. D, limitation 4a.

Even if this feature were not expressly disclosed in Andren, it would be obvious to modify the carrier of Andren to implement this feature using the one or more thigh supports of Lundh for the reasons discussed at *supra* limitation [1m]. *Id.* For example, the thigh support adjuster annotated below in FIG. 6 of Andren is described as being adjustable in two configurations that are vertically displaced from each other. *Id.* Lundh specifically discloses that the illustrated adjuster is used to change the height of the bottom portion between two positions. Ex. 1008, ¶ [0042].

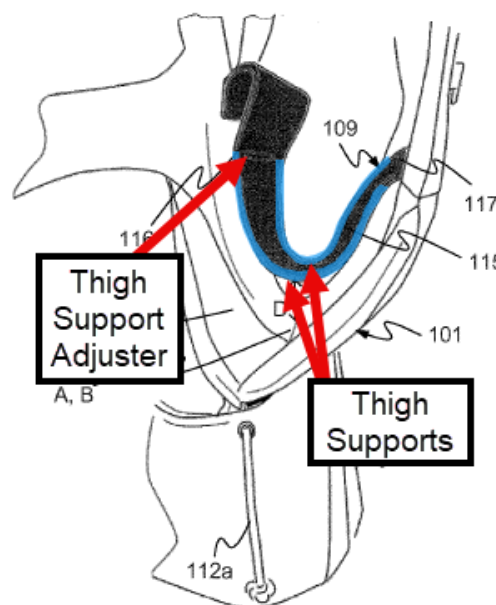


Fig. 6

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

For the reasons discussed at *supra* limitations [1j] and [1m], Andren discloses limitation [4b]. When the illustrated zippers are partially closed, the carrier has a second setting that is vertically displaced from the third setting in which the zippers are fully open. Ex. 1003, Appx. D, limitation 4b.

Even if this feature were not disclosed in Andren, it would be obvious to modify the carrier of Andren to implement this feature in view of Lundh. *Id.* As discussed at *supra* limitation [4a], the illustrated adjuster of Lundh is adjustable between two positions that are vertically displaced from one another. It would be obvious to a POSITA to modify the combination of Andren and Lundh to include an additional setting between the first and third settings to allow finer adjustment of the carrier, and a POSITA would be motivated to make this modification to provide finer adaptation of the carrier to accommodate a child at different sizes and to provide varying levels of thigh support. Ex. 1003, Appx. D, limitations 4b-4c. Thus, the second setting would be vertically displaced from the third setting.

d. Limitation [4c]

For the reasons discussed at *supra* limitations [1j] and [1m], Andren discloses limitation [4c]. When the illustrated zippers are fully open, the carrier has a third setting that is vertically displaced from the first setting. *Id.*

Even if this feature were not disclosed in Andren, it would be obvious to modify the carrier of Andren to implement this feature for the reasons discussed at *supra* limitation [4a]. *Id.*

e. Limitation [4d]

For the reasons discussed at *supra* limitations [1j] and [1m], Andren discloses limitation [4d]. The setting in which the illustrated zippers are partially zipped is defined between the setting in which the zippers are fully closed and the setting in which the zippers are fully open. Ex. 1003, Appx. D, limitation 4d.

5. Claim 5

a. Limitation [5pre]

See supra limitation [1pre].

b. Limitation [5a]

As discussed at *supra* limitations [1m] and [2a], adjusting the length of the body to the first length corresponds to a fully zipped configuration of the illustrated zippers of Andren. An object of the invention of Andren is to provide a baby carrier that is usable during a longer period of time, such as from an infant age to 24 or 36 months of age. Ex. 1005, ¶ [0002]. Accordingly, the fully-zipped configuration of Andren would correspond to “an infant mode,” as in claim 5 of the ’055 Patent. Ex. 1003, Appx. D, 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. D, limitation 5b; *see also* Exs. 1010 & 1011. Accordingly, Andren 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]

Andren discloses limitation [11i]. Ex. 1003, Appx. D, limitation 11i. As discussed at *supra* limitation [1h], FIGs. 9 and 10 of Andren illustrate different configurations of the disclosed carrier, with FIG. 9 depicting the upper portion of the front piece in an upward neck supporting position. Ex. 1005, ¶¶ [0017]-[0018]. By contrast, FIG. 10 illustrates the upper portion of the front piece in a detached and folded-down configuration. *Id.* As can be seen in FIG. 10, the folded-down configuration reduces the body length.

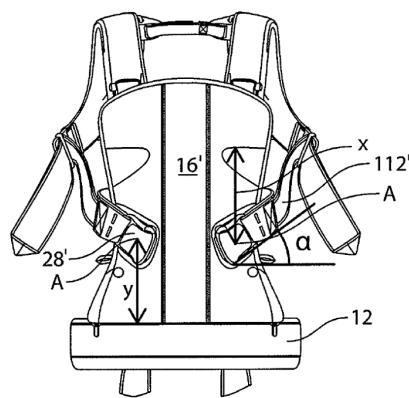


FIG. 9

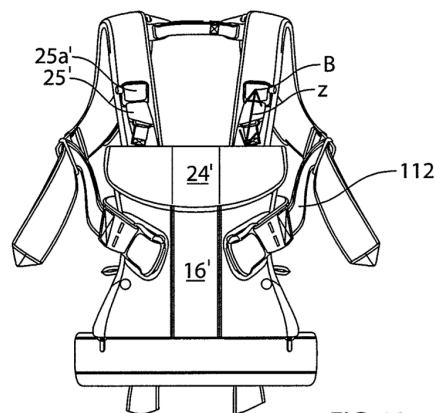


FIG. 10

FIGs. 9 & 10 of Andren

Limitation [11i] is also taught by Lundh, and it would be obvious to a POSITA to implement this feature further in view of Lundh. *Id.* A POSITA would be motivated to implement this feature based on Lundh because Lundh expressly teaches that the folded-down position is desirable to provide more freedom of movement for an older child. *Id.*

k. Limitation [11j]

See supra limitation [1i].

l. Limitation [11k]

As illustrated in the below annotations to FIG. 2, Andren discloses limitation [11k]. Ex. 1003, Appx. D, limitation 11k. The thigh supports of Andren are configured relative to the body as described at *supra* limitation [1i], and the body, first thigh support, and second thigh support combine to form a seat.

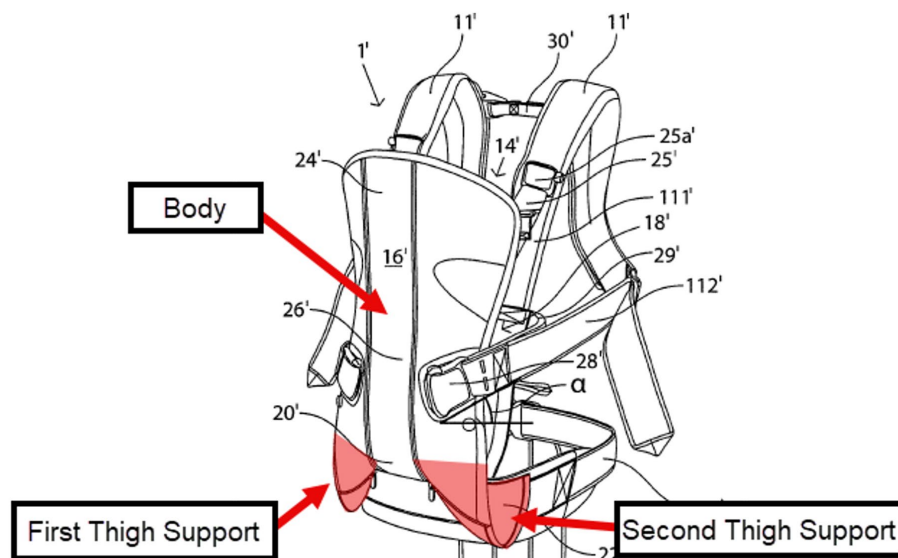


FIG. 2 of Andren (annotated)

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]

As illustrated in the below annotation to FIG. 3, Andren discloses limitation [15a]. Ex. 1003, Appx. D, limitation 15a. Indeed, the position of the child in FIG. 3 of Andren 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.

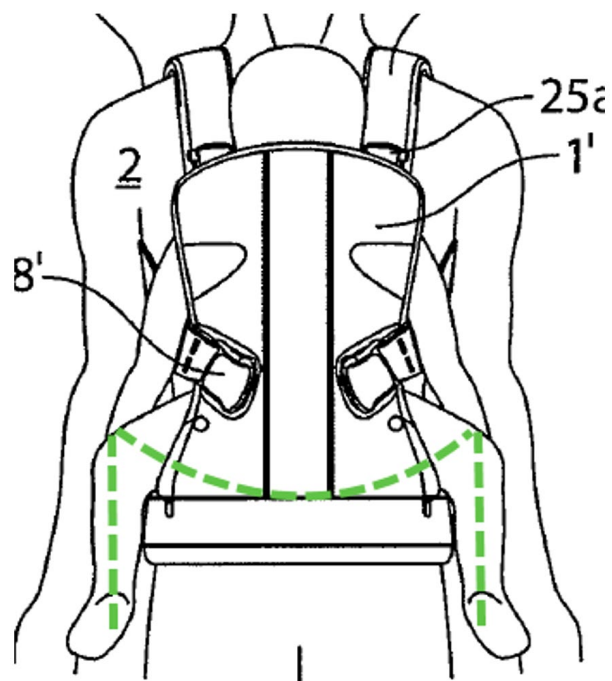


FIG. 3 of Andren (annotated)

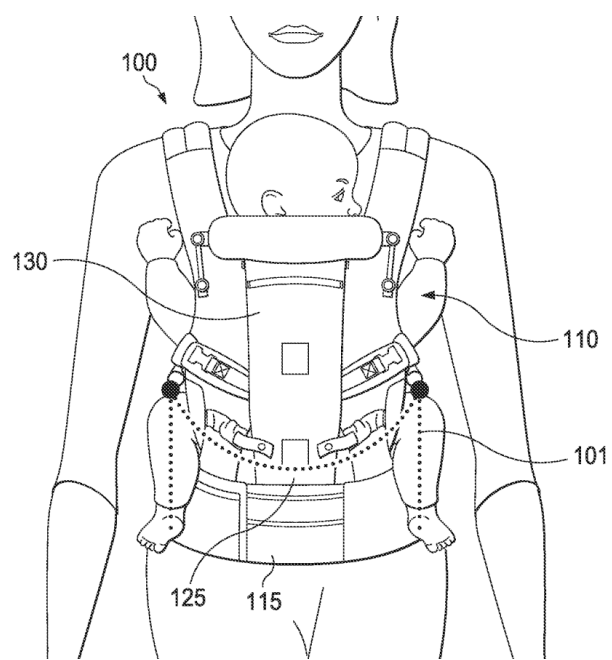


FIG. 1 of '055 Patent

To the extent that Andren fails to disclose this position, knowledge of a POSITA makes it obvious to attempt to secure this position by, for example, ensuring that the closed-zipper position is oriented such that the child's legs spread around the parent with the knees sufficiently high to achieve a squat orientation. This is so at least because 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.

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]

Andren discloses limitation [21a]. Ex. 1003, Appx. D, limitation 21a. As discussed at *supra* limitations [5a] and [5b], an object of the invention of Andren is to provide a baby carrier that is usable during a longer period of time, such as from an infant age to 24 or 36 months of age. Ex. 1005, ¶ [0002]. The fully-open configuration of Andren would correspond to “a toddler mode,” as in claim 21 of the ’055 Patent. Ex. 1003, Appx. D, limitation 21a.

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. D, limitation 21a; *see also* Exs. 1010 & 1011. Accordingly, the carrier of Andren 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 configuring the disclosed zippers to a fully open position. *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]

As illustrated in the below annotations to FIG. 9, Andren discloses limitation [28a]. Ex. 1003, Appx. D, limitation 28a. The illustrated zippers of Andren, which

can be set to the first, second, or third setting, are disposed on an exterior surface of the carrier, and would thus be visible to the user. *Id.*

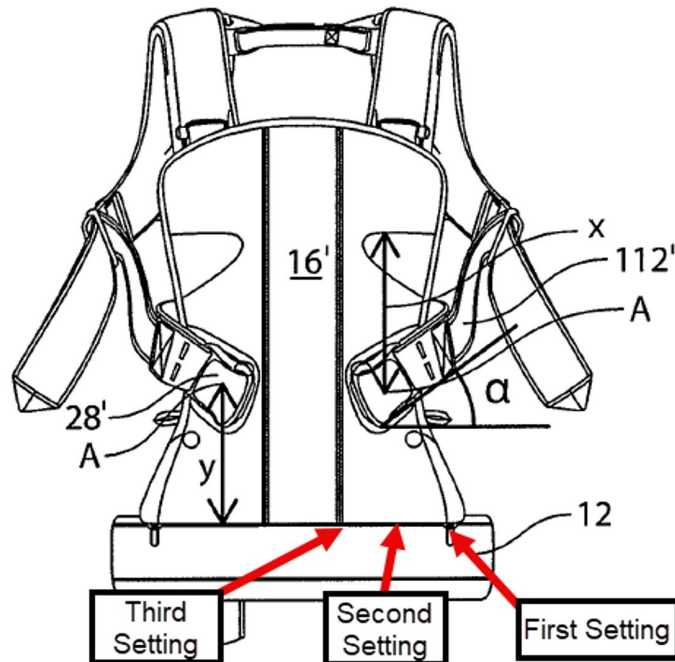


FIG. 9 of Andren (annotated)

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 5: The Challenged Claims are anticipated and obvious over Sharp, alone or in view of Lundh.

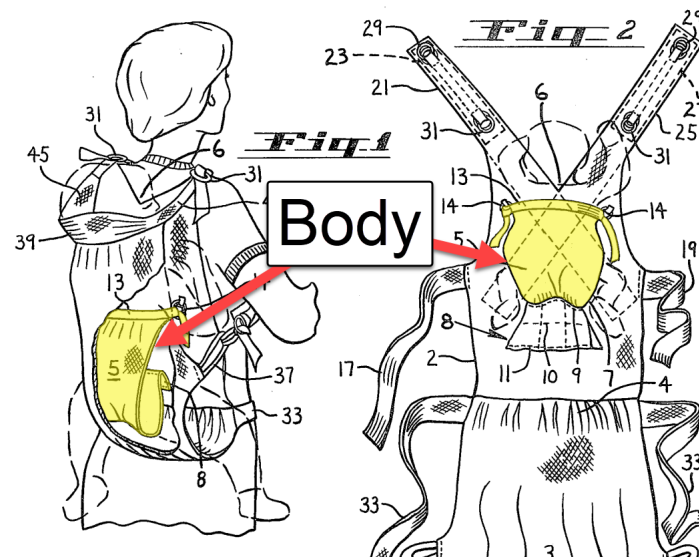
The Challenged Claims are anticipated and obvious over Sharp, alone or in view of the knowledge of a POSITA and/or Lundh. *See* Ex. 1003, Appx. E. Petitioner demonstrates anticipation and obviousness of the Challenged Claims by adopting the claim mapping set forth in the Listing of Claims at *supra* 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]**

Sharp discloses limitation [1pre]. Ex. 1003, Appx. E, limitation 1pre. The title of Sharp is “Baby Pack,” and FIG. 1 of Sharp illustrates a child being supported by a user and using the disclosed carrier. Ex. 1003, Appx. E, limitation 1pre.

b. Limitation [1a]

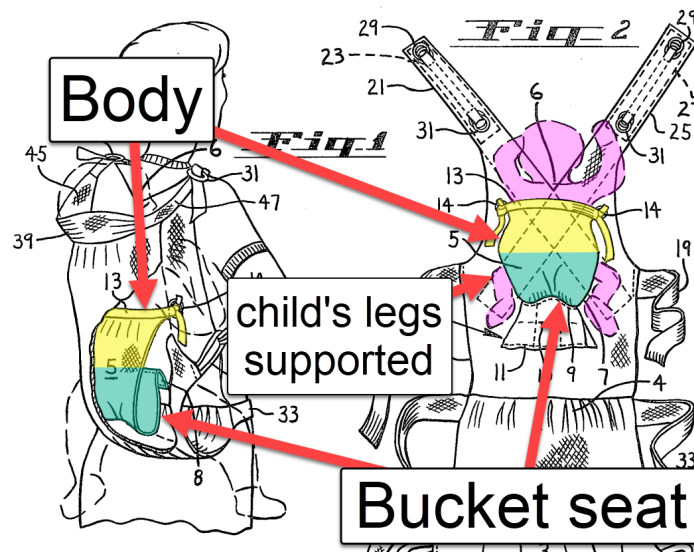
Sharp discloses limitation [1a]. Ex. 1003, Appx. E, limitation 1a. Sharp describes that the disclosed carrier includes “an inner seat which will provide full support for an infant from its buttocks to its shoulder blades.” Ex. 1006, 1:37-40.



FIGS. 1 & 2 of Sharp (annotated)

c. Limitation [1b]

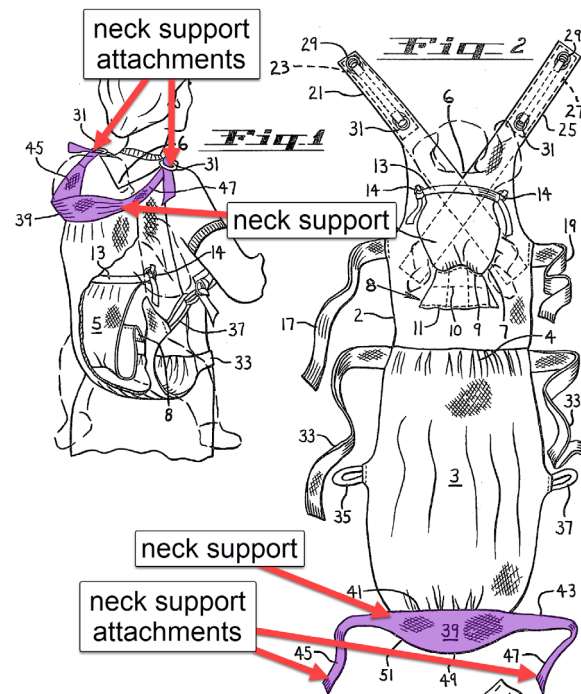
As illustrated in the below annotations of FIGS. 1 and 2, Sharp discloses that limitation [1b]. Ex. 1003, Appx. E, limitation 1b. Specifically, Sharp describes that “[o]n the inside surface of the front member (2) is fastened an inner seat (5),” and the inner seat (5) is depicted in the below figures as supporting the child’s legs. Ex. 1006, 1:65-67; Ex. 1003, Appx. E, limitation 1b.



FIGS. 1 & 2 of Sharp (annotated)

d. Limitation [1c]

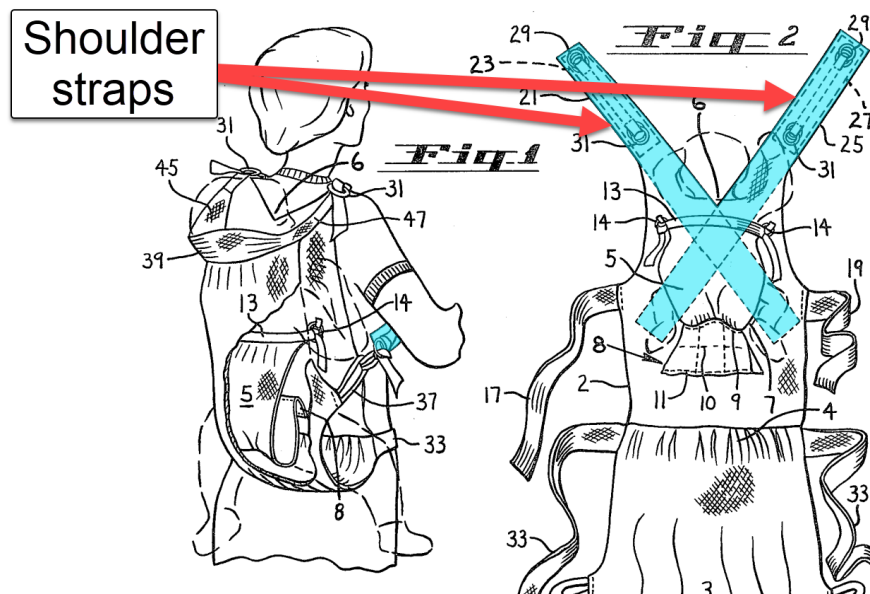
As illustrated in the below annotations to FIGS. 1 and 2 of Sharp, the disclosed carrier includes limitation [1c]. Ex. 1003, Appx. E, limitation 1c. In particular, Sharp describes a head support (39) “which will support the child’s head from his neck up the base of the skull to the lower back of the head.” Ex. 1006, 3:15-18. The illustrated head support includes head support straps 45 and 47 that connect to head support rings (i.e., first and second neck support attachments). Ex. 1003, Appx. E, limitation 1c; Ex. 1006, 3:10-14.



FIGS. 1 & 2 of Sharp (annotated)

e. Limitation [1d]

The below annotations illustrate that Sharp discloses limitation [1d]. Ex. 1003, Appx. E, limitation 1d; *see also* Ex. 1006, 2:12-15.



FIGS. 1 and 2 of Sharp (annotated)

f. Limitation [1e]

The above annotations also illustrate that Sharp discloses limitation [1e]. Ex. 1003, Appx. E, limitation 1e. Ex. 1003, Appx. E, limitation 1e; *see also* Ex. 1006, 2:12-15.

g. Limitation [1f]

Sharp discloses limitation [1f]. Ex. 1003, Appx. E, limitation 1f. Specifically, head strap retaining rings (e.g., 31 of FIGS. 1 and 2 of Sharp) are coupled to each shoulder strap and configured to receive the respective neck support attachments. Ex. 1006, 2:23-25 & 3:10-14.

h. Limitation [1g]

Sharp discloses limitation [1g] for the same reasons discussed above with

reference to limitation [1f].

i. Limitation [1h]

Sharp discloses limitation [1h] as illustrated in the annotations to FIG. 1 below. Ex. 1003, Appx. E, limitation 1h. When the support straps 45 and 47 are connected to the head strap retaining rings 31, the head support 39 extends upwards to support the child's neck. *Id.*; see also Ex. 1006, 3:4-7 & 3:15-18.

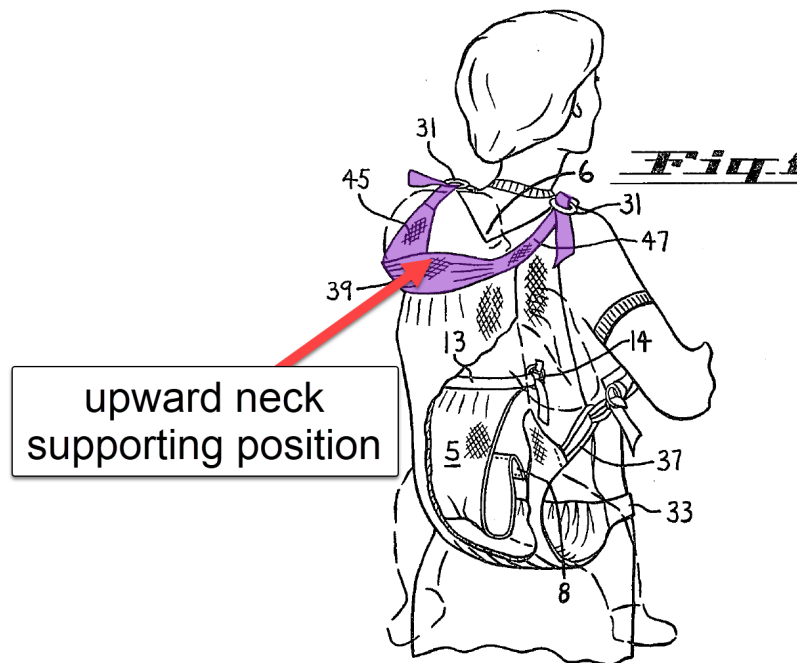
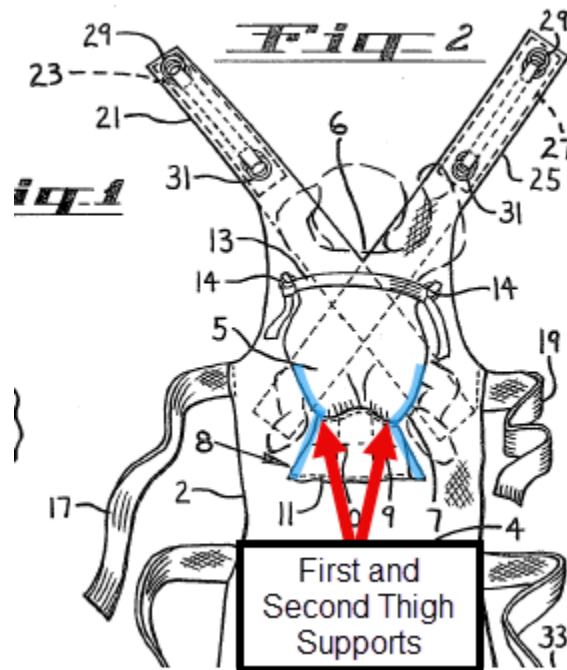


FIG. 1 of Sharp (annotated)

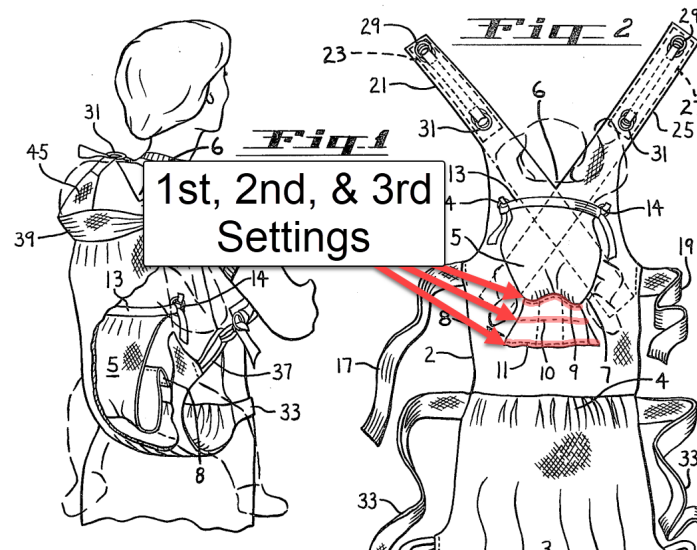
j. Limitation [1i]

Sharp discloses limitation [1i] as illustrated in annotated FIG. 2 below. Ex. 1003, Appx. E, limitation 1i. The inner seat 5 of Sharp is depicted as supporting

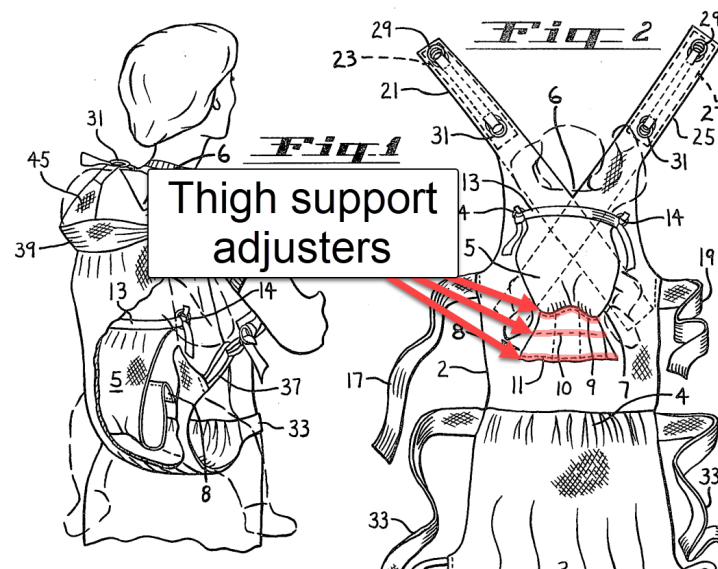
the child's thighs on either side, such that the child's legs extend outward and bend at the knee. *Id.* Moreover, Sharp describes that "seams (9), (10) and (11) may be progressively removed so that an increasingly wide portion of the bottom section (8) becomes available to support the child's buttocks and back as the child increases in size," which also serves to support the child's thighs in the depicted position. Ex. 1006, 2:58-65 (emphasis added). To the extent that Patent Owner contends that thigh supports are not disclosed in Sharp, a POSITA would find it obvious to widen the seat to provide such support, for the obvious benefits afforded by such widening. Ex. 1003, Appx. E, limitation 1i. For example, a wider seat spreads the child's load across a wider surface, enhancing the child's comfort. *Id.* Moreover, as taught by the Hip Dysplasia Institute (Ex. 1012), it was known that supporting the thighs to achieve the spread-squat position was an ergonomically sound construction of a baby carrier; this would require little more than widening the seat and ensuring that the removable seams were oriented such that the child's legs were supported into that position. *Id.* Additionally, Lundh discloses support means for a child's legs to achieve a desirable frog position in a carrier. Ex. 1008, ¶ [0043]. Thus, it would have been obvious to a POSITA to include limitation [1i] in the carrier of Sharp. Ex. 1003, Appx. E, limitation 1i.

**FIG. 2 of Sharp (annotated)****k. Limitation [1j]**

Sharp also discloses limitation [1j] as illustrated in the below annotated figures. Ex. 1003, Appx. E, limitation 1j. As discussed above, Sharp describes that “seams (9), (10) and (11) may be progressively removed so that an increasingly wide portion of the bottom section (8) becomes available to support the child’s buttocks and back as the child increases in size.” Ex. 1006, 2:58-65. These seams define the first, second, and third settings, as in claim 1 of the ’055 Patent. Ex. 1003, Appx. E, limitation 1j.

**FIGS. 1 and 2 of Sharp (annotated)****I. Limitation [1k]**

Sharp discloses limitation [1k] under either a 112(f) or P&O construction. See Ex. 1003, Appx. E, limitation 1k. Namely, the seams discussed at *supra* limitation [1k] are thigh support adjusters having first, second, and third settings to adjust a depth and width of the seat that provides the thigh support and accommodate a child at different sizes. *Id.*



FIGs. 1 and 2 of Sharp (annotated)

Even if this feature were not disclosed in Sharp, Lundh also discloses limitation [1k] for the reasons discussed at *supra* Ground 4, limitation [1k]. *Id.* Combining the thigh support adjuster of Lundh with the carrier disclosed in Sharp would be obvious at least because it would allow for reversible adjustment of the seat—something not afforded by the seam-ripping requirement of Sharp. *Id.* This combination would therefore provide the obvious benefit of re-use with a second child smaller than the family's first child. *Id.*

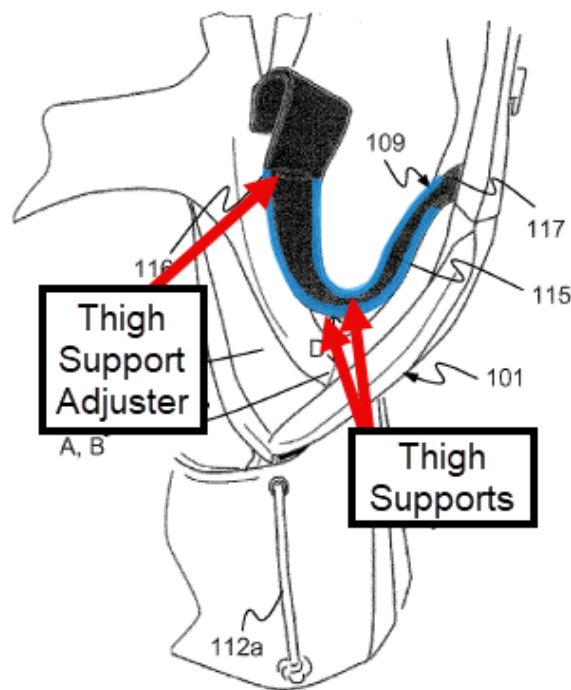


Fig. 6

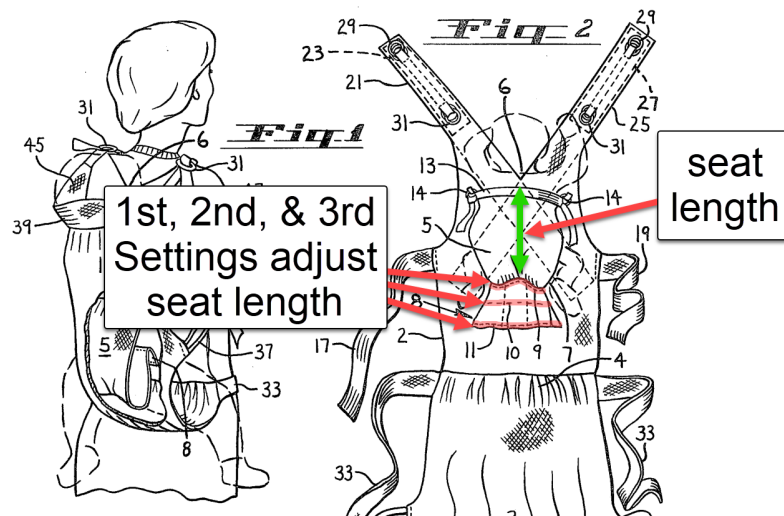
FIG. 6 of Lundh (annotated)

For the foregoing reasons, Sharp discloses limitation [1k]. Moreover, even if this feature were not disclosed in Sharp, it would have been obvious to modify the carrier of Sharp to include on or more thigh support adjusters, as in Lundh, and a POSITA would have been motivated to so modify the carrier of Sharp to more easily and reversibly accommodate a child at different sizes. Ex. 1008, ¶¶ [0042] & [0044].

m. Limitation [1m]

As illustrated in annotated FIGs. 1 and 2 below, Sharp discloses limitation [1m]. Ex. 1003, Appx. E, limitation 1m. Specifically, the illustrated seams allow

for selective positioning of the thigh supports to a first, second, or third setting, and each setting provides a different length of the body of the carrier. *Id.*



FIGS. 1 and 2 of Sharp (annotated)

Even if this feature were not disclosed in Sharp, it would be obvious to modify the carrier of Sharp to include such a feature, for example, using the one or more thigh support adjusters of Lundh, as discussed above. *See supra* limitation [1k].

n. Limitation [1n]

As illustrated in the annotations to FIGS. 1 and 2 above, Sharp discloses limitation [1n]. Ex. 1003, Appx. E, limitation [1n].

2. Claim 2

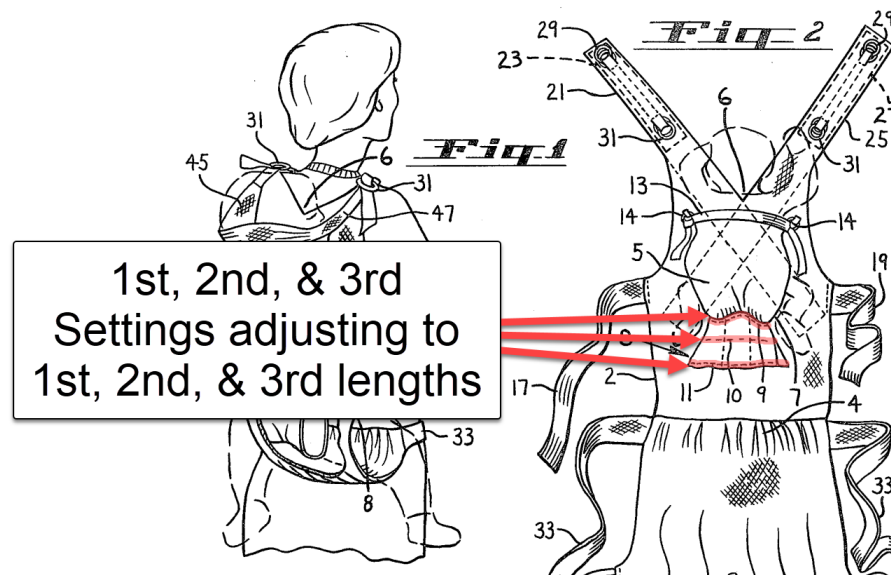
a. Limitation [2pre]

See supra limitation [1pre].

b. Limitation [2a]

Sharp discloses limitation [2a] as illustrated in the below annotated figures.

Ex. 1003, Appx. E, limitation 2a. When the highest seam is used, the body has a first length. *Id.*



FIGs. 1 and 2 of Sharp (annotated)

c. Limitation [2b]

The above figure also illustrates that Sharp discloses limitation [2b]. Ex. 1003, Appx. E, limitation 2b. When the middle seam is used, the body has a second length greater than the first length. *Id.*

d. Limitation [2c]

The above figure also illustrates that Sharp discloses limitation [2c]. Ex. 1003, Appx. E, limitation 2c. When the lowest seam is used, the body has a third length that is greater than the second length. *Id.*

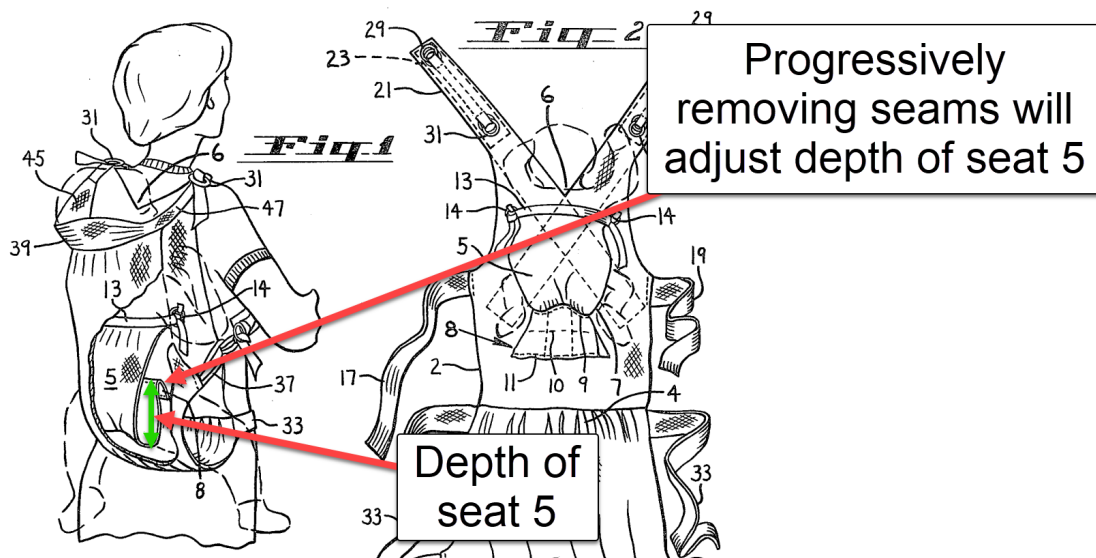
3. Claim 3

a. Limitation [3pre]

See supra limitation [1pre].

b. Limitation [3a]

For the reasons discussed at *supra* limitation [1m], Sharp discloses limitation [3a]. Ex. 1003, Appx. E, limitation 3a. The depth adjustment is also illustrated in the below annotations to FIGs. 1 and 2 of Sharp. *Id.* The depth of the bucket seat is adjustable by removing the seams, such that the bucket seat is deeper when the lowest seam is used and less deep when the middle or highest seam is used. *Id.*



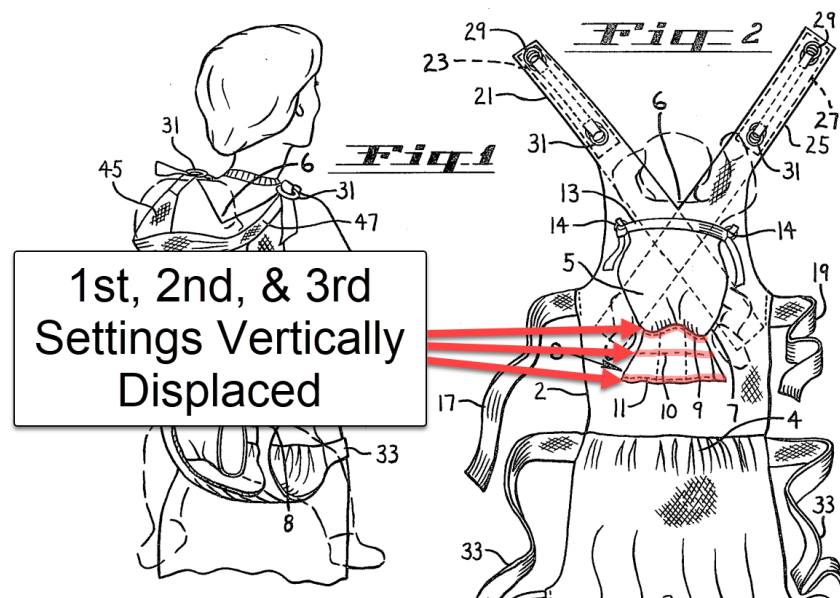
FIGs. 1 and 2 of Sharp (annotated)

4. Claim 4**a. Limitation [4pre]**

See supra limitation [1pre].

b. Limitation [4a]

Sharp discloses limitation [4a] as illustrated in the below annotations and for the reasons discussed at *supra* limitations [1j] and [1m]. Ex. 1003, Appx. E, limitation 4a. The highest seam (i.e., the first setting) is at least partially vertically displaced from the middle seam (i.e., the second setting). *Id.*



FIGs. 1 and 2 of Sharp (annotated)

c. Limitation [4b]

Sharp discloses limitation [4b] as illustrated in the above figures and for the reasons discussed at *supra* limitations [1j] and [1m]. Ex. 1003, Appx. E, limitation

4b. The middle seam (i.e., the second setting) is at least partially vertically displaced from the lowest seam (i.e., the third setting). *Id.*

d. Limitation [4c]

Sharp discloses limitation [4c] as illustrated in the above figures and for the reasons discussed at *supra* limitations [1j] and [1m]. Ex. 1003, Appx. E, limitation 4c. The lowest seam (i.e., the third setting) is at least partially vertically displaced from the highest seam (i.e., the first setting). *Id.*

e. Limitation [4d]

Sharp discloses limitation [4d] as illustrated in the above figures and for the reasons discussed at *supra* limitations [1j] and [1m]. Ex. 1003, Appx. E, limitation 4d. The middle seam (i.e., the second setting) is between the highest seam (i.e., the first setting) and the lowest seam (i.e., the third setting). *Id.*

5. Claim 5

a. Limitation [5pre]

See supra limitation [1pre].

b. Limitation [5a]

Sharp discloses limitation [5a]. Ex. 1003, Appx. E, limitation 5a. Sharp describes that “the back and buttocks of a small infant will be supported by the narrow section (7)” (i.e., corresponding to the first setting). Ex. 1006, 2:58-60.

c. Limitation [5b]

A POSITA would appreciate that the carrier of Sharp is a child in the height range recited in limitation [5b] because a child in this range would be a small infant (e.g., between 0 and 3 months of age). Ex. 1003, Appx. E, limitation 5b.

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]

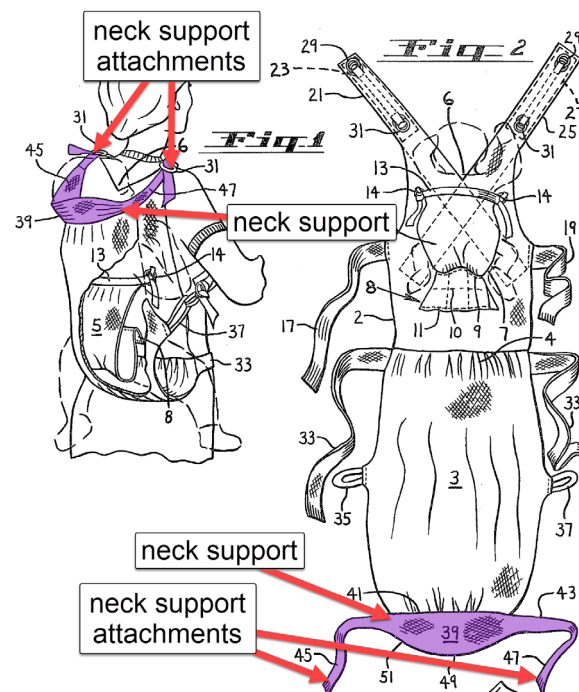
See supra limitation [1g].

i. Limitation [11h]

See supra limitation [1h].

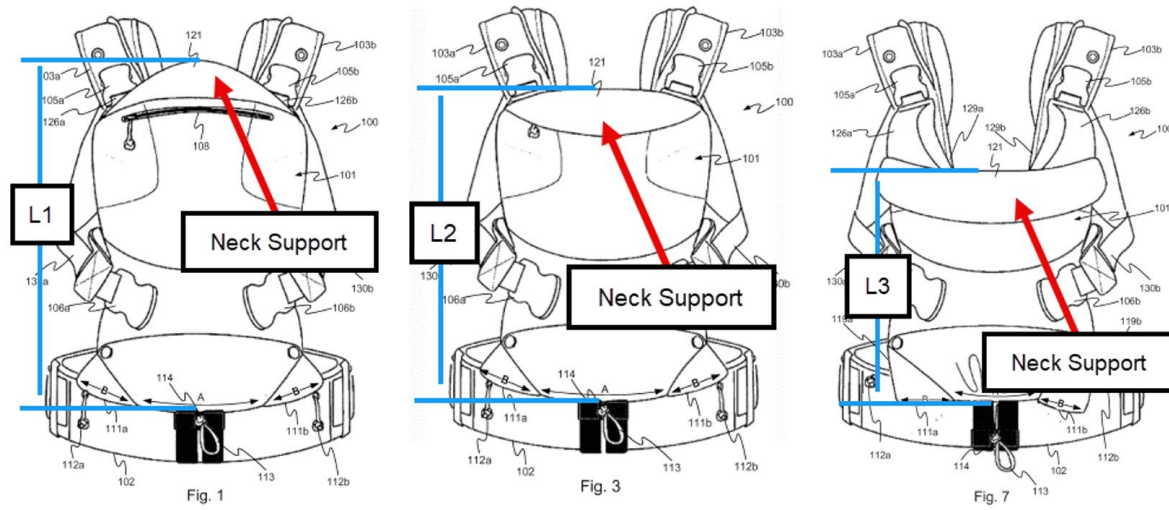
j. Limitation [11i]

A POSITA would understand that the neck support of Sharp—constructed of cloth—can easily be folded down and away from the user (e.g., by merely folding the area above the seam down or by disconnecting one or more of the illustrated neck support attachments). Ex. 1003, Appx. E, limitation 11i. Folding the neck support down and away would reduce the body length because the neck support would no longer be in the upright position. *Id.*



FIGs. 1 and 2 of Sharp (annotated)

Even if the foregoing feature were not disclosed in Sharp, it would be obvious to do in view of the teachings of Lundh or obvious to modify the carrier of Sharp to include a neck support as disclosed in Lundh, which also includes limitation [11i], as illustrated in the below annotated figures. Ex. 1003, Appx. E, limitation 11i. Specifically, Lundh describes an upper part 121 that, when in a raised position, provides support for the child's head, as illustrated in FIG. 1. Ex. 1008, ¶ [0039]. This upper part 121 is foldable into at least two positions, including a "partly lowered" position (FIG. 3) and a "completely folded down" position (FIG. 7). *Id.* Each of these folded-down positions reduces the body length, as illustrated in the below annotated figures. It would be obvious to combine the foldable support of Lundh with the carrier of Sharp, and a POSITA would be motivated to so modify the carrier of Sharp to provide more freedom of movement (e.g., for an older child) and to allow for a forward-facing position in which the child's face is free. *See id.*



FIGs. 1, 3, and 7 of Lundh (annotated)

k. Limitation [11j]

See supra limitation [1i].

l. Limitation [11k]

As illustrated in the below figure, Sharp discloses limitation [11k]. Ex. 1003, Appx. E, limitation 11k. The thigh supports are configured relative to the body as described at *supra* limitation [1i], and the body, first thigh support, and second thigh support combine to form a seat. *See* Ex. 1006, 1:38-40.

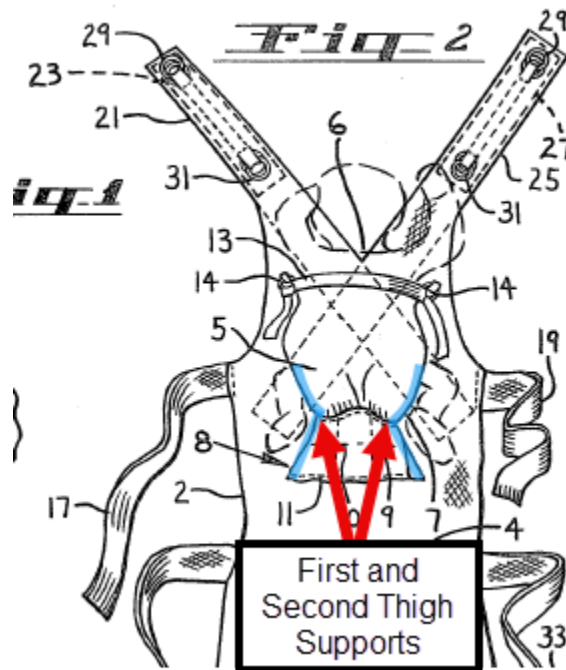


FIG. 2 of Sharp (annotated)

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]

Sharp discloses limitation [15a] as illustrated in annotated FIG. 2 below. Ex. 1003, Appx. E, limitation 15a. Indeed, the position of the child in FIG. 2 of Sharp 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.*

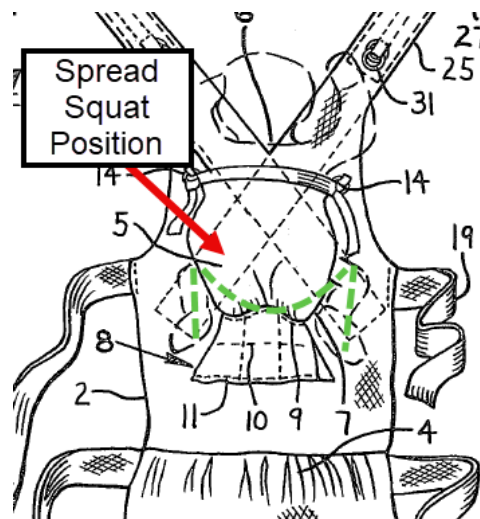


FIG. 2 of Sharp (annotated)

Even if this feature were not disclosed in Sharp, Lundh also discloses that a carrier is configured to carry a child in a “frog position” which is synonymous with “spread squat position.” *Id.*; *see also* Ex. 1008, ¶¶ [0016] & [0044]. It would be obvious to modify the carrier of Sharp to implement a spread-squat position, and a POSITA would have been motivated to so modify the carrier of Sharp because the advantages of the spread-squat position were known in the art, as discussed in Lundh. *See id.*

Moreover, as discussed above with reference to Ground 4, 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, and a POSITA would be motivated to achieve this position through simple modification of the width of the seat and position of the removable seams to achieve this position. Ex. 1003, Appx. E, 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]

Sharp discloses limitation [21a]. Ex. 1003, Appx. E, limitation 21a. The carrier of Sharp provides removable seams “so that an increasingly wide portion of the bottom section (8) becomes available to support the child’s buttocks and back as the child increases in size.” Ex. 1006, 2:60-65 (emphasis added to show that Lundh uses “child” rather than “infant” as it does with respect to the first position (*see* Ex. 1006, 2:58-60)). 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. E, 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**

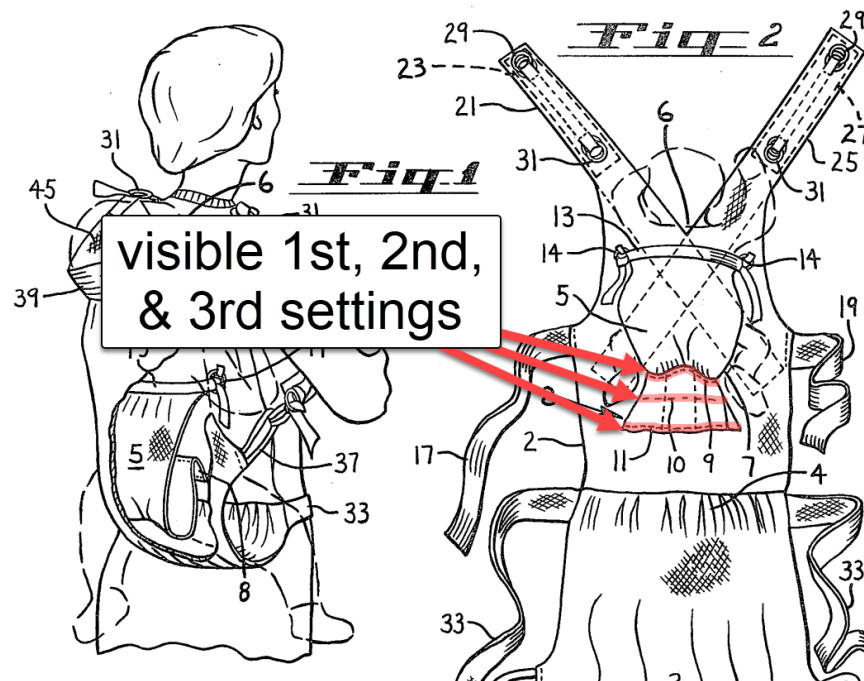
a. Limitation [28pre]

See supra limitation [1pre].

b. Limitation [28a]

As illustrated in annotated FIG. 2 below, Sharp discloses limitation [28a].

Ex. 1003, Appx. E, limitation 28a. In particular, the seams 9, 10, 11 are visible to the user, such that the user can visibly identify the current setting and adjust the inner seat 5 to a different setting. *Id.*



FIGs. 1 and 2 of Sharp (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 6: The Challenged Claims are anticipated and obvious over Kalouskova, alone or in view of Lundh.

The Challenged Claims are anticipated and obvious over Kalouskova, alone or in view of the knowledge of a POSITA and/or Lundh. *See* Ex. 1003, Appx. F. 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]

Kalouskova discloses limitation [1pre]. Ex. 1003, Appx. F, limitation 1pre. The invention of Kalouskova is described as “a child carrier for carrying babies and children on the body of the carrying person.” Ex. 1007, p. 1.

b. Limitation [1a]

Kalouskova discloses limitation [1a]. Ex. 1003, Appx. F, limitation 1a. The carrier of Kalouskova includes a carry element comprising a back support (e.g., 5 of FIG. 1) and a head rest (e.g., 3 of FIG. 1). Ex. 1007, p. 1.

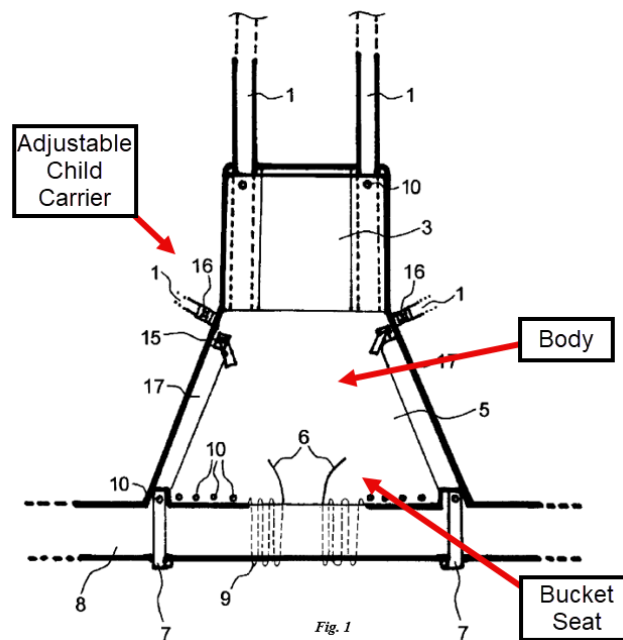


FIG. 1 of Kalouskova (annotated)

c. Limitation [1b]

Kalouskova discloses limitation [1b]. Ex. 1003, Appx. F, limitation 1b. Specifically, compression of the sides of the back support can be adjusted using a fastening clip to “allow the fabric to provide an optimal support for the child’s legs in all positions of the back support width.” Ex. 1007, p. 2.

d. Limitation [1c]

Kalouskova discloses limitation [1c] as illustrated in the annotated figure below. Ex. 1003, Appx. F, limitation 1c. A head support (e.g., 3 of FIG. 3) supports the child’s head and neck. *Id.* Shoulder straps of the carrier of Kalouskova are disposed in a pocket or sleeve (e.g., 2 of FIG. 3), and press buttons are selectively

connected to one of multiple bottom parts of the press button on the shoulder straps to position the headrest. *Id.*; see also Ex. 1007, pp. 2-3.

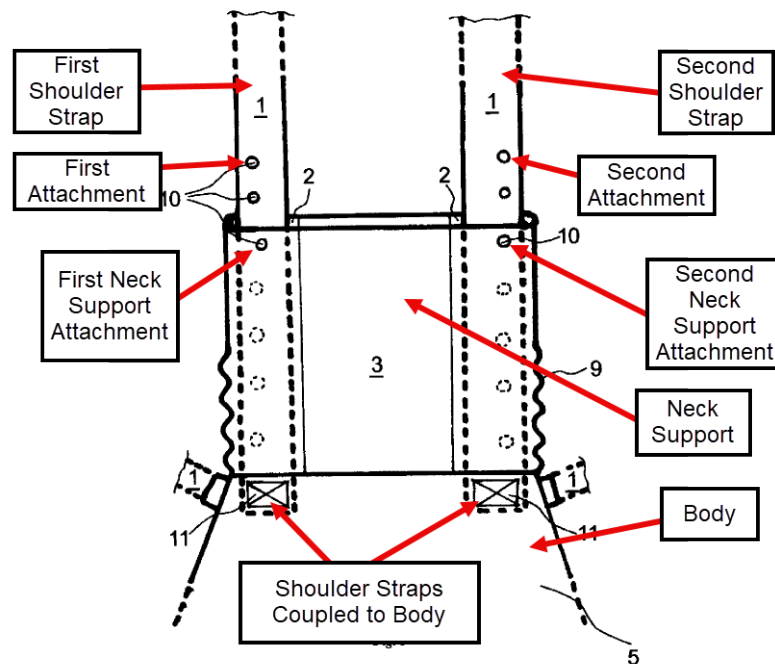


FIG. 3 of Kalouskova (annotated)

e. Limitation [1d]

Kalouskova discloses limitation [1d] as illustrated in the above figure. Ex. 1003, Appx. F, limitation 1d.

f. Limitation [1e]

The above figure also illustrates that Kalouskova discloses limitation [1e]. Ex. 1003, Appx. F, limitation 1e.

g. Limitation [1f]

The above figure also illustrates that Kalouskova discloses limitation [1f].

Ex. 1003, Appx. F, limitation 1f. Specifically, press buttons are disposed on the shoulder straps to receive the neck support attachments. Ex. 1007, pp. 2-3.

h. Limitation [1g]

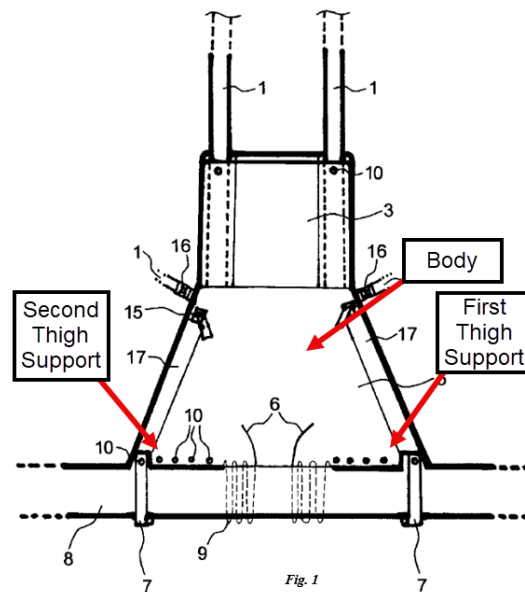
Kalouskova discloses limitation [1g] for the same reasons discussed at *supra* limitation 1f.

i. Limitation [1h]

Kalouskova discloses limitation [1h] as illustrated in the above figure. Ex. 1003, Appx. F, limitation 1h. When the neck support is in the highest position on the strap (i.e., using the press buttons), the neck support is in an upward neck supporting position. *Id.*

j. Limitation [1i]

Kalouskova discloses limitation [1i] as illustrated in the below annotations to FIG. 1. Ex. 1003, Appx. F, limitation [1i]. A POSITA would appreciate that the indicated portions of the body can be positioned to support a child's thighs in the same manner as the thigh supports of Andren provide thigh support to the child. *See id.*

**FIG. 1 of Kalouskova (annotated)****k. Limitation [1j]**

The below modifications and annotations to FIG. 1 illustrate that Kalouskova discloses limitation [1j]. Ex. 1003, Appx. F, limitation 1j. The carrier of Kalouskova includes fastening laces on either side (e.g., 4 of FIG. 2), which connect between eyelets (e.g., 7 of FIG. 1) and a fastening clip (e.g., 15 of FIG. 2). Ex. 1007, p. 3. The fastening laces pass through a loop (e.g., 17 of FIG. 1), and the fastening laces can be tightened to provide different amounts of compression (e.g., 9 of FIG. 1), which provides different settings illustrated as L1, L2, and L3 in the below figures. *See id.*

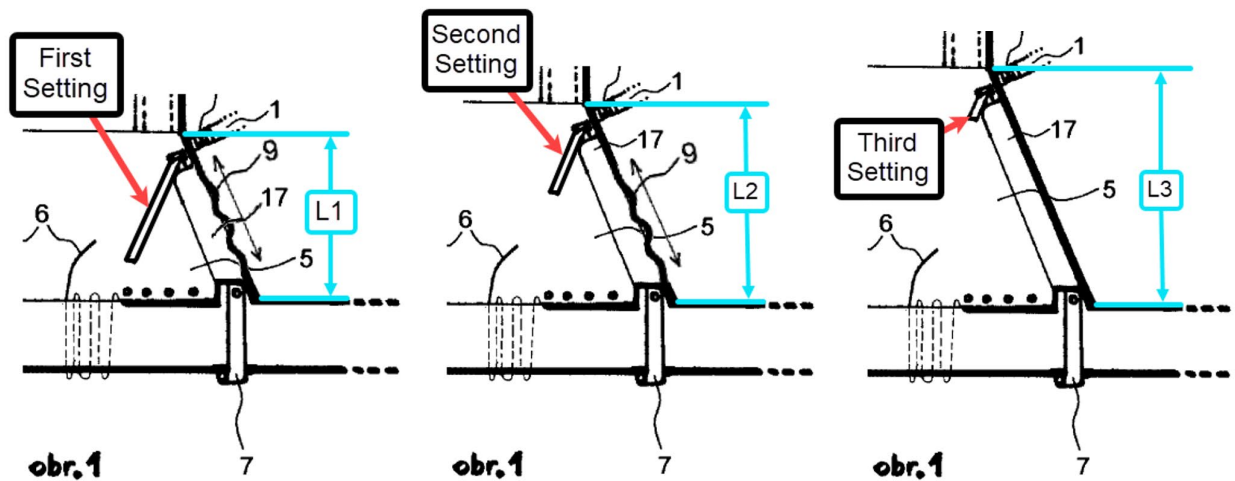


FIG. 1 of Kalouskova (modified and annotated)

I. Limitation [1k]

To the extent a meaning can be ascribed to limitation [1k] this feature is disclosed in Kalouskova either under a Section 112(f) or P&O construction. Alternatively, it would be obvious to a POSITA to modify the carrier of Kalouskova to include limitation [1k] in view of the knowledge of a POSITA or in view of Lundh.

First, the below figure illustrates that Kalouskova discloses thigh support adjusters. As discussed at *supra* limitation [1j], the carrier of Kalouskova provides adjustable fastening laces to provide different adjustment options around the thigh support areas. Ex. 1003, Appx. F, limitation 1j. While Patent Owner may argue that these fastening laces are not “coupled to the first thigh support *and* the second thigh support,” no such feature or structure is supported in the ’055 Patent. *Id.* Put another way, the *pair* of adjusters in Kalouskova are an equivalent disclosure to the

Second, even if limitation [1k] were not disclosed in Kalouskova, 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 Kalouskova. Ex. 1003, Appx. F, limitation [1k]. The thigh support adjuster of Lundh functions as described at *supra* Ground 4, limitation [1k]. It would have been obvious for a POSITA to replace one known element with another, for example replacing the lace and fastening clip of Kalouskova with the hook-and-eye-connection of Lundh to accommodate changes in child size, and to increase the comfort of the child. *Id.*; *see also* Ex. 1003, ¶ 121.

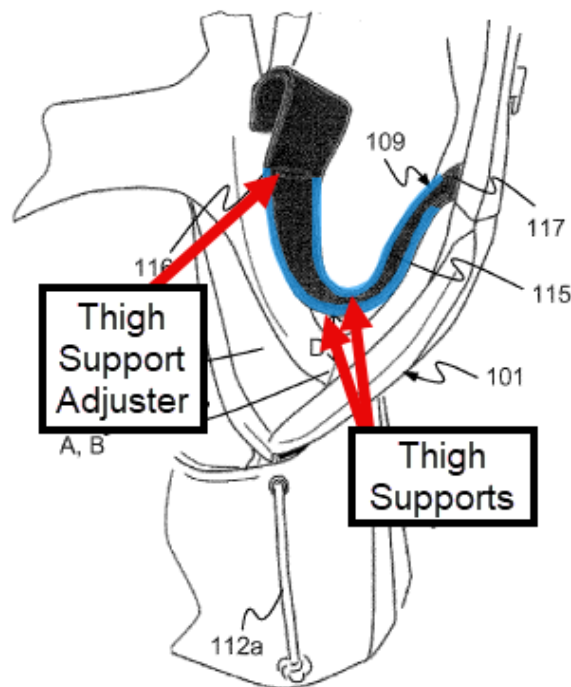


Fig. 6

FIG. 6 of Lundh (annotated)

m. Limitation [1m]

As illustrated at *supra* limitation [1j], the body length can be adjusted using

the fastening laces (i.e., thigh support adjusters), which may be positioned to first, second, or third settings. Ex. 1003, Appx. F, limitation 1m.

n. Limitation [1n]

The body of the bucket seat is illustrated at *supra* limitation [1a]. The length of the body that is adjustable using the fastening laces is defined from a bottom of the bucket seat to a top of the body. Ex. 1003, Appx. F, limitation 1n.

2. Claim 2

a. Limitation [2pre]

See supra limitation [1pre].

b. Limitation [2a]

Kalouskova discloses limitation [2a], which corresponds to L1 in the below annotations. Ex. 1003, Appx. F, limitation 2a.

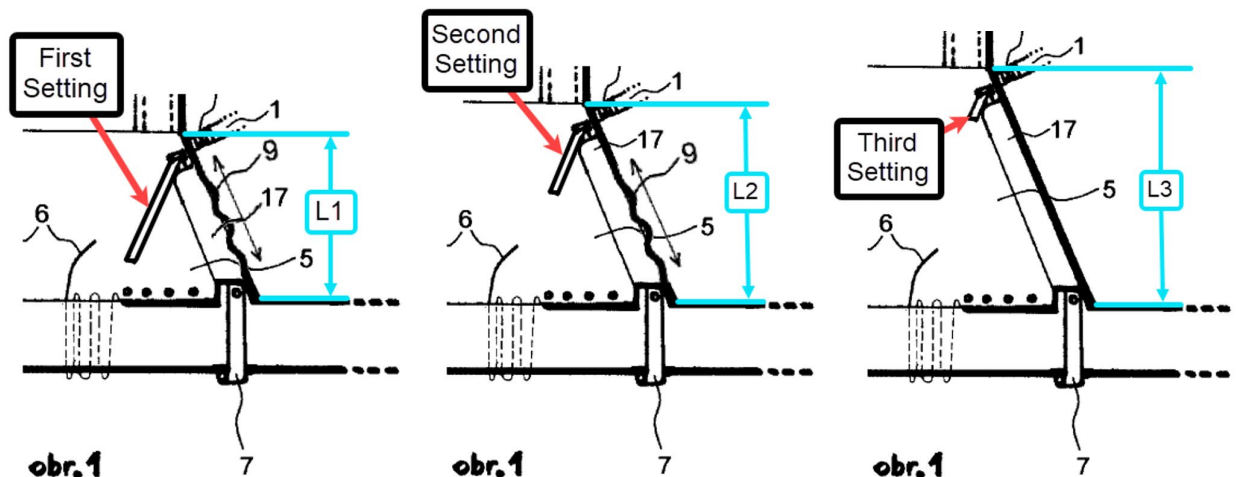


FIG. 1 of Kalouskova (modified and annotated)

c. Limitation [2b]

As illustrated in the above figure, Kalouskova limitation [2b], which corresponds to L2. Ex. 1003, Appx. F, limitation 2b.

d. Limitation [2c]

The above figure also illustrates that Kalouskova discloses limitation [2c], which corresponds to L3. Ex. 1003, Appx. F, limitation 2c.

3. Claim 3

a. Limitation [3pre]

See supra limitation [1pre].

b. Limitation [3a]

For the reasons discussed at *supra* limitation [1m], Kalouskova discloses limitation [3a]. Ex. 1003, Appx. F, limitation 3a. The depth of the bucket seat is adjustable using the fastening laces, such that the bucket seat is deeper when less compression is provided and less deep when more compression is provided. *Id.*

4. Claim 4

a. Limitation [4pre]

See supra limitation [1pre].

b. Limitation [4a]

The settings of Kalouskova are described at *supra* limitations [1j] and [1m]. As further illustrated below, the first setting is at least partially vertically displaced from the second setting. Ex. 1003, Appx. F, limitation 4a.

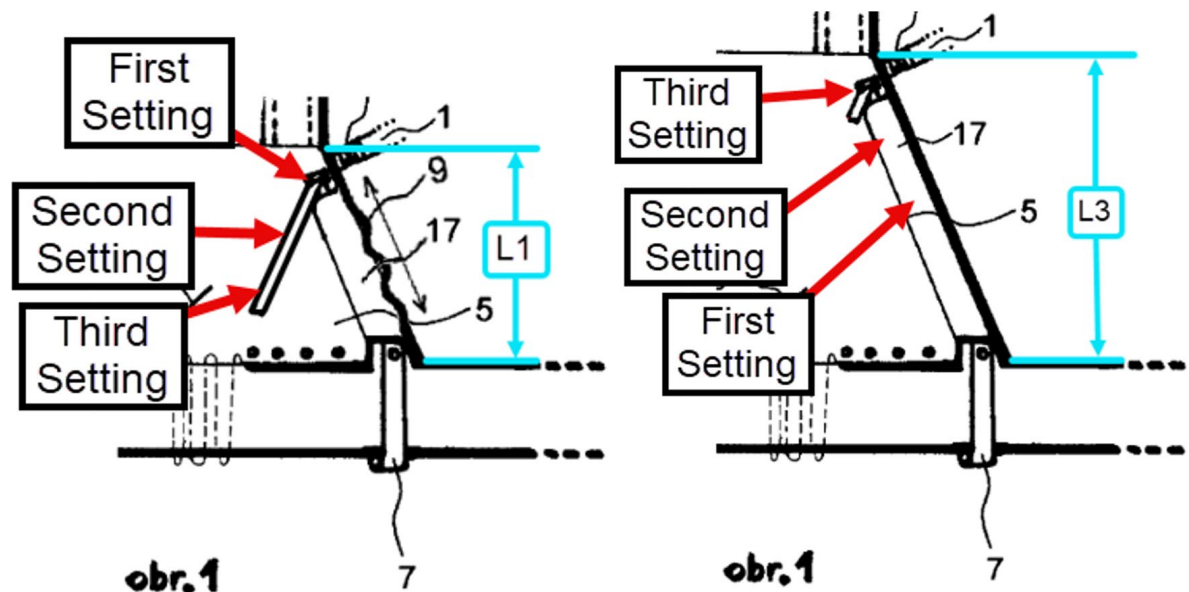


FIG. 1 of Kalouskova (modified and annotated)

c. Limitation [4b]

The above figure also illustrates that the second setting is at least partially vertically displaced from the third setting. Ex. 1003, Appx. F, limitation 4b.

d. Limitation [4c]

The above figure further illustrates that the third setting is at least partially vertically displaced from the first setting. Ex. 1003, Appx. F, limitation 4c.

e. Limitation [4d]

As shown in the above figure, the adjustable child carrier of Kalouskova defines the second setting between the first setting and the third setting. Ex. 1003, Appx. F, limitation 4d.

5. Claim 5**a. Limitation [5pre]**

See supra limitation [1pre].

b. Limitation [5a]

Kalouskova discloses limitation [5a]. Ex. 1003, Appx. F, limitation 5a. The carrier of Kalouskova is described as being configured “for carrying babies *and* children.” Ex. 1007, p. 1 (emphasis added). Additionally, Kalouskova describes that the disclosed carrier addresses problems in the prior art whereby existing carriers were not sufficiently adjustable (e.g., such that manufacturers offered smaller carriers for small children and larger carriers for toddlers). *Id.* To address these and other problems, Kalouskova describes that a purpose of the invention is “to execute a child carrier that would allow problem-free regulation of the carrier size, thus developing a carrier that can be regulated based on the child’s growth.” *Id.* Against this backdrop, a POSITA would appreciate that the first setting of Kalouskova corresponding to the first length configures the carrier in “an infant mode.” Ex. 1003, Appx. F, limitation 5a. For example, when the fastening laces of Kalouskova are adjusted to the highest amount of compression (corresponding to L1 described at *supra* limitation [1j]), the carrier of Kalouskova is in an infant mode. *Id.*

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. F, limitation 5b; *see also* Exs. 1010 & 1011. Accordingly, Kalouskova 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]

It would be obvious, in view of Kalouskova and the knowledge of a POSITA, to implement limitation [11i]. Ex. 1003, Appx. F, limitation 11i. The head rest of Kalouskova (e.g., 3 of FIG. 3) can be compressed using safety components (e.g., 10 of FIG. 3), which may be press buttons. Ex. 1007, p. 3. Varying degrees of compression are illustrated in the below modifications to FIG. 3, which shows that the most compressed position (i.e., L1 in the below annotations) achieves the equivalent effect of the “outside folded down position” of claim 11 of the ’055 Patent. Ex. 1003, Appx. F, limitation 11i. A POSITA would appreciate that implementing a folded down configuration, rather than the compressed configuration described in Kalouskova, is merely a design choice, and an obvious-to-try variant of the compressed configuration disclosed in Kalouskova. *Id.* Moreover, folding neck supports were known and commonplace in the art before the effective filing date of the ’055 Patent. Ex. 1003, ¶¶ 109-119. A POSITA could have easily

substituted a folding neck support, as known in the art, for the compressible support of Kalouskova to achieve predictable results, and a POSITA would have been motivated to so modify the carrier of Kalouskova to simplify the structure of the adjustable neck support (e.g., which may use fewer fasteners and be faster to modify from a folded-up to a folded-down position or vice versa). Ex. 1003, Appx. F, limitation 11i.

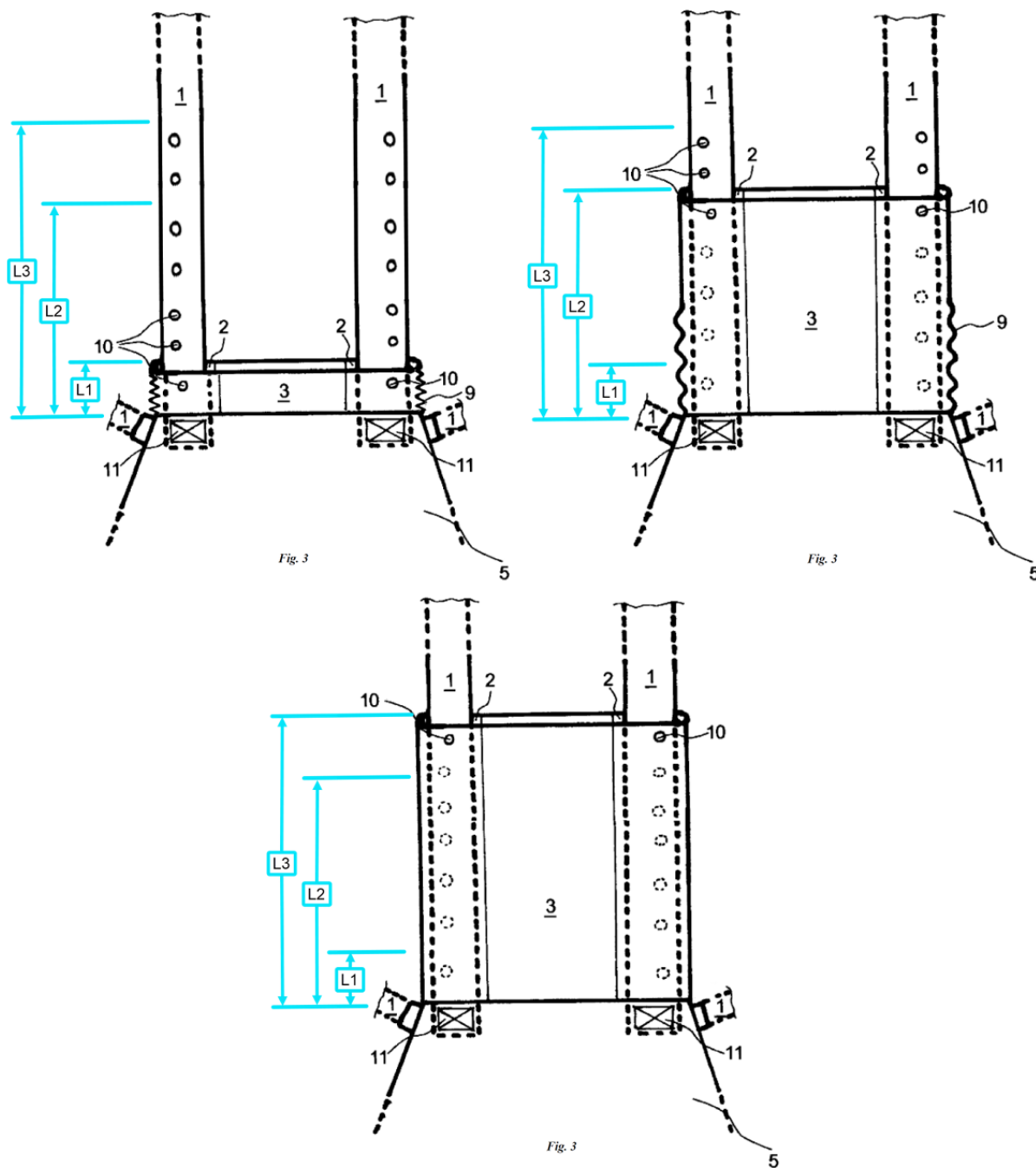


FIG. 3 of Kalouskova (modified and annotated)

k. Limitation [11j]

See supra limitation [1i].

l. Limitation [11k]

The thigh supports of Kalouskova are configured relative to the body as described at *supra* limitation [1i], and the body, first thigh support, and second thigh support combine to form a seat for the child. Ex. 1003, Appx. F, limitation 11k.

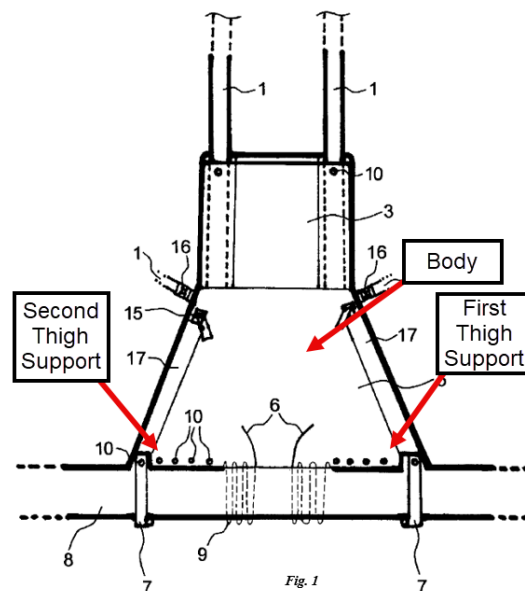


FIG. 1 of Kalouskova (annotated)

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]

A POSITA would appreciate that the seat of the carrier of Kalouskova can be configured to support the child in a spread squat position. Ex. 1003, Appx. F, limitation 15a. The carrier of Kalouskova was developed, in part, in view of the need for “correct positioning of small children when carried in carriers,” including “the need to support the entire length of the back and head and sufficient support of the legs, which should be bent and the fabric should reach from one knee to the other.” Ex. 1007, p. 1 (emphasis added).

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.

Accordingly, in view of the disclosure of Kalouskova regarding the need to correctly position a child in a carrier and support thighs to the knee, as well the knowledge of a POSITA regarding the spread squat position, a POSITA would understand that the seat of the carrier of Kalouskova is or beneficially should be configured to support the child in a spread squat position. Ex. 1003, Appx. F, limitation 15a. Even if this limitation were not taught by Kalouskova 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. *Id.*

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]

Kalouskova discloses limitation [21a]. Ex. 1003, Appx. F, limitation 21a. As discussed at *supra* limitations [5a] and [5b], the carrier of Kalouskova was provided, in part, to address problems in the prior art related to accommodating children at different ages and sizes, and Kalouskova describes that a purpose of the invention is “to execute a child carrier that would allow problem-free regulation of the carrier size, thus developing a carrier that can be regulated based on the child’s growth.” Ex. 1007, p. 1. When the fastening lace of Kalouskova are adjusted to the lowest amount of compression (corresponding to L3 described at *supra* limitation [1j]), the carrier of Kalouskova is in a toddler mode. Ex. 1003, Appx. F, limitation 21a.

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. F, limitation 21a; *see also* Exs. 1010 & 1011. Kalouskova would be understood to be directed to car-

rying children of this age and height. Ex. 1003, Appx. F, limitation 21a. Accordingly, the carrier of Kalouskova 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 configuring the fastening laces to a least-compress position. *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]

Kalouskova discloses limitation [28a]. Ex. 1003, Appx. F, limitation 28a. As discussed at *supra* limitation [1j] and illustrated in the below figures, the fastening laces of Kalouskova can be positioned to a first, second, or third setting. Ex. 1003, Appx. F, limitation 1j. Each of these settings is visible to the user, for example, because the position of the fastening laces and the amount of compression can easily be viewed, as shown in the below figures. Ex. 1003, Appx. F, limitation 28a.

To the extent that Patent Owner may argue that the claimed settings require some visual markings to be “visible to the user,” it would be obvious to a POSITA that the fastening laces of Kalouskova could use a visual scale or graduation marks if necessary or desirable to be able to identify a known configuration or adjust between three or more known configurations of the child carrier. *Id.*

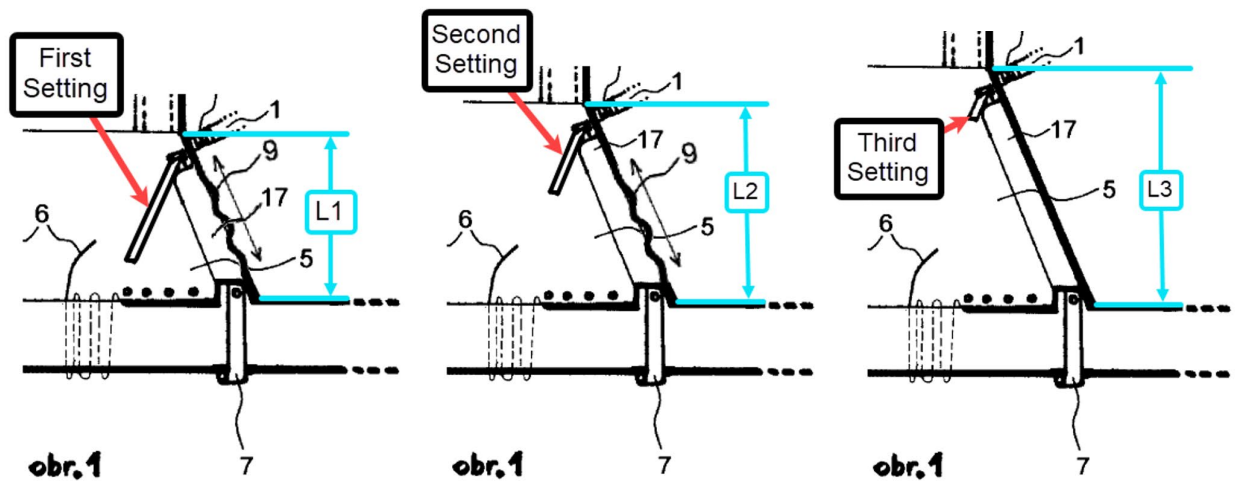


FIG. 1 of Kalouskova (modified and annotated)

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 13,994 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