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HONORABLE KYMBERLY K. EVANSON

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

SHENZHEN ROOT TECHNOLOGY CO.,
LTD., HONG KONG LUTE
TECHNOLOGY CO., LIMITED, AND
SHENZHEN CONGLIN E-COMMERCE
CO., LTD.,

Plaintiffs,

v.

CHIARO TECHNOLOGY LTD.,

Defendant.

Case No. 2:23-cv-00631-KKE

**PLAINTIFFS/COUNTERCLAIM
DEFENDANTS' INVALIDITY
CONTENTIONS**

CHIARO TECHNOLOGY LTD.,

Counterclaim Plaintiff,

v.

SHENZHEN ROOT TECHNOLOGY CO.,
LTD., HONG KONG LUTE
TECHNOLOGY CO., LIMITED,
SHENZHEN CONGLIN E-COMMERCE
CO., LTD., SHENZHEN ROOT E-
COMMERCE CO., LTD., SHENZHEN
TPH TECHNOLOGY CO., LTD.,
SHENZHEN LUTEJIACHENG
NETWORK TECHNOLOGY CO., LTD,
AND SHENZHEN JINRUIHANG
TECHNOLOGY CO., LTD.,

Counterclaim Defendants.

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<i>Ariad Pharms., Inc. v. Eli Lilly & Co.</i> , 598 F.3d 1336 (Fed. Cir. 2010) (<i>en banc</i>)	58
<i>Genentech, Inc. v. Novo Nordisk A/S</i> , 108 F.3d 1361 (Fed. Cir. 1997).....	57
<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966).....	16
<i>ICU Med. Inc. v. Alaris Medical Sys., Inc.</i> , 558 F.3d 1368 (Fed. Cir. 2009).....	58
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<i>MagSil Corp. v. Hitachi Glob. Storage Techs., Inc.</i> , 687 F.3d 1377 (Fed. Cir. 2012).....	57
<i>Nautilus, Inc. v. Biosig Instruments, Inc.</i> , 572 U.S. 898 (2014).....	54
<i>Sitrick v. Dreamworks, LLC</i> , 516 F.3d 993 (Fed. Cir. 2008).....	57
<i>Synthes USA, LLC v. Spinal Kinetics, Inc.</i> , 734 F.3d 1332 (Fed. Cir. 2013).....	58
<i>Univ. of Rochester v. G.D. Searle & Co.</i> , 358 F.3d 916 (Fed. Cir. 2004).....	58
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I. INTRODUCTION

Plaintiffs/Counterclaim Defendants Shenzhen Root Technology Co., Ltd., Hong Kong Lute Technology Co., Limited, Shenzhen Conglin e-Commerce Co., Ltd., Shenzhen Root E-Commerce Co., Ltd., Shenzhen TPH Technology Co., Ltd., Shenzhen Lutejiacheng Network Technology Co., Ltd., Shenzhen Jinruihang Technology Co., Ltd., and Shenzhen Xitao Network Technology Co., Ltd. (collectively, “Momcozy”) provide these Invalidity Contentions to Defendant/Counterclaim Elvie Chiaro Technology Ltd. (“Elvie”) for U.S. Patent Nos. 11,357,893 (“the ’893 Patent”), 11,413,380 (“the ’380 Patent”), 11,806,454 (“the ’454 Patent”), and 11,813,381 (“the ’381 Patent”), collectively, the “Patents-in-Suit” or “Asserted Patents.” Momcozy also serves contemporaneously herewith the accompanying production of documents as required by the Local Rules.

These Invalidity Contentions are made as to all claims of the ’893 Patent and only the claims of the ’380 Patent, the ’454 Patent, and the ’381 Patent that Elvie has identified in Elvie’s Disclosure of Asserted Claims and Initial Infringement Contentions served on June 10, 2024 (“Initial Infringement Contentions”) and Elvie’s Disclosure of Asserted Claims and Supplemental Infringement Contentions served on August 1, 2024 (“Supplemental Infringement Contentions”), collectively, the “Infringement Contentions”:

Patent	Asserted Claims
’893 Patent	1-28
’380 Patent	1-13, 15-24, 26-46
’454 Patent	17-19 and 21-33
’381 Patent	1-9, 11-18, 20-24, 26-27, and 29

Momcozy reserves the right to amend and/or supplement these invalidity contentions to the extent Elvie is allowed to change its Asserted Claims.

These invalidity contentions are being made before claim construction. Discovery is ongoing, no party depositions have been noticed or taken, and no third-party discovery has been taken. Accordingly, Momcozy reserves the right to supplement and amend these contentions to

1 the extent additional information becomes available during discovery. Momcozy may serve
2 third-party discovery including without limitation, based on discovery received from Elvie, the
3 named inventors of the Patents-in-Suit and associated companies, and/or companies or
4 individuals that it is informed and believes have relevant prior art. Momcozy reserves the right
5 to supplement and/or amend its invalidity contentions to include new prior art discovered from
6 Elvie, the named inventors, third parties, or other sources.

7 **II. RESERVATIONS**

8 **A. General Reservation of Rights**

9 The information provided shall not be deemed an admission regarding the scope of any
10 claims or the proper construction of those claims or any claim terms. Momcozy does not waive
11 the right to contest any claim constructions or to take the positions during claim construction
12 proceedings that have yet to occur that may be inconsistent with the invalidity contentions
13 herein. In certain instances, Momcozy has applied the claims to the prior art in view of Elvie's
14 allegations, admissions, or positions for purposes of these invalidity contentions only, to the
15 extent Momcozy can discern Elvie's allegations. This disclosure of invalidity contentions is not
16 intended to be, and is not, an admission that any Asserted Claim is infringed by any of
17 Momcozy's products, that any particular feature or aspect of any of the accused products
18 practices any limitations of the Asserted Claims, or that any of the constructions implicit in
19 Elvie's Infringement Contentions are reasonable, supportable, or proper. Rather, in some
20 instances, Momcozy's application of the claims to the prior art is intended to apply Elvie's
21 apparent interpretation of the claims.

22 **B. The Intrinsic Record**

23 Momcozy further reserves the right to rely on applicable industry standards and prior art
24 cited in the file histories of the Patents-in-Suit and any related U.S. and foreign patent
25 applications as invalidating references or to show the state of the art. Momcozy further reserves
26 the right to rely on the patent applicant's admissions concerning the scope of the prior art
27 relevant to the Patents-in-Suit found in, *inter alia*: the patent prosecution history for the Patents-

1 in-Suit and any related patents and/or parent applications or reexaminations (or *inter partes*
2 review or post-grant review proceedings); any deposition testimony of a named inventor or
3 inventors of the Patents-in-Suit; any deposition testimony or other admissions by Elvie; and the
4 papers filed and any evidence submitted by Elvie in connection with this or any related litigation
5 or proceeding.

6 **C. Rebuttal Evidence**

7 Prior art not included in these invalidity contentions, whether known or not known to
8 Momcozy, may become relevant. In particular, Momcozy is currently unaware of the extent, if
9 any, to which Elvie will contend that limitations of the Asserted Claims of the Patents-in-Suit are
10 not disclosed in the prior art identified herein or otherwise contend the Patents-in-Suit are not
11 invalid. To the extent that such an issue arises, Momcozy reserves the right to identify other
12 references that would render obvious the allegedly missing limitation(s) or otherwise rebut
13 Elvie's argument(s).

14 **D. Contextual Evidence**

15 Momcozy's claim charts cite particular teachings and disclosures of the prior art as
16 applied to the limitations of each of the Asserted Claims. However, persons having ordinary
17 skill in the art ("POSAs") generally may view an item of prior art in the context of his or her
18 experience and training, other publications, literature, products, and understandings. Moreover,
19 common sense may be employed as part of the obviousness analysis. As such, Momcozy may
20 rely on the uncited portions of the prior art references and on other publications, expert
21 testimony, and common sense as aids in understanding and interpreting the cited portions, as
22 providing context thereto, and as additional evidence that the prior art discloses a claim
23 limitation or the claimed subject matter as a whole. Momcozy further reserves the right to rely
24 on uncited portions of the prior art references, other publications, and testimony, including expert
25 testimony, to establish bases for combinations of certain cited references that render the Asserted
26 Claims obvious. The references discussed in the claim charts may disclose the elements of the
27 Asserted Claims explicitly and/or inherently, and/or they may be relied upon to show the state of

the art in the relevant time frame. The suggested obviousness combinations are provided in the alternative to anticipation contentions and are not to be construed to suggest that any reference included in the combinations is not by itself anticipatory.

III. PRIORITY DATE OF ASSERTED PATENTS

A. The '893 Patent, the '380 Patent, and the '381 Patent

Elvie's Supplemental Infringement Contentions allege that "each claim for the '893 patent, '380 patent, and '381 patent is entitled to a priority date of no later than June 15, 2017." Supplemental Infringement Contentions, Cover at 6.

The '893 Patent, the '380 Patent, and the '381 Patent were each filed on March 16, 2021, and purport to claim priority to U.S. Application No. 17/181,057, filed on February 22, 2021; U.S. Application No. 16/009,547, filed on June 15, 2018; GB Application Nos. 1709561, 1709564, 1709566, filed on June 15, 2017; and GB Application No. 1809036, filed on June 1, 2018. Elvie bears the burden to prove that the Asserted Claims of each of the '893 Patent, the '380 Patent, and the '381 Patent are entitled to a priority date earlier than March 16, 2021. Momcozy reserves the right to assert later priority dates based on any findings as to the priority date of the Asserted Claims by the Court, information learned through discovery, or otherwise. Momcozy further reserves the right to amend its invalidity contentions should Elvie fail to prove that any Asserted Claim is entitled to an earlier priority date.

B. The '454 Patent

Elvie's Supplemental Infringement Contentions allege that "each claim for the '454 patent is entitled to a priority date of no later than March 26, 2020." Supplemental Infringement Contentions, Cover at 6.

The '454 Patent was filed on December 30, 2022, and purports to claim priority to U.S. Application No. 17/907,347, filed as PCT Application No. PCT/GB2021/050764, on March 26, 2021; and GB Application No. 2004395, filed on March 26, 2020. Elvie bears the burden to prove that the Asserted Claims of the '454 Patent are entitled to a priority date earlier than December 30, 2022. Elvie cannot meet its burden to prove that the '454 Patent is entitled to a

1 priority date of March 26, 2020. GB Application No. 2004395 fails to provide written
2 description support and/or enable the claim limitations “a breast flange,” “a milk port,” “the
3 diaphragm is configured to extend over and adjacent to the milk port in a relaxed state,” and “a
4 pair of recessed finger grips,” among others.

5 Momcozy reserves the right to assert later priority dates based on any findings as to the
6 priority date of the Asserted Claims by the Court, information learned through discovery, or
7 otherwise. Momcozy further reserves the right to amend its invalidity contentions should Elvie
8 fail to prove that any Asserted Claim is entitled to an earlier priority date.

9 **IV. IDENTIFICATION OF PRIOR ART**

10 The following patents, publications, systems, and admitted prior art are prior art to the
11 Asserted Claims of the Patents-in-Suit under at least 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2).

12 Momcozy also incorporates as if fully set forth in these Invalidity Contentions the
13 complete prosecution histories for the Patents-in-Suit and related patents, including the prior art
14 and supporting documents cited in those prosecution histories. Momcozy may cite or rely upon
15 the prosecution histories, the examiner’s findings, and the prior art cited therein to support or
16 provide context for these Invalidity Contentions.

17 Momcozy not only relies upon the prior art disclosed in these Invalidity Contentions, but
18 also relies on any commercial embodiments and accompanying literature (or other evidence
19 and/or witness testimony) of the various assignees that correspond to the respective disclosures
20 found within the prior art disclosed in these contentions. The assignees’ various and respective
21 commercial embodiments and/or corresponding literature (or other evidence and/or witness
22 testimony) anticipate and/or render obvious the Asserted Claims of the Patents-in-Suit for at least
23 the reasons disclosed in these Invalidity Contentions, as well as for other independent reasons
24 found within the commercial embodiments and corresponding literature. Momcozy also reserves
25 the right to rely on related patents, published applications, foreign patents or publications, and
26 other patent documents as necessary to establish prior art status or clarify the disclosures cited.
27 Momcozy further reserves the right to rely on the earliest publication or priority dates to which

each of the prior art references are entitled, including dates on which a claim of priority may be based for patent references that are any of a divisional, continuation, or continuation-in-part of an earlier filed patent application.

A. The '893 Patent, the '380 Patent, and the '381 Patent

1. Patents and Published Patent Applications

Number	Inventor(s)	Filing Date	Publication or Issue Date
U.S. Pat. No. 4,673,388 ("Schlensog")	Klaus Schlensog et al.	Mar. 14, 1985	Jun. 16, 1987
U.S. Pat. No. 6,673,036	James Joseph Britto	Oct. 13, 2000	Jan. 6, 2004
U.S. Pat. No. 6,749,582	James J. Britto et al.	Apr. 30, 2002	Jun. 15, 2004
U.S. Pat. No. 6,840,918	James J. Britto et al.	Jul. 18, 2001	Jan. 11, 2005
U.S. Pat. No. 6,887,210	Steven C. Quay	Nov. 13, 2001	May 3, 2005
U.S. Pat. No. 7,223,255 ("Myers '255")	Kenneth E. Myers et al.	Jun. 19, 2002	May 29, 2007
U.S. Pat. App. Pub. No. 2004/0087898 ("Weniger")	Gotthilf Weniger	Nov. 1, 2002	May 6, 2004
U.S. Pat. No. 7,875,000	Yvonne Krebs et al.	May 26, 2005	Jan. 25, 2011
U.S. Pat. No. 8,216,179	Patrik Bosshard et al.	Jul. 10, 2007	Jul. 10, 2012
U.S. Pat. App. Pub. No. 2007/0219486	Kenneth E. Myers et al.	May 3, 2007	Sep. 20, 2007
U.S. Pat. App. Pub. No. 2007/0179439	Stefan Vogelin et al.	Feb. 6, 2006	Aug. 2, 2007
International Pub. No. WO 2008/057218	Mark A. Luzbetak et al.	Oct. 24, 2007	May 15, 2008
U.S. Pat. App. Pub. No. 2008/0275386 ("Myers '386")	Kenneth E. Myers	May 2, 2008	Nov. 6, 2008
U.S. Pat. No. 8,118,772	Stella Dao et al.	May 1, 2008	Feb. 21, 2012
U.S. Pat. App. Pub. No. 2009/0281485 ("Baker")	Peter Christensen Baker et al.	Apr. 27, 2009	Nov. 12, 2009
U.S. Pat. No. 7,641,629	Yat Keung William Yuen	Apr. 12, 2004	Jan. 5, 2010
U.S. Pat. App. Pub. No. 2011/0071466 ("Silver '466")	Brian H. Silver et al.	Sep. 17, 2010	Mar. 24, 2011
AU Pat. App. Pub. No. AU 2010300058 ("Weber")	Beda Weber et al.	Sep. 17, 2010	Mar. 31, 2011
U.S. Pat. App. Pub. No. 2012/0277728	Beda Weber et al.	Sep. 17, 2010	Nov. 1, 2012
U.S. Pat. App. Pub. No. 2012/0116299 ("Tack")	Johannes Willem Tack	Jul. 21, 2010	May 10, 2012
U.S. Pat. No. 8,702,646	Dan Garbez et al.	Aug. 14, 2012	Apr. 22, 2014

1	U.S. Pat. App. Pub. No. 2013/0023821 (“Khalil”)	Gamal Khalil et al.	Jun. 28, 2012	Jan. 24, 2013
2	International Pub. No. WO 2014/094187	Etienne Furrer et al.	Dec. 12, 2013	Jun. 26, 2014
3	U.S. Pat. App. Pub. No. 2015/0157775 (“Hu”)	Min Hu	Feb. 12, 2015	Jun. 11, 2015
4	U.S. Pat. App. Pub. No. 2015/0283311 (“Alvarez”)	Jeffery B. Alvarez et al.	Feb. 6, 2015	Oct. 8, 2015
5	U.S. Pat. App. Pub. No. 2015/0217033	Ashia M. Pollen et al.	Apr. 14, 2015	Aug. 6, 2015
6	International Pub. No. WO 2015/120321	Jeffery B. Alvarez et al.	Feb. 6, 2015	Aug. 13, 2015
7	U.S. Pat. App. Pub. No. 2015/0328380	Etienne Furrer et al.	Dec. 12, 2013	Nov. 19, 2015
8	U.S. Pat. App. Pub. No. 2015/0335800	Daisuke Yamashita	Jan. 17, 2013	Nov. 26, 2015
9	U.S. Pat. App. Pub. No. 2016/0082166 (“Guthrie ’166”)	Gabrielle V. Guthrie et al.	Sep. 19, 2015	Mar. 24, 2016
10	U.S. Pat. App. Pub. No. 2016/0220743 (“Guthrie ’743”)	Gabrielle V. Guthrie et al.	Jan. 30, 2016	Aug. 4, 2016
11	International Pub. No. WO 2016/131677 (“Rigert ’677”)	Mario Rigert et al.	Feb. 9, 2016	Aug. 25, 2016
12	U.S. Pat. App. Pub. No. 2016/0206794 (“Makower”)	Joshua Makower et al.	Mar. 30, 2016	Jul. 21, 2016
13	CN Utility Model Pat. Pub. No. CN 205626591 U (“Jian”)	Zhongrong Jian	Apr. 1, 2016	Oct. 12, 2016
14	U.S. Pat. App. Pub. No. 2016/0296682 (“Phillips”)	Andrew Luke Phillips et al.	Apr. 8, 2016	Oct. 13, 2016
15	U.S. Pat. App. Pub. No. 2016/0271305 (“Kurihara”)	Kiyoshi Kurihara et al.	May 27, 2016	Sep. 22, 2016
16	U.S. Pat. App. Pub. No. 2016/0325031 (“Miller”)	Jared Miller et al.	May 9, 2016	Nov. 10, 2016
17	International Pub. No. WO 2016/186452 (“Park”)	Cho Hee Park	May 18, 2016	Nov. 24, 2016
18	CN Utility Model Pat. Pub. No. CN 205913751 U (“Fang”)	Guofeng Fang et al.	Jun. 29, 2016	Feb. 1, 2017
19	U.S. Pat. App. Pub. No. 2018/0333523 (“Chang”)	John Chang et al.	Feb. 9, 2017	Nov. 22, 2018
20	International Pub. No. WO 2017/139437	Joshua Makower et al.	Feb. 9, 2017	Aug. 17, 2017
21	U.S. Pat. App. Pub. No. 2017/0080135 (“Chen ’135”)	Junbo Chen	Sep. 29, 2015	Mar. 23, 2017
22	CN Utility Model Pat. Pub. No. CN 105233355 U (“Chen ’355”)	Junbo Chen	October 9, 2015	January 13, 2016
23	U.S. Pat. No. 10,149,929	Etienne Furrer et al.	Dec. 12, 2013	Dec. 11, 2018

International Pub. No. WO 2017/190678 (“Yuen”)	Cheuk Ho Yuen et al.	May 5, 2017	Nov. 9, 2017
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2. Publications

Title	Author / Publisher	Publication Date
Shouldn't the breast pump be as elegant as an iPhone and as quiet as a Prius by now? (https://archive.nytimes.com/parenting.blogs.nytimes.com/2014/03/16/shouldnt-the-breast-pump-be-as-elegant-as-an-iphone-and-as-quiet-as-a-prius-by-now/)	Courtney E. Martin et al.	Mar. 16, 2014
Breast pumps are finally getting better. Here's how. (https://slate.com/human-interest/2016/05/breast-pumps-are-finally-getting-better-here-s-how.html)	Elissa Strauss	May 27, 2016
A Feminist HCI Approach to Designing Postpartum Technologies: “When I First Saw a Breast Pump I Was Wondering if it was a Joke.”	Catherine D’Ignazio et al.	May 7-12, 2016
The Breast Pump Finally Joins the 21st Century (https://www.wired.com/2017/04/building-a-better-breast-pump/)	Arielle, Pardes	Apr. 27, 2016
Willow breast pump at CES 2017 (https://www.youtube.com/watch?v=XFVN2hIPlgA)	TechCrunch	Jan. 6, 2017
The Willow smart breast pump could be a game-changer for moms (https://www.youtube.com/watch?v=5IinsUDZks0)	Reviewed	Jan. 5, 2017
Smart breast pump lets moms multitask (https://money.cnn.com/2017/01/05/technology/breast-pump-willow-ces-2017/index.html)	Selena Larson	Jan. 5, 2017
CES 2017: Maternal Tech (https://www.vml.com/insight/ces-2017-maternal-tech)	Shepherd Laughlin	Jan. 7, 2017
CES 2017: The final word (https://www.cnet.com/home/smart-home/ces-2017-the-final-word/)	John Falcone	Jan. 9, 2017
Pump on the go with the Willow breast pump (https://www.youtube.com/watch?v=DfKUcamxOPI)	CNET	Jan. 10, 2017
How a smart breast pump won CES (https://www.engadget.com/2017-01-10-how-willow-smart-breast-pump-won-ces-2017.html)	Nathan Ingraham	Jan. 10, 2017
Medela Pump In Style Review (https://thepumpingmommy.com/medela-pump-in-style-review/)	Reviewed	Feb. 28, 2016

Momcozy additionally identifies and relies on patent or publication references that describe or are otherwise related to the prior art systems identified below. Momcozy's investigation into prior art patent and publication references remains ongoing, and Momcozy reserves the right to identify and rely on additional patent or publication references that are identified through further investigation or discovery.

3. Systems

System	Person or Entity	Date
WhisperWear Double Pump	Whisper Wear	At least 2009
Lansinoh Smartpump 1.0	Lansinoh	At least May 27, 2016
Willow 1.0 Wearable Breast Pump	Willow	At least Apr. 27, 2017
Medela Sonata	Medela	At least Apr. 27, 2017
Medela Pump-in-Style	Medela	At least Jul. 7, 2008
Naya Smart Breast Pump	Naya	At least Jan. 7, 2017

4. Admitted Prior Art

Elvie expressly or implicitly admitted that certain elements recited in the Asserted Claims of the '893 Patent, the '380 Patent, and the '381 Patent were known in the prior art and thus part of the state of the art. These admissions include, but are not limited to, the following claim limitations and prior art concepts. Momcozy reserves the right to identify additional examples of admitted prior art and to further support the admissions identified below by relying on additional portions of the patent specification, statements made during the prosecution of the '893 Patent, the '380 Patent, and the '381 Patent and any related application, and any statements by Elvie or the patent applicants.

Admitted Prior Art Concept	Cite to Intrinsic Record
Self-contained, in-bra wearable breast pump	'893 Patent at 2:7-17, 3:43-51
Device with breast-shaped profile to be held inside the bra	'893 Patent at 2:12-16
Battery-powered pump	'893 Patent at 2:12-16
Breast shield with breast flange and nipple tunnel	'893 Patent at 1:55-62
Milk container	'893 Patent at 2:20-25

Diaphragm or membrane housed in holder	'893 Patent at 2:45-57
Visual indicator of milk flow into the milk container	'893 Patent at 3:13

Elvie also admitted that the following patent and patent application publications are prior art:

Number	Inventor(s)	Filing Date	Publication or Issue Date
U.S. Pat. No. 4,390,024	Marguerite R. Williams	Feb. 5, 1982	Jun. 28, 1983
International Pub. No. WO 96/25187	Brian Silver	Feb. 14, 1996	Aug. 22, 1996
International Pub. No. WO 96/36298	Jon P. St. Germain	May 17, 1996	Nov. 21, 1996
U.S. Pat. App. Pub. No. 2016/0206794	Joshua Makower et al.	Mar. 30, 2016	Jul. 21, 2016
U.S. Pat. App. Pub. No. 2013/0023821	Gamal Khalil et al.	Jun. 28, 2012	Jan. 24, 2013
U.S. Pat. App. Pub. No. 2016/296681	Nathaniel Gaskin et al.	Apr. 8, 2016	Oct. 13, 2016

B. The '454 Patent

1. Patents and Published Patent Applications

Number	Inventor(s)	Filing Date	Publication or Issue Date
U.S. Pat. No. 4,673,388 ("Schlensog")	Klaus Schlensog et al.	Mar. 14, 1985	Jun. 16, 1987
U.S. Pat. No. 6,673,036	James Joseph Britto	Oct. 13, 2000	Jan. 6, 2004
U.S. Pat. No. 6,749,582	James J. Britto et al.	Apr. 30, 2002	Jun. 15, 2004
U.S. Pat. No. 6,840,918	James J. Britto et al.	Jul. 18, 2001	Jan. 11, 2005
U.S. Pat. No. 6,887,210	Steven C. Quay	Nov. 13, 2001	May 3, 2005
U.S. Pat. No. 7,223,255 ("Myers '255")	Kenneth E. Myers et al.	Jun. 19, 2002	May 29, 2007
U.S. Pat. App. Pub. No. 2004/0087898 ("Weniger")	Gotthilf Weniger	Nov. 1, 2002	May 6, 2004
U.S. Pat. No. 7,875,000	Yvonne Krebs et al.	May 26, 2005	Jan. 25, 2011
U.S. Pat. No. 8,216,179	Patrik Bosshard et al.	Jul. 10, 2007	Jul. 10, 2012
U.S. Pat. App. Pub. No. 2007/0219486	Kenneth E. Myers et al.	May 3, 2007	Sep. 20, 2007
U.S. Pat. App. Pub. No. 2007/0179439	Stefan Vogelin et al.	Feb. 6, 2006	Aug. 2, 2007
International Pub. No. WO 2008/057218	Mark A. Luzbetak et al.	Oct. 24, 2007	May 15, 2008

1	U.S. Pat. App. Pub. No. 2008/0275386 ("Myers '386")	Kenneth E. Myers	May 2, 2008	Nov. 6, 2008
2	U.S. Pat. No. 8,118,772	Stella Dao et al.	May 1, 2008	Feb. 21, 2012
3	U.S. Pat. App. Pub. No. 2009/0281485 ("Baker")	Peter Christensen Baker et al.	Apr. 27, 2009	Nov. 12, 2009
4	U.S. Pat. No. 7,641,629	Yat Keung William Yuen	Apr. 12, 2004	Jan. 5, 2010
5	U.S. Pat. App. Pub. No. 2011/0071466 ("Silver '466")	Brian H. Silver et al.	Sep. 17, 2010	Mar. 24, 2011
6	AU Pat. App. Pub. No. AU 2010300058 ("Weber")	Beda Weber et al.	Sep. 17, 2010	Mar. 31, 2011
7	U.S. Pat. App. Pub. No. 2012/0277728	Beda Weber et al.	Sep. 17, 2010	Nov. 1, 2012
8	U.S. Pat. App. Pub. No. 2012/0116299 ("Tack")	Johannes Willem Tack	Jul. 21, 2010	May 10, 2012
9	U.S. Pat. No. 8,702,646	Dan Garbez et al.	Aug. 14, 2012	Apr. 22, 2014
10	U.S. Pat. App. Pub. No. 2013/0023821 ("Khalil")	Gamal Khalil et al.	Jun. 28, 2012	Jan. 24, 2013
11	International Pub. No. WO 2014/094187	Etienne Furrer et al.	Dec. 12, 2013	Jun. 26, 2014
12	U.S. Pat. App. Pub. No. 2015/0157775 ("Hu")	Min Hu	Feb. 12, 2015	Jun. 11, 2015
13	U.S. Pat. App. Pub. No. 2015/0283311 ("Alvarez")	Jeffery B. Alvarez et al.	Feb. 6, 2015	Oct. 8, 2015
14	U.S. Pat. App. Pub. No. 2015/0217033	Ashia M. Pollen et al.	Apr. 14, 2015	Aug. 6, 2015
15	International Pub. No. WO 2015/120321	Jeffery B. Alvarez et al.	Feb. 6, 2015	Aug. 13, 2015
16	U.S. Pat. App. Pub. No. 2015/0328380	Etienne Furrer et al.	Dec. 12, 2013	Nov. 19, 2015
17	U.S. Pat. App. Pub. No. 2015/0335800	Daisuke Yamashita	Jan. 17, 2013	Nov. 26, 2015
18	U.S. Pat. App. Pub. No. 2016/0082166 ("Guthrie '166")	Gabrielle V. Guthrie et al.	Sep. 19, 2015	Mar. 24, 2016
19	U.S. Pat. App. Pub. No. 2016/0220743 ("Guthrie '743")	Gabrielle V. Guthrie et al.	Jan. 30, 2016	Aug. 4, 2016
20	International Pub. No. WO 2016/131677 ("Rigert '677")	Mario Rigert et al.	Feb. 9, 2016	Aug. 25, 2016
21	U.S. Pat. App. Pub. No. 2016/0206794 ("Makower")	Joshua Makower et al.	Mar. 30, 2016	Jul. 21, 2016
22	CN Utility Model Pat. Pub. No. CN 205626591 U ("Jian")	Zhongrong Jian	Apr. 1, 2016	Oct. 12, 2016
23	U.S. Pat. App. Pub. No. 2016/0296682 ("Phillips")	Andrew Luke Phillips et al.	Apr. 8, 2016	Oct. 13, 2016
24	U.S. Pat. App. Pub. No. 2016/0271305 ("Kurihara")	Kiyoshi Kurihara et al.	May 27, 2016	Sep. 22, 2016

1	U.S. Pat. App. Pub. No. 2016/0325031 (“Miller”)	Jared Miller et al.	May 9, 2016	Nov. 10, 2016
2	International Pub. No. WO 2016/186452 (“Park”)	Cho Hee Park	May 18, 2016	Nov. 24, 2016
3	CN Utility Model Pat. Pub. No. CN 205913751 U (“Fang”)	Guofeng Fang et al.	Jun. 29, 2016	Feb. 1, 2017
4	U.S. Pat. App. Pub. No. 2018/0333523 (“Chang”)	John Chang et al.	Feb. 9, 2017	Nov. 22, 2018
5	International Pub. No. WO 2017/139437	Joshua Makower et al.	Feb. 9, 2017	Aug. 17, 2017
6	U.S. Pat. App. Pub. No. 2017/0080135 (“Chen ’135”)	Junbo Chen	Sep. 29, 2015	Mar. 23, 2017
7	CN Utility Model Pat. Pub. No. CN 105233355 U (“Chen ’355”)	Junbo Chen	October 9, 2015	January 13, 2016
8	U.S. Pat. No. 10,149,929	Etienne Furrer et al.	Dec. 12, 2013	Dec. 11, 2018
9	International Pub. No. WO 2017/190678 (“Yuen”)	Cheuk Ho Yuen et al.	May 5, 2017	Nov. 9, 2017
10	U.S. Pat. App. Pub. No. 2018/0028731 (“Luzbetak”)	Mark A. Luzbetak et al.	Oct. 10, 2017	Feb. 1, 2018
11	U.S. Pat. App. Pub. No. 2018/0361040 (“O’Toole”)	Jonathan O’Toole et al.	Jun. 15, 2018	Dec. 20, 2018
12	U.S. Pat. App. Pub. No. 2016/0213824	Ofer Fridman	Aug. 26, 2014	Jul. 28, 2016
13	U.S. Pat. App. Pub. No. 2015/0217035	Ashia M. Pollen et al.	Apr. 14, 2015	Aug. 6, 2015
14	U.S. Pat. No. 11,717,599	Jared Miller et al.	Jul.29, 2019	Aug. 8, 2023
15	U.S. Pat. No. 11,534,535	John Chang et al.	Aug.7, 2018	Dec. 27, 2022
16	U.S. Pat. No. 11,097,039	Dan Garbez et al.	Mar. 6, 2019	Aug. 24, 2021
17	U.S. Pat. No. 10,722,624	Joshua Makower et al.	Oct. 29, 2019	Jul. 28, 2020
18	U.S. Pat. No. 10,046,097	Susan Thompson et al.	Jun. 23, 2014	Aug. 14, 2018
19	U.S. Pat. No. 10,016,547	Ashia M. Pollen et al.	Apr. 14, 2015	Jul. 10, 2018
20	U.S. Pat. No. 9,919,084	Ashia M. Pollen et al.	Apr. 14, 2015	Mar. 20, 2018
21	CN Utility Model Pat. Pub. No. CN 206473606 U	Zheng Guangwu	Aug. 12, 2016	Sept. 8, 2017
22	CN Utility Model Pat. Pub. No. CN 210096493 U	Chen Shaozhong	May 29, 2019	Feb. 21, 2020
23	CN Utility Model Pat. Pub. No. CN 209033304 U	Zheng Guangwu	May 21, 2018	Jun. 28, 2019

2. Publications

Title	Author / Publisher	Publication Date
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Shouldn't the Breast Pump Be as Elegant as an iPhone and as Quiet as a Prius by Now? (https://archive.nytimes.com/parenting.blogs.nytimes.com/2014/03/16/shouldnt-the-breast-pump-be-as-elegant-as-an-iphone-and-as-quiet-as-a-prius-by-now/)	Courtney E. Martin et al.	Mar. 16, 2014
Breast Pumps Are Finally Getting Better. Here's How. (https://slate.com/human-interest/2016/05/breast-pumps-are-finally-getting-better-here-s-how.html)	Elissa Strauss	May 27, 2016
A Feminist HCI Approach to Designing Postpartum Technologies: "When I First Saw a Breast Pump I Was Wondering if it was a Joke."	Catherine D'Ignazio et al.	May 7-12, 2016
The Breast Pump Finally Joins the 21st Century (https://www.wired.com/2017/04/building-a-better-breast-pump/)	Arielle, Pardes	Apr. 27, 2016

3. Systems

System	Person or Entity	Date
Lansinoh Smartpump 1.0	Lansinoh	At least May 27, 2016
Willow 1.0 Wearable Breast Pump	Willow	At least Apr. 27, 2017
Medela Sonata	Medela	At least Apr. 27, 2017
Freemie Independence	Freemie	At least January 28, 2019
Freemie Freedom	Freemie	At least June 29, 2017
Freemie Liberty	Freemie	At least January 25, 2018
Elvie Pump	Elvie	At least September 14, 2018
Baby Express: Be Free Wearable Breast Pump	Baby Express	At least December 23, 2020
Youha The INS Wearable Breast Pump	Unknown	TBD
Amaia Pump Hands-Free	Amaia	TBD

4. Admitted Prior Art

Elvie expressly or implicitly admitted that certain elements recited in the Asserted Claims of the '454 Patent were known in the prior art and thus part of the state of the art. These admissions include, but are not limited to, the following claim limitations and prior art concepts. Momcozy reserves the right to identify additional examples of admitted prior art and to further support the admissions identified below by relying on additional portions of the patent

specification, statements made during the prosecution of the '454 Patent and any related application, and any statements by Elvie or the patent applicants.

Admitted Prior Art Concept	Cite to Intrinsic Record
Fully integrated wearable breast pump system	'454 Patent at 1:30-35
Diaphragm	'454 Patent at 1:32-36, 1:56-61
External pump via vacuum hose	'454 Patent at 1:37-51
Vacuum attaching at the top of the collection device	'454 Patent 1:52-56

Elvie also admitted that the following patent and patent application publications are prior art:

Number	Inventor(s)	Filing Date	Publication or Issue Date
International Pub. No. WO 2018/229504	Jonathan O'Toole et al.	Jun. 15, 2018	Dec. 20, 2018
U.S. Pat. App. Pub. No. 2008/0262420	Stella Dao et al.	Apr. 12, 2005	Oct. 23, 2008
U.S. Pat. App. Pub. No. 2018/0008758	Dan Garbez et al.	Jul. 8, 2016	Jan. 11, 2018

V. INVALIDITY UNDER 35 U.S.C. §§ 102 AND 103

Momcozy contends that certain prior art references identified herein and in the attached claim charts anticipate one or more Asserted Claims and/or render obvious one or more of the Asserted Claims alone and/or when viewed in combination with other prior art references. To the extent Elvie contends that the prior art reference fails to disclose one or more limitations of the Asserted Claims, Momcozy contends that any difference between the reference and the corresponding patent claims would have been obvious to a POSA based on the combinations identified below and in the attached claim charts, as well as information generally known to POSAs at the time of the alleged invention. Thus, all claim charts should be interpreted as both reflecting anticipation by the reference as well as invalidity due to obviousness in light of the specific combinations identified below and in the attached claim charts, as well as single reference obviousness, to the extent Elvie contends that any limitation is missing.

1 Exhibits A-1 through A-8 (for the '893 Patent), B-1 through B-5 (for the '380 Patent), C-
2 1 through C-6 (for the '381 Patent), and D-1 through D-9 (for the '454 Patent) provide detailed
3 claim charts showing where each claim element may be found in the prior art identified above.
4 In addition to these claim charts, Momcozy incorporates by reference the grounds presented in
5 related *inter partes* review (IPR) proceedings. *See, e.g.*, IPR2024-00953. Each of these claim
6 charts is without prejudice to Momcozy's indefiniteness positions under 35 U.S.C. § 112(b) and
7 assume that such positions have been rejected by the Court. Nothing in the Exhibits should be
8 taken as a concession that the claims are not indefinite.

9 Momcozy relies on all portions and aspects of each item of prior art in support of
10 Momcozy's contention that such prior art satisfies each limitation of the Asserted Claims of the
11 Patents-in-Suit. Momcozy has provided specific supporting citations to the prior art, but these
12 citations do not necessarily represent every location, instance, or manner in which a particular
13 claim limitation is satisfied by the prior art. Even where limitations are disclosed at multiple
14 locations within a single item of prior art, Momcozy has not necessarily identified each iteration
15 of every such disclosure. Momcozy therefore reserves the right to rely on additional, or
16 different, portions or aspects of the prior art other than those specifically cited in the claim charts
17 provided herewith.

18 For those references for which detailed claim charts are provided in the Exhibits, the
19 Exhibit Number is listed next to the prior art reference below. Prior art references which are not
20 associated with an Exhibit Number are additional prior art references that are pertinent to the
21 invalidity of the Patents-in-Suit. At this time, Momcozy has not provided claim charts for each
22 of these additional references, either because they are cited in conjunction with references for
23 which charts have already been provided, are cited in these contentions, and/or because these
24 references have similar disclosures to the prior art references for which invalidity charts have
25 already been provided and/or may be used to show the state of the art.

1 Momcozy reserves the right to revise its claim charts to rely on any of these references to
2 prove the invalidity of the claims of the Patents-in-Suit in a manner consistent with the Federal
3 Rules of Civil Procedure, the Court’s Local Rules, and this Court’s Orders.

4 In general, a claimed invention is unpatentable if the differences between it and the prior
5 art “are such that the claimed invention as a whole would have been obvious before the effective
6 filing date of the claimed invention to a person having ordinary skill in the art to which the
7 claimed invention pertains.” 35 U.S.C. § 103; *Graham v. John Deere Co.*, 383 U.S. 1, 13-14
8 (1966). In view of the Supreme Court’s *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398
9 (2007) decision, the USPTO issued a set of Examination Guidelines setting forth a number of
10 potential rationales for combining prior art references. See Examination Guidelines for
11 Determining Obviousness under 35 U.S.C. § 103 in view of the Supreme Court Decision in *KSR*.

12 Those rationales include:

- 13 • Combining prior-art elements according to known methods to yield predictable
14 results;
- 15 • Simple substitution of one known element for another to obtain predictable results;
- 16 • Use of a known technique to improve similar devices (methods, or products) in the
17 same way;
- 18 • Applying a known technique to a known device (method, or product) ready for
19 improvement to yield predictable results;
- 20 • “Obvious to try”—choosing from a finite number of identified, predictable solutions,
21 with a reasonable expectation of success;
- 22 • Known work in one field of endeavor that may prompt variations of it for use in
23 either the same field or a different one based on design incentives or other market
24 forces if the variations would have been predictable to one of ordinary skill in the art;
25 and
- 26 • Some teaching, suggestion, or motivation in the prior art that would have led one of
27 ordinary skill to modify the prior art or to combine prior-art teachings to arrive at the
claimed invention.

28 These rationales are consistent with the Supreme Courts emphasis in *KSR* that “the
29 results of ordinary innovation” from the perspective of a POSA are not patentable, and further
30 that “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” 550
31 U.S. at 421, 427. Momcozy contends that one or more of these rationales apply in considering
32 the obviousness of the Asserted Claims.

1 For example, a POSA at the time of the alleged invention of the Patents-in-Suit would
2 have been motivated to combine or adapt known or familiar methods in the art, especially where
3 market forces prompted such variations. Moreover, each of the references identified herein
4 describes methods that were known to offer improvements and benefits to the art, and,
5 accordingly, a POSA would have been motivated to combine or modify the references as
6 identified in each of the combinations above.

7 Furthermore, since there were a finite number of predictable solutions, a POSA had a
8 good reason to pursue the known options. The prior art identified herein references merely use
9 those familiar elements for their primary or well-known purpose in a manner well within the
10 ordinary level of skill in the art. Accordingly, common sense and the knowledge of the prior art
11 render the claims invalid under Section 102 or Section 103.

12 A POSA would also have been motivated to combine the above prior art based on his/her
13 knowledge, the nature of the problem to be solved, and the teachings of the prior art. The
14 identified prior art addresses the same or similar technical issues and suggests the same or
15 similar solutions to those issues. Moreover, some of the prior art refer to or discuss other prior
16 art, illustrating the close technical relationship among the prior art. As one example, the
17 references listed herein are directed to the same or similar technology.

18 A POSA would have been further motivated to look at all of the available documentation
19 for a particular product/system to understand the operation. A POSA would have combined that
20 knowledge from the various related references because it would be clear that the references were
21 related. For at least this reason, a POSA could consider it obvious to combine the references that
22 collectively teach a product or system.

23 A POSA would have been further motivated to combine the different publications and
24 patents that were authored by employees of the company or assigned to the same assignee and
25 related to the same subject matter.

26 A POSA would have been further motivated to combine different references that were
27 authored, developed, or invented by the same individual(s) related to the same subject matter.

1 The common inventor/author/architect references themselves demonstrate that they relate to
2 continued work in a common field of effort and continued related developments in that field. A
3 POSA would, therefore, combine the references related to each individual. Similarly, based on
4 the teachings of the references and/or the knowledge of one of ordinary skill, a POSA would
5 have been further motivated to combine different references from the same company.

6 Finally, as explained below and in the attached charts, all concepts recited in the Asserted
7 Claims of the Patents-in-Suit represent well-known features. Thus, the Asserted Claims of the
8 Patents-in-Suit are invalid under 35 U.S.C. § 103 because they do nothing more than combine
9 known techniques and systems according to their known and ordinary uses to yield predictable
10 results.

11 **A. The '893 Patent, the '380 Patent, and the '381 Patent**

12 **1. Anticipation and Obviousness Grounds**

13 As detailed in the attached charts, the following prior art anticipates and/or renders
14 obvious the Asserted Claims of the '893 Patent, the '380 Patent, and/or the '381 Patent, alone
15 and/or when viewed in combination with other prior art references under the proper construction
16 of the claims and/or under Elvie's apparent interpretation of the claims as set forth by Elvie in its
17 Infringement Contentions.

18 Momcozy provides information regarding exemplary combinations below. Each of these
19 exemplary combinations is listed for purposes of explaining and exemplifying which references
20 would be combined with a reasonable expectation of success under the motivations to combine
21 described below. These combinations are not intended to be exclusive or limiting but rather
22 intended to provide notice of the reasoning behind the motivations to combine and the references
23 that would be combined thereunder. In many instances, multiple different motivations would
24 apply to a particular combination (for example, if multiple references were both authored by the
25 same person and referred to the same product/system, then both of those motivations would
26 apply) and the specific combinations were not duplicated.

Should any prior art cited herein be deemed not to disclose, explicitly or inherently, any limitation of a claim, Momcozy reserves the right to argue that any such difference between that prior art and the corresponding claim would have been obvious to a POSA. To the extent that such an argument is deemed a “combination” analysis for purposes of obviousness, Momcozy discloses its present intention to rely on the separate combination of the knowledge of a POSA with each item of prior art identified below.

Patent	Ex. No.	References and Exemplary Obviousness Combinations
'893 Patent	A-1	Chang , alone or in view of Willow, Myers '386, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Guthrie '743, Baker, Schlensog, and/or Miller
	A-2	Myers '386 , alone or in view of Willow, Chang, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Guthrie '743, Baker, Schlensog, and/or Miller
	A-3	Khalil , alone or in view of Willow, Myers '386, Chang, Park, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Guthrie '743, Baker, Schlensog, and/or Miller
	A-4	Park , alone or in view of Willow, Myers '386, Chang, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Guthrie '743, Baker, Schlensog, and/or Miller
	A-5	Weber , alone or in view of Willow, Myers '386, Chang, Khalil, Park, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Guthrie '743, Baker, Schlensog, and/or Miller
	A-6	Kurihara , alone or in view of Willow, Myers '386, Chang, Khalil, Park, Weber, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Guthrie '743, Baker, Schlensog, and/or Miller
	A-7	Guthrie '166 , alone or in view of Willow, Myers '386, Chang, Khalil, Park, Weber, Kurihara, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Guthrie '743, Baker, Schlensog, and/or Miller
	A-8	Willow , alone or in view of Chang, Myers '386, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Guthrie '743, Baker, Schlensog, and/or Miller

'380 Patent	B-1	Chang , alone or in view of Willow, Myers '386, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Yuen, Chen '135, Schlensog, and/or Miller
	B-2	Myers '386 , alone or in view of Willow, Chang, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Yuen, Chen '135, Schlensog, and/or Miller
	B-3	Park , alone or in view of Willow, Chang, Myers '386, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Yuen, Chen '135, Schlensog, and/or Miller
	B-4	Weber , alone or in view of Willow, Myers '386, Chang, Khalil, Park, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Yuen, Chen '135, Schlensog, and/or Miller
	B-5	Willow , alone or in view of Chang, Myers '386, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Yuen, Chen '135, Schlensog, and/or Miller
'381 Patent	C-1	Chang , alone or in view of Willow, Myers '386, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Schlensog, and/or Miller
	C-2	Myers '386 , alone or in view of Willow, Chang, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Schlensog, and/or Miller
	C-3	Khalil , alone or in view of Willow, Myers '386, Chang, Park, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Schlensog, and/or Miller
	C-4	Park , alone or in view of Willow, Myers '386, Chang, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Schlensog, and/or Miller
	C-5	Weber , alone or in view of Willow, Myers '386, Chang, Khalil, Park, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Schlensog, and/or Miller
	C-6	Willow , alone or in view of Chang, Myers '386, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Schlensog, and/or Miller

Each of the prior art references identified above renders obvious one or more of the Asserted Claims of the '893 Patent, the '380 Patent, and the '381 Patent, alone and/or when viewed in combination with other prior art references as described below and in the attached claim charts. Momcozy's contentions that the references described in these Invalidity Contentions, in various combinations, render those Asserted Claims obvious under 35 U.S.C. § 103 are in no way an admission or suggestion that each reference does not independently anticipate those Asserted Claims under 35 U.S.C. § 102. Furthermore, the specific combinations described in these Invalidity Contentions are not intended to be exhaustive, as there are many

possible combinations of these references, and it is not practical, particularly at this early stage before further factual investigation and claim construction proceedings, to identify and list all potentially relevant combinations. Momcozy reserves the right to identify additional combinations in later stages of the case.

2. Primary References

(a) Chang

Chang discloses “portable breast pump systems . . . for collecting milk from the breast of a nursing mother.” Chang at [0001]. Chang’s breast pump device “is contemplated to fit comfortably and conveniently into a bra,” such that “the flange or skin contact member, the conduit, the driving mechanism, the external shell and the milk collection container are all contained within a cup of a brassiere.” *Id.* at [0011], [0019]. Chang’s breast pump also includes a flange that “is sized and shaped to engage a breast of a user . . . to provide structure for sealingly engaging with breast tissue” and a “nipple receiving portion . . . contoured to more closely match the natural shape of the nipple.” *Id.* at [0071], [0090]. Chang’s breast pump further includes pumping system components contained under a housing, between housing 12 and flange 14, including a “rechargeable battery” for powering the system, a “system controller” circuit board, and a pump comprising electrical motors and actuators coupled to a flex-tube. *See, e.g., id.* at Fig. 6A, [0068], [0072], [0080]. Chang’s breast pump further includes a “milk collection container” with “a one-way valve that permits milk inflow into the milk collection container but prevents milk backflow from the milk collection container to the conduit.” *Id.* at [0021].

As explained in the attached charts and below, Chang discloses each of the limitations of the ’893 Patent, the ’380 Patent, and/or the ’381 Patent, expressly, inherently, or as a matter of common sense, and/or it would have been obvious to add missing aspects of the limitation in light of other prior art, including Willow, Myers ’386, Park, Khalil, Weber, Kurihara, Guthrie ’166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers ’255, Yuen, Chen ’135, Guthrie ’743, Baker, Schlensog, and/or Miller. Each of these prior art references are from the same field

of endeavor (breast milk collection devices), address the same or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping) and suggests the same or similar solutions to those issues.

(b) Myers '386

Myers '386 discloses a “hands-free breast pump” that is held “between the breast of a nursing woman and the cup of a bra worn by the woman,” and has “a breast milk into a collection bag supported by the breast pump and bra.” Myers '386 at [0002], [0010]. Myers '386's breast pump includes a “dome-shaped outer housing 16 that faces the inner surface of the brassier cup 14” and an “inner housing 19 that receives the breast cup 18, which interfaces with the woman's breast 12.” *Id.* at [0052]. The breast cup includes “a funnel shaped breast interface section 48,” as well as a nipple tunnel 46.” *Id.* at [0058]. The housing of Myers '386's breast pump “includes a pump mechanism 50 powered by a power source 52,” such as an “AA battery.” *Id.* at [0060]. Myers '386 further includes a “. . . power control switch 30, which affects the cycling rate of the pump, includes three settings, fast, slow and off.” *Id.* at [0054]. The collection bag of Myers '386's breast pump also includes a “one-way valve 20” that opens and closes in response to pressure changes from the pump. *Id.* at [0071].

As explained in the attached charts and below, Myers '386 discloses each of the limitations of the '893 Patent, the '380 Patent, and/or the '381 Patent, expressly, inherently, or as a matter of common sense, and/or it would have been obvious to add missing aspects of the limitation in light of other prior art, including Willow, Chang, Park, Khalil, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers '255, Yuen, Chen '135, Guthrie '743, Baker, Schlensog, and/or Miller. Each of these prior art references are from the same field of endeavor (breast milk collection devices), address the same or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping) and suggests the same or similar solutions to those issues.

1 **(c) Khalil**

2 Khalil discloses a “hands-free breastpump unit that can be worn in the bra.” Khalil at
3 [0070]. Khalil’s breast pump includes a “vacuum pump” that is “preferably a diaphragm
4 vacuum pump of a known type,” which is “operated by means of an electric motor.” *Id.* at
5 [0067]. Khalil’s breast pump further includes a “membrane” held in two “membrane housing
6 parts,” a “breast interface,” a “non-return valve,” and a “milk collection container” that is
7 “preferably made of plastic” and that can engage with a “shell ring” of the housing. *Id.* at
8 [0053]-[0055], [0069].

9 As explained in the attached charts and below, Khalil discloses each of the limitations of
10 the ’893 Patent, the ’380 Patent, and/or the ’381 Patent, expressly, inherently, or as a matter of
11 common sense, and/or it would have been obvious to add missing aspects of the limitation in
12 light of other prior art, including Willow, Myers ’386, Chang, Park, Weber, Kurihara, Guthrie
13 ’166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers ’255, Yuen, Chen ’135, Guthrie
14 ’743, Baker, Schlensog, and/or Miller. Each of these prior art references are from the same field
15 of endeavor (breast milk collection devices), address the same or similar technical issues (e.g.,
16 bulkiness, heaviness, complexity, inefficiency, lack of discreteness, inconvenience, discomfort,
17 difficulty in cleaning, difficulty in monitoring pumping) and suggests the same or similar
18 solutions to those issues.

19 **(d) Park**

20 Park discloses “a breast pump which enables a lactating woman to freely use both hands
21 during milking, is capable of preventing breast milk from flowing backward, and is easily
22 cleaned and maintained.” Park at [8]. Park’s breast pump includes a “close-contact housing 100
23 having a protruding part 110, which extends forward and is formed in the portion corresponding
24 to a nipple of a lactating woman,” and a “breast milk discharging hole 120” on the “bottom
25 surface of the protruding part 110.” *Id.* at [37]. Park’s breast pump is electrically powered by
26 “electric pump 800,” an “automatic breast pump in which a vacuum pressure.” *Id.* at [49].
27 Park’s breast pump also includes a “flow separation membrane 500 formed of a ductile material

1 so as to be easily bendable” that is housed within a “cover 400” and a “funnel connector 300”
2 and that forms vacuum pressure to enable breast milk to be extracted. *Id.* at [39]. Park further
3 discloses a “a storing housing coupled to the close-contact housing in a detachable structure . . .
4 provided with a space in which breast milk discharged through the breast milk discharge tube is
5 stored.” *Id.* at [12].

6 As explained in the attached charts and below, Park discloses each of the limitations of
7 the ’893 Patent, the ’380 Patent, and/or the ’381 Patent, expressly, inherently, or as a matter of
8 common sense, and/or it would have been obvious to add missing aspects of the limitation in
9 light of other prior art, including Willow, Myers ’386, Chang, Khalil, Weber, Kurihara, Guthrie
10 ’166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers ’255, Yuen, Chen ’135, Guthrie
11 ’743, Baker, Schlensog, and/or Miller. Each of these prior art references are from the same field
12 of endeavor (breast milk collection devices), address the same or similar technical issues (e.g.,
13 bulkiness, heaviness, complexity, inefficiency, lack of discreteness, inconvenience, discomfort,
14 difficulty in cleaning, difficulty in monitoring pumping) and suggests the same or similar
15 solutions to those issues.

16 **(e) Weber**

17 Weber discloses a breast pump that can be configured and used as a “hands-free” device.
18 Weber’s breast pump includes a “breast shield” that “can be fixed in a bra” and is “discretely
19 concealed in the clothing.” Weber at 3:20-22. Weber’s breast pump also includes “an electric
20 motor 11 in the housing 10” that can be “battery operated.” *Id.* at 11:31-32, 20:7-9. Weber’s
21 breast pump further includes a “milk collecting container” with a “nonreturn valve” that may be
22 “be fastened directly to the vacuum pump.” *Id.* at 22:7-8, 11:21-25.

23 As explained in the attached charts and below, Weber discloses each of the limitations of
24 the ’893 Patent, the ’380 Patent, and/or the ’381 Patent, expressly, inherently, or as a matter of
25 common sense, and/or it would have been obvious to add missing aspects of the limitation in
26 light of other prior art, including Willow, Myers ’386, Chang, Khalil, Park, Kurihara, Guthrie
27 ’166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers ’255, Yuen, Chen ’135, Guthrie

’743, Baker, Schlensog, and/or Miller. Each of these prior art references are from the same field of endeavor (breast milk collection devices), address the same or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping) and suggests the same or similar solutions to those issues.

(f) Kurihara

Kurihara discloses a “a compact and silent breast-milk suction device” that includes a “nozzle” that is “shaped like a funnel to be fit the shape of breasts.” Kurihara at [0093], [0092]. Kurihara’s device includes a “housing” that includes “a battery and a power feeding circuit,” as well as a “piezoelectric driving part.” *Id.* at [0054], [0061]. Kurihara’s device also includes a “storage unit” for collection of liquid, such as milk. *Id.* at [0026].

As explained in the attached charts and below, Kurihara discloses each of the limitations of the ’893 Patent, the ’380 Patent, and/or the ’381 Patent, expressly, inherently, or as a matter of common sense, and/or it would have been obvious to add missing aspects of the limitation in light of other prior art, including Willow, Myers ’386, Chang, Khalil, Park, Weber, Guthrie ’166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers ’255, Yuen, Chen ’135, Guthrie ’743, Baker, Schlensog, and/or Miller. Each of these prior art references are from the same field of endeavor (breast milk collection devices), address the same or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping) and suggests the same or similar solutions to those issues.

(g) Guthrie ’166

Guthrie ’166 discloses a breast pump system “that provides women a discrete low profile breast pump that may be worn underneath regular clothing” and that includes “smart” device functionality. Guthrie ’166 at Abstract, [0001]. Guthrie ’166’s breast pump includes a “milk capture and collection element 101” with a “pump portion” comprising “a vacuum pump and a vacuum chamber through which milk can flow uninterrupted as it is expressed into a milk

1 collection portion of milk capture and collection element 101,” a “cup portion” for engagement
2 with a woman’s breast in a bra, and a “milk collection portion” for receiving and collecting milk
3 as it is pumped from the woman’s breast. *Id.* at [0023], [0024], [0037]. Guthrie ’166’s breast
4 pump is battery-powered and also includes sensors for detecting milk expression and flow during
5 the pumping process. *Id.* at [0025].

6 As explained in the attached charts and below, Guthrie ’166 discloses each of the
7 limitations of the ’893 Patent, the ’380 Patent, and/or the ’381 Patent, expressly, inherently, or as
8 a matter of common sense, and/or it would have been obvious to add missing aspects of the
9 limitation in light of other prior art, including Willow, Myers ’386, Chang, Khalil, Park, Weber,
10 Kurihara, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers ’255, Yuen, Chen ’135,
11 Guthrie ’743, Baker, Schlensog, and/or Miller. Each of these prior art references are from the
12 same field of endeavor (breast milk collection devices), address the same or similar technical
13 issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of discreteness, inconvenience,
14 discomfort, difficulty in cleaning, difficulty in monitoring pumping) and suggests the same or
15 similar solutions to those issues.

16 **(h) Willow**

17 Willow is a self-contained, in-bra wearable breast pump device. Willow includes a pump
18 housing containing a rechargeable battery, an electrical pump, and electronics for mobile app
19 connectivity and for controlling the pump. Willow also includes a flange comprising a nipple
20 tunnel and flange spout, a Flextube, and a milk container containing a self-sealing valve.

21 As explained in the attached charts and below, Willow discloses each of the limitations of
22 the ’893 Patent, the ’380 Patent, and/or the ’381 Patent, expressly, inherently, or as a matter of
23 common sense, and/or it would have been obvious to add missing aspects of the limitation in
24 light of other prior art, including Chang, Myers ’386, Park, Khalil, Weber, Kurihara, Guthrie
25 ’166, Makower, Hu, Jian, Fang, Alvarez, Phillips, Tack, Myers ’255, Yuen, Chen ’135, Guthrie
26 ’743, Baker, Schlensog, and/or Miller. Each of these prior art references are from the same field
27 of endeavor (breast milk collection devices), address the same or similar technical issues (e.g.,

1 bulkiness, heaviness, complexity, inefficiency, lack of discreteness, inconvenience, discomfort,
2 difficulty in cleaning, difficulty in monitoring pumping) and suggests the same or similar
3 solutions to those issues.

4 **3. Motivations to Combine**

5 Each limitation of the Asserted Claims of the '893 Patent, the '380 Patent, and the '381
6 Patent was well-known to POSAs by June 15, 2017. As explained below and in the attached
7 charts, all of the elements recited in the Asserted Claims are mere combinations of and
8 modifications to well-known features, and a POSA would have been able, and motivated, to
9 improve the existing technology in the same or similar manner by combining or modifying the
10 individual elements using known techniques and apparatuses according to their known and
11 ordinary uses to yield predictable results.

12 **(a) Self-Contained, In-Bra Wearable Device Limitations**

13 To the extent any reference is found not to include a self-contained, in-bra wearable
14 device, as noted in the attached charts, it would have been obvious in view of Willow, Chang,
15 Khalil, Myers '386, Park, Weber, Kurihara, Guthrie '166, and/or Makower to modify the
16 reference to include such a feature. In addition to the reasons identified above, a POSA would
17 have been motivated to make this modification at least because a self-contained, in-bra wearable
18 device would be small, self-powered, portable, lightweight, and discrete such that the breast of
19 the user is not exposed when worn and the device can be used in a variety of situations. A POSA
20 would also have been motivated to make this modification in order to improve usability and
21 convenience by enabling a lactating woman to freely use both hands during operation of the
22 device.

23 **(b) Pump Limitations**

24 **Pump housing.** To the extent any reference is found not to include a pump housing, as
25 noted in the attached charts, it would have been obvious in view of Willow, Chang, Khalil,
26 Myers '386, Park, Weber, Kurihara, Guthrie '166, Tack, Hu, Jian, and/or Fang to modify the
27 reference to include such a feature. In addition to the reasons identified above, a POSA would

1 have been motivated to make this modification because a pump housing protects the pump
2 elements from milk and the external environment and provides a structure for the user to hold the
3 pump elements.

4 **Recess or cavity that defines a pumping chamber.** To the extent any reference is
5 found not to include a diaphragm that is in a recess or cavity that defines a pumping chamber, it
6 would have been obvious in view of Chang, Myers '386, Park, and Weber to modify the
7 reference to include such a feature. In addition to the reasons identified above, a POSA would
8 have been motivated to make this modification at least because it would have been an
9 advantageous and a simple solution to reduce part count, create space for the diaphragm and
10 pumping chamber in the device, minimize the overall size of the device, allow for improved
11 sealing, and make the device easier to clean.

12 **Piezo air pump system.** To the extent any reference is found not to include a piezo air
13 pump system, as noted in the attached charts, it would have been obvious in view of Kurihara to
14 modify the reference to include such a feature. In addition to the reasons identified above, a
15 POSA would have been motivated to make this modification at least because a piezo air pump
16 advantageously allows for a compact, lightweight breast pump design that also reduces the noise
17 typically caused by electric motors. A POSA would also view the choice of using a vacuum
18 pump or a piezo air pump as a well-known way to create a vacuum.

19 **Pump positioned at or close to base of housing.** To the extent any reference is found
20 not to include a pump positioned at or close to a base of the housing, as noted in the attached
21 charts, it would have been obvious in view of Willow, Chang, Khalil, Weber, Kurihara, Tack,
22 and/or Jian to modify the reference to include such a feature. In addition to the reasons identified
23 above, a POSA would have been motivated to make this modification at least because
24 positioning pump components at or close to a base of the housing advantageously makes the
25 device more comfortable to wear and use by lowering the center of gravity, which in turn makes
26 the device feel less top-heavy during use. It would also decrease the distance between the pump
27

1 and the diaphragm or membrane, reducing the losses associated with longer paths and making
2 the system more responsive.

3 **Housing guide members for sliding onto the breast shield.** To the extent any
4 reference is found not to include a housing that is configured to slide onto the breast, when the
5 breast shield has been placed on to the breast, using guide members, or a breast shield that is
6 configured to slide in and out from the housing, together with the diaphragm, on guide members
7 in the breast shield, as noted in the attached charts, it would have been obvious in view of
8 Willow, Chang, Myers '386, Khalil, Guthrie '166, and/or Schlensog to modify the reference to
9 include such a feature. In addition to the reasons identified above, a POSA would have been
10 motivated to make this modification at least because guide members would enhance usability by
11 assisting a user in properly and reliably aligning the components when assembling the device.

12 **Pump with maximum suction of approximately 240 mm Hg.** To the extent any
13 reference is found not to include an air pump that is configured to generate negative air pressure
14 with a maximum suction of approximately 240 mm Hg, as noted in the attached charts, it would
15 have been obvious in view of Myers '386, Weber, Chang, and/or Willow to modify the reference
16 to include such a feature. In addition to the reasons identified above, a POSA would have been
17 motivated to make this modification at least because determining a safe, comfortable, and
18 effective vacuum pressure would be a high priority when designing a breast pump and
19 identifying 240 mm Hg would have been well within the skill of a POSA and a matter of routine
20 optimization.

21 **Quiet pump.** To the extent any reference is found not to include a breast pump device
22 that makes less than 30 dB noise at maximum power and less than 25 dB at normal power,
23 against a 20 dB ambient noise, as noted in the attached charts, it would have been obvious in
24 view of Kurihara and Baker to modify the reference to include such a feature. In addition to the
25 reasons identified above, a POSA would have been motivated to make this modification at least
26 to ensure that a device design to be worn discretely user's undergarment is as quiet as possible
27 and identifying an appropriate noise level of less than 30 dB at maximum power and less than 25

1 dB at normal power, against a 20 dB ambient noise, would have been well within the skill of a
2 POSA and a matter of routine optimization.

3 **(c) Battery and Power Limitations**

4 **Battery.** To the extent any reference is found not to include a breast pump with a
5 battery, as noted in the attached charts, it would have been obvious in view of Chang, Myers
6 '386, Weber, Kurihara, Guthrie '166, Makower, Hu, Jian, Alvarez, Phillips, and/or Yuen to
7 modify the reference to include such a feature. In addition to the reasons identified above, a
8 POSA would have been motivated to make this modification at least because the use of a battery
9 to provide the electrical power for an electrically-driven device would have enabled the device to
10 be used wirelessly and discretely, without needing to be plugged into an AC power source during
11 use.

12 **Rechargeable battery and related electronics.** To the extent any reference is found not
13 to include breast pump with a rechargeable battery, as noted in the charts, it would have been
14 obvious in view of Willow, Chang, Myers '386, Yuen, Hu, Guthrie '166, Makower, Jian, and/or
15 Alvarez to modify the reference to include such a feature. In addition to the reasons identified
16 above, a POSA would have been motivated to make this modification at least because it would
17 be advantageous to have a rechargeable, internal power source, which would minimize space in
18 the device itself, remove the need for external components, maintain the device's discreteness,
19 improve convenience by eliminating the need to install and remove batteries after they are
20 expired, and minimize the waste and cost associated with disposable power sources such as
21 conventional batteries. A POSA would have been further motivated to modify the reference in
22 view of Willow, Chang, Myers '386, Yuen, Hu, Guthrie '166, Makower, Jian, and/or Alvarez to
23 include a power charging circuit for controlling the charging of the rechargeable battery, at least
24 because it would be advantageous to implement a system that improves safety and efficiency of
25 the device by assuring that the rechargeable battery does not become over- or under-charged.

26 **Control electronics powered by the rechargeable battery.** To the extent any reference
27 is found to not include control electronics powered by the rechargeable battery, as noted in the

1 attached charts, it would have been obvious in view of Chang, Myers '386, Park, Weber, Guthrie
2 '166, Makower, Hu, Jian, Yuen, and/or Alvarez to modify the reference to include such a
3 feature. In addition to the reasons identified above, a POSA would have been motivated to make
4 this modification at least because it would be advantageous to have a breast pump device that is
5 powered by a battery which can be easily stored inside a housing, maintaining discreteness, and
6 is superior to other less-portable external power sources, while enabling a user to control the
7 settings of the pump, such as suction.

8 **Universal Serial Bus (USB) charging socket.** To the extent any reference is found to
9 not include USB charging socket for transferring power to the power charging circuit and the
10 rechargeable battery, as noted in the attached charts, it would have been obvious in view of
11 Chang, Yuen, and/or Guthrie '166 to modify the reference to include such a feature. In addition
12 to the reasons identified above, a POSA would have been motivated to make this modification at
13 least because it would be advantageous to have a breast pump device that has a USB charging
14 socket as it is sturdier, more common, and more reliable than other charging sockets available at
15 the time.

16 **(d) Breast Shield Limitations**

17 **Milk port intermediate to closed end of nipple tunnel and breast flange.** To the
18 extent any reference is found not to include a nipple tunnel comprising a closed end and a milk
19 port intermediate to the breast flange and the closed end, as noted in the attached charts, it would
20 have been obvious in view of Willow, Chang, Myers '386, Khalil, Park, Weber, Guthrie, and/or
21 Alvarez to modify the reference to include such a feature. In addition to the reasons identified
22 above, a POSA would have been motivated to make this modification at least to create a short
23 and efficient path for the milk to flow out of the nipple tunnel.

24 **Nipple tunnel with milk port on lower surface.** To the extent any reference is found
25 not to include a nipple tunnel that includes on a lower surface a milk port through which
26 expressed milk flows under gravity into the milk container, as noted in the attached charts, it
27 would have been obvious in view of Myers '386, Khalil, Weber, Park, and/or Guthrie '166 to

1 modify the reference to include such a feature. In addition to the reasons identified above, a
2 POSA would have been motivated to make this modification at least to prevent or reduce pooling
3 of milk on the lower surface of the nipple tunnel during milk expression, thereby minimizing
4 waste and improving cleanliness, and reducing the power required and noise generated by the
5 pump operating at a higher power level to deliver the expressed milk into the milk container.

6 **Breast shield configured to rotate smoothly around a nipple.** To the extent any
7 reference is found not to include a breast shield that is configured to rotate smoothly around a
8 nipple inserted into the nipple tunnel to provide a correct positioning of the breast shield onto the
9 breast, as noted in the attached charts, it would have been obvious in view of Willow, Chang,
10 Myers '386, Weber, Khalil, Park, Kurihara, Jian, Fang, and/or Chen '135 to modify the reference
11 to include such a feature. In addition to the reasons identified above, a POSA would have been
12 motivated to make this modification at least to improve comfort, milk expression, and pump
13 performance by enabling the user to determine the optimal position and fit for the size and shape
14 of a user's breast and nipple, and to adjust the positioning of the shield without removing the
15 shield from the breast.

16 **One piece, continuous breast shield.** To the extent any reference is found not to include
17 a breast shield that is a one-piece item that, in use, presents a single continuous surface to a
18 nipple and a breast; integrates the breast flange and nipple tunnel as a one-piece item; or that
19 includes a breast flange and nipple tunnel as a single, integral item with no joining stubs, a
20 POSA would have been motivated in view of Willow, Chang, Myers '386, Weber, Khalil, Park,
21 Kurihara, Jian, Fang, and/or Chen '135 to modify to reference to include such a feature. In
22 addition to the reasons identified above, a POSA would have been motivated to make this
23 modification at least because a breast shield that is a one-piece item with an integrated breast
24 flange and nipple tunnel simplifies the device by reducing the number of components required
25 for assembly and disassembly and improves reusability and hygiene by making the device easier
26 to clean after use due to fewer interfaces between components and fewer parts to assemble and
27

disassemble during cleaning. It also makes for a more comfortable product because there are no joints that could cause discomfort.

Substantially rigid breast shield. To the extent any reference is found not to include a breast shield that is substantially rigid, a POSA would have been motivated in view of Willow, Chang, Myers '386, Weber, Hu, and/or Alvarez to modify to reference to include such a feature. In addition to the reasons identified above, a POSA would have been motivated to make this modification at least because a breast shield that is rigid would allow the container to maintain its strength and structural integrity, prevent compression of the breast shield that could affect suction, and improve ease of cleaning and reusability.

(e) Milk Container Limitations

Substantially rigid milk container. To the extent any reference is found not to include a milk container that is substantially rigid, as noted in the attached charts, it would have been obvious in view of Chang, Khalil, Park, and/or Phillips to modify the reference to include such a feature. In addition to the reasons identified above, a POSA would have been motivated to make this modification at least because a rigid milk container would allow the container to maintain its strength and structural integrity, prevent compression of the volume of the container that could affect filling, minimize waste from residual expressed milk in the container, and improve ease of cleaning and reusability.

Milk container forming a flat-bottomed base. To the extent any reference is found not to include a milk container that is configured to attach to a lower part of the housing to form a flat bottomed base, as noted in the attached charts, it would have been obvious in view of Khalil, Park, Weber, Guthrie '166, Tack, Hu, and/or Fang to modify the reference to include such a feature. In addition to the reasons identified above, a POSA would have been motivated to make this modification at least because a container that forms a flat-bottomed base of the device promotes stability and beneficially facilitates an upright orientation of the container on a surface, thereby minimizing the likelihood of spillage during disassembly or detachment of the milk container from the device. A POSA would also have recognized that utilizing a container at the

1 lower portion of the device beneficially allows for the downward flow of milk to the container
2 and enhances isolation of the milk from the pump components.

3 **Milk container wider than tall.** To the extent any reference is found not to include a
4 milk container that is wider than it is tall, as noted in the attached charts, it would have been
5 obvious in view of Willow, Chang, Khalil, and/or Fang to modify the reference to include such a
6 feature. In addition to the reasons identified above, a POSA would have been motivated to make
7 this modification at least because a container that is wider than tall promotes stability by
8 lowering the center of gravity of the system and minimizes the risk of spillage during
9 disassembly or detachment of the milk container from the device by enhancing the balance of the
10 container when it is in an upright orientation.

11 **Milk container with a surface shaped to continue curved shape of housing.** To the
12 extent any reference is found not to include a milk container with a surface shaped to continue a
13 curved shape of the housing, so that the breast pump device can be held comfortably inside a bra,
14 it would have been obvious in view of Willow, Chang, Khalil, Park, and/or Makower to modify
15 the reference to include such a feature. In addition to the reasons identified above, a POSA
16 would have been motivated to make this modification at least because a milk container that has
17 surface shaped to continue the curved shape of the housing makes the device more discrete and
18 improves comfort when worn in the bra.

19 **Milk container with removable, flexible self-sealing valve and/or cap.** To the extent
20 any reference is found not to include a milk container with a flexible and removable valve that
21 self-seals under negative air pressure against a milk opening in the nipple tunnel and that permits
22 milk to flow into the milk container in one direction and a removable cap, it would have been
23 obvious in view of Willow, Chang, Khalil, Park, Myers '386, and/or Guthrie '166 to modify the
24 reference to include such a feature. In addition to the reasons identified above, a POSA would
25 have been motivated to make this modification at least because a flexible one-way or self-sealing
26 valve, such as a duckbill valve, improves hygiene by preventing contamination due to milk
27 backflow and facilitates greater output during pumping by preserving negative pressure in the

nipple tunnel while allowing milk to flow into the milk container and making the volume under negative pressure smaller, creating stronger and more responsive suction. A POSA would also have been motivated to make the self-sealing valve removable so that it is easier to clean. A POSA would have been further motivated to modify the milk container to include a removable cap to enable the user to easily store milk in the milk container for later use, reduce risk of milk spillage, and minimize waste of collected milk.

Milk container attachable to housing with single-push mechanical or magnetic mechanism. To the extent any reference is found not to include a milk container that is attachable to the housing with a mechanical or magnetic mechanism that releasably attaches or latches when the milk container is sufficiently pressed on to the housing with a single push action, it would have been obvious in view of Willow, Chang, Myers '386, Weber, and/or Khalil to modify the reference to include such a feature. In addition to the reasons identified above, a POSA would have been motivated to make this modification at least because a single-push attachment mechanism facilitates quick assembly of the breast pump, enables easier maintenance of nipple alignment with the nipple tunnel, and improves convenience and usability by allowing the user to attach the milk container to the housing using only one hand.

(f) Diaphragm and Membrane Limitations

Diaphragm or membrane. To the extent any reference is found not to include a diaphragm or membrane, it would have been obvious in view of Willow, Chang, Khalil, Park, Jian, Fang, Chen, Tack, Guthrie '166, Weber, Kurihara, Myers '386, and/or Alvarez to modify the reference to include such a feature. In addition to the reasons identified above, a POSA would have been motivated to make this modification at least because a diaphragm or membrane facilitates suction, creates a closed pumping system by providing a sealed, protective barrier separating the pump components on the air-side of the system against milk backflow from the milk-flow side of the system, and improves hygiene and ease of cleaning by preventing the buildup of bacteria and other contaminants during or after milk expression.

1 **Substantially circular diaphragm or membrane and holder.** To the extent any
2 reference is found not to include a diaphragm or membrane that is substantially circular and a
3 diaphragm or membrane housing that is substantially circular, it would have been obvious in
4 view of Weber, Park, Khalil, Tack, Kurihara, Jian, Fang, and/or Alvarez to modify the reference
5 to include such a feature. In addition to the reasons identified above, a POSA would have been
6 motivated to make this modification at least because a circular diaphragm and holder were both
7 well-known design choices that were easy to produce and assemble, beneficially had a large
8 relative surface area that ensures optimal separation of air or vacuum and milk and minimizes
9 complexity and potential failure points because a circular design requires only a single seal to be
10 formed around the outer edge of the diaphragm.

11 **Flexible membrane.** To the extent any reference is found not to include a diaphragm
12 that is a flexible membrane, it would have been obvious in view of Park, Weber, Tack, Khalil,
13 Kurihara, Jian, Fang, Alvarez, and/or Chen to modify the reference to include such a feature. In
14 addition to the reasons identified above, a POSA would have been motivated to make this
15 modification because flexibility in the diaphragm improves suction and facilitates the transfer of
16 negative air pressure from the pump into the nipple tunnel.

17 **Diaphragm or membrane housing or holder.** To the extent any reference is found not
18 to include a diaphragm or membrane housing or holder, it would have been obvious in view of
19 Willow, Chang, Khalil, Park, Jian, Fang, Chen, Tack, Guthrie '166, Weber, Kurihara, Myers
20 '386, and/or Alvarez to modify the reference to include such a feature. In addition to the reasons
21 identified above, a POSA would have been motivated to make this modification at least because
22 a diaphragm housing or holder facilitates uniform output of the pump during use by ensuring that
23 the dead volume in the nipple tunnel remains unchanged during operation and is necessary for
24 the proper operation of a diaphragm pump. Additionally, using a diaphragm housing to support
25 a diaphragm or membrane in its relaxed state and the pump housing of the device or a second
26 diaphragm housing or holder to fix the maximum extent of the diaphragm in its flexed state were
27 known, predictable solutions for creating a defined pumping chamber that is necessary for the

1 functionality of a diaphragm pump. The diaphragm housing could also be further modified such
2 that it is an integral part of the breast shield in order to lower part count and make the device
3 easier to clean by minimizing the number of adjoining portions which could potentially
4 accumulate bacteria and other contaminants.

5 **Diaphragm housing positioned over top of nipple tunnel.** To the extent any reference
6 is found not to include a second diaphragm housing that is positioned, when the breast pump
7 device is upright, over a top surface of a nipple tunnel, it would have been obvious in view of
8 Park, Khalil, Jian, and/or Fang to modify the reference to include such a feature. In addition to
9 the reasons identified above, a POSA would have been motivated to make this modification at
10 least because positioning a second diaphragm housing above the nipple tunnel allows for further
11 separation between the milk-flow side of the chamber and the air-flow side of the chamber. The
12 modification would also free up space in the lower portion of the nipple tunnel to include a milk
13 port that would allow for expressed milk to flow under gravity into the milk container, which
14 advantageously prevents or reduces pooling of milk on the lower surface of the nipple tunnel
15 during milk expression, reduces waste and improves cleanliness, and reduces the power required
16 and noise generated by the pump operating at high power to deliver the expressed milk into the
17 milk container.

18 **Diaphragm or membrane that when relaxed has an inner raised and outer raised**
19 **area.** To the extent any reference is found not to include a flexible, generally circular,
20 diaphragm or membrane that, in a relaxed state, includes an inner raised area and a concentric
21 outer raised area, it would have been obvious in view of Park, Jian, Fang, and/or Chen to modify
22 the reference to include such a feature. In addition to the reasons identified above, a POSA
23 would have been motivated to make this modification at least because a circular design with an
24 inner raised and outer raised area increases surface area and facilitates flexion of the diaphragm
25 in response to pressure changes during operation, and thus improves the efficiency of the pump,
26 and such a modification would have been a well-known and routine design choice for a POSA.
27

1 (g) Other Limitations

2 **Breast pump with mass less than 250 gm.** To the extent any reference is found not to
3 include a breast pump with a mass of less than 250 gm, as noted in the attached charts, it would
4 have been obvious in view of Myers '255 to modify the reference to include such a feature. In
5 addition to the reasons identified above, a POSA would have been motivated to make this
6 modification at least because determining a mass for the device that is sufficiently lightweight
7 and comfortable for the user when worn would have been well within the skill of a POSA and a
8 matter of routine optimization.

9 **Breast pump with housing that contacts inner surface of bra and breast shield.** To
10 the extent any reference is found not to include a housing that has a front surface that is
11 configured to fit inside a bra and to contact an inner surface of the bra, and a rear surface that is
12 shaped to contact, at least in part, the breast shield, as noted in the attached charts, it would have
13 been obvious in view of Willow, Chang, Khalil, and/or Myers '386 to modify the reference to
14 include such a feature. In addition to the reasons identified above, a POSA would have been
15 motivated to make this modification because doing so would reduce the size of the pump,
16 making it easier to fit inside a bra and generally increasing the user's comfort, and such a
17 modification would have been a well-known and routine design choice for a POSA.

18 **Only breast shield and milk container directly removable from housing.** To the
19 extent any reference is found not to include a device that includes only the breast shield and milk
20 container that are directly removable from the housing in normal use or dis-assembly, at least in
21 part, the breast shield, as noted in the attached charts, it would have been obvious in view of
22 Willow, Chang, Khalil, Myers '386, Weber, Guthrie '166, Park, and/or Miller to modify the
23 reference to include such a feature. In addition to the reasons identified above, a POSA would
24 have been motivated to make this modification because allowing only the breast shield and milk
25 container to be directly removable from the housing simplifies the assembly and disassembly
26 process and facilitates easy cleaning and handling of the components that come into contact with
27

1 skin and milk, and such a modification would have been a well-known and routine design choice
2 for a POSA.

3 **Clear top of milk container below light emitters in housing.** To the extent any
4 reference is found not to include a top of a milk container that includes an optically clear region
5 that is aligned below one or more light emitters positioned in a base of the housing, it would
6 have been obvious in view of Khalil, Guthrie '166, and/or Guthrie '743 to modify the reference
7 to include such a feature. In addition to the reasons identified above, a POSA would have been
8 motivated to make this modification to better enable the user to assess the amount of milk in the
9 container, and such a modification would have been a well-known and routine design choice for
10 a POSA.

11 **Wireless data communications system.** To the extent any reference is found not to
12 include a housing that includes a wireless data communications system, as noted in the attached
13 charts, it would have been obvious in view of Willow, Chang, Guthrie '166, Makower, and/or
14 Alvarez to modify the reference to include such a feature. In addition to the reasons identified
15 above, a POSA would have been motivated to make this modification because a wireless data
16 communications system enables “smart” device functionality that would enable users to monitor
17 in greater detail the amount of milk expressed and rate of milk expression, and such a
18 modification would have been a well-known and routine design choice for a POSA. In addition,
19 because such functionality would allow for more information to be transmitted to and viewed via
20 an external device, the housing of the breast pump device can be smaller and more lightweight,
21 as fewer display and processing-related electronics in the breast pump device housing would be
22 required.

23 **Visual or haptic indicator of milk flow or correct pump operation on housing.** To
24 the extent any reference is found not to include a housing that includes at least one of a visual or
25 haptic indicator that indicates whether milk is flowing or not flowing into the milk container or
26 that if the pump is operating correctly to pump milk, based on whether a quantity or a height of
27 liquid in the milk container above a base of the milk container is increasing above a threshold

1 rate of increase, as noted in the attached charts, it would have been obvious in view of Makower,
2 Jian, and/or Alvarez to modify the reference to include such a feature. In addition to the reasons
3 identified above, a POSA would have been motivated to make this modification to enable the
4 user to monitor and track milk expression and pumping efficiency in real time, and such a
5 modification would have been a well-known and routine design choice for a POSA.

6 **B. The '454 Patent**

7 **1. Anticipation and Obviousness Grounds**

8 As detailed in the attached charts, the following prior art anticipates and/or renders
9 obvious the Asserted Claims of the '454 Patent, alone and/or when viewed in combination with
10 other prior art references under the proper construction of the claims and/or under Elvie's
11 apparent interpretation of the claims as set forth by Elvie in its Infringement Contentions.

12 Momcozy provides information regarding exemplary combinations below. Each of these
13 exemplary combinations is listed for purposes of explaining and exemplifying which references
14 would be combined with a reasonable expectation of success under the motivations to combine
15 described below. These combinations are not intended to be exclusive or limiting but rather
16 intended to provide notice of the reasoning behind the motivations to combine and the references
17 that would be combined thereunder. In many instances, multiple different motivations would
18 apply to a particular combination (for example, if multiple references were both authored by the
19 same person and referred to the same product/system, then both of those motivations would
20 apply) and the specific combinations were not duplicated.

21 Should any prior art cited herein be deemed not to disclose, explicitly or inherently, any
22 limitation of a claim, Momcozy reserves the right to argue that any such difference between that
23 prior art and the corresponding claim would have been obvious to a POSA. To the extent that
24 such an argument is deemed a "combination" analysis for purposes of obviousness, Momcozy
25 discloses its present intention to rely on the separate combination of the knowledge of a POSA
26 with each item of prior art identified below.

Patent	Ex. No	Reference(s)
'454 Patent	D-1	Chen '355 , alone or in view of the Freemie Independence, the Freemie Freedom, Park, Fang, Chang, Myers '386, Weber, Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Weniger, Rigert '677, Silver '466, Luzbetak, Marcelo, Chen '082, Zheng, and/or Garbez '389
	D-2	Freemie Freedom , alone or in view of Park, Chen '355, Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Rigert '677, Weniger, Silver '466, Luzbetak, Marcelo, and/or Chen '082
	D-3	Freemie Independence , alone or in view of Park, Chen '355, Fang, O'Toole, Etienne, Rigert '677, Weniger, Silver '466, Luzbetak, Marcelo, and/or Chen '082
	D-4	Garbez '389 , alone or in view of the Freemie Independence, the Freemie Freedom, Park, Chen '355, Fang, Chang, Myers '386, Weber, Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Phillips, Etienne, Rigert '677, Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, and/or Zheng
	D-5	Garbez '646 , alone or in view of the Freemie Independence, the Freemie Freedom, Park, Chen '355, Fang, Chang, Myer's '386, Weber, Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Rigert '677, Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, Garbez '389, and/or Zheng
	D-6	Zheng , alone or in view of the Freemie Independence, the Freemie Freedom, Park, Chen '355, Fang, Chang, Myers '386, Weber, Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Rigert '677, Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, and/or Garbez '389
	D-7	Kim , alone or in view of the Freemie Independence, the Freemie Freedom, Park, Chen '355, Fang, Chang, Myers '386, Weber, Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Rigert '677, Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, Garbez '089, and/or Zheng
	D-8	O'Toole , alone or in view of the Freemie Independence, the Freemie Freedom, Park, Chen '355, Fang, Etienne, Rigert '677, Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, Garbez '389, and/or Zheng
	D-9	Park , alone or in view of the Freemie Independence, the Freemie Freedom, Chen '355, Fang, Chang, Myers '386, Weber, Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Rigert '677, Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, Garbez '089, and/or Zheng

2. Primary References

(a) Chen '355

Chen '355 discloses “a hand-free breast pump,” with “a negative pressure source and a milk extractor.” Chen '355 at 1, 8. Further, this breast pump system is “suitable for use while

1 lying down.” *Id.* at cl. 1. Chen ’355 further discloses that the “middle of the bottom cover is
2 provided with a tapered breast support that fits the human breast.” *Id.*

3 As explained in the attached charts and below, Chen ’355 discloses each of the
4 limitations of the ’454 Patent, expressly, inherently, or as a matter of common sense, and/or it
5 would have been obvious to add missing aspects of the limitation in light of other prior art,
6 including the Freemie Independence, the Freemie Freedom, Park, Fang, Chang, Myers ’386,
7 Weber, Kurihara, Guthrie ’166, O’Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Weniger,
8 Rigert ’677, Silver ’466, Luzbetak, Marcelo, Chen ’082, Zheng, and/or Garbez ’389. Each of
9 these prior art references are from the same field of endeavor (breast milk collection devices),
10 address the same or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency,
11 lack of discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring
12 pumping) and suggests the same or similar solutions to those issues.

13 **(b) Freemie Freedom**

14 Freemie Freedom discloses a wearable, hands-free breast pump system with milk
15 collection cups that are attached to a vacuum/power source. The milk collection cups are worn
16 inside a woman’s brassiere allowing for hands-free pumping.

17 As explained in the attached charts and below, Freemie Freedom discloses each of the
18 limitations of the ’454 Patent, expressly, inherently, or as a matter of common sense, and/or it
19 would have been obvious to add missing aspects of the limitation in light of other prior art,
20 including Park, Chen ’355, Kurihara, Guthrie ’166, O’Toole, Hu, Jian, Alvarez, Yuen, Phillips,
21 Etienne, Rigert ’677, Weniger, Silver ’466, Luzbetak, Marcelo, and/or Chen ’082. Each of these
22 prior art references are from the same field of endeavor (breast milk collection devices), address
23 the same or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of
24 discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping)
25 and suggests the same or similar solutions to those issues.

1 **(c) Freemie Independence**

2 Freemie Independence discloses a wearable, hands-free breast pump system with milk
3 collection cups that are attached to a vacuum/power source/battery. The milk collection cups are
4 worn inside a woman's brassiere allowing for hands-free pumping.

5 As explained in the attached charts and below, Freemie Independence discloses each of
6 the limitations of the '454 Patent, expressly, inherently, or as a matter of common sense, and/or it
7 would have been obvious to add missing aspects of the limitation in light of other prior art,
8 including Park, Chen '355, Fang, O'Toole, Etienne, Rigert '677, Weniger, Silver '466, Luzbetak,
9 Marcelo, and/or Chen '082. Each of these prior art references are from the same field of
10 endeavor (breast milk collection devices), address the same or similar technical issues (e.g.,
11 bulkiness, heaviness, complexity, inefficiency, lack of discreteness, inconvenience, discomfort,
12 difficulty in cleaning, difficulty in monitoring pumping) and suggests the same or similar
13 solutions to those issues.

14 **(d) Garbez '389**

15 Garbez '389 discloses a "breast milk collection device" that has "one end to receive a
16 woman's breast." Garbez '389 at Abstract. Further, Garbez '389 "incorporates an improved
17 flexible barrier structure that allows vacuum pressure to be cyclically applied to the breast for the
18 expression of milk into the reservoir 33." *Id.* at [0035]. Garbez '389 also discloses a "somewhat
19 oval rimmed flange 84 extends outwardly from inner face 86 of adaptor 12." *Id.* at [0037].
20 Garbez '389 further discloses and "outer rim 90 of barrier 78 is similarly oval in shape and is
21 held securely between flange 84 and outer rim 88 of the barrier housing 76." *Id.* Garbez '389
22 further discloses "[a] one-way assembly permits breast milk to enter the reservoir and to
23 submerge the valve element." *Id.* at Abstract.

24 As explained in the attached charts and below, Garbez '389 discloses each of the
25 limitations of the '454 Patent, expressly, inherently, or as a matter of common sense, and/or it
26 would have been obvious to add missing aspects of the limitation in light of other prior art,
27 including the Freemie Independence, the Freemie Freedom, Park, Chen '355, Fang, Chang,

1 Myers '386, Weber, Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Phillips, Etienne, Rigert
2 '677, Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, and/or Zheng. Each of these prior art
3 references are from the same field of endeavor (breast milk collection devices), address the same
4 or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of
5 discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping)
6 and suggests the same or similar solutions to those issues.

7 **(e) Garbez '646**

8 Garbez '646 discloses "a naturally shaped and hands-free human breast milk collection
9 device that fits into a mother's existing nursing or standard brassiere." Garbez '646 at Abstract.
10 This breast milk collection device "can significantly increase breast milk collection capacity
11 within the collection device without increasing the size of the collection device." *Id.* at 1:9-11.
12 Garbez '646 further discloses that "[t]he device which contains this improved valve system can
13 be attached to a conventional electric or manual vacuum pump for milk collection." *Id.* at 1:57-
14 59. Garbez '646 also discloses "a breast adaptor which has a funnel-shaped inlet coupled to a
15 reservoir." *Id.* at 2:60-61. Garbez '646 further discloses "contact between the breast and the
16 adaptor 12 creates a seal, whereby the negative pressure created by the vacuum force applied to
17 the outer end of the breast does not escape." *Id.* at 5:27-31.

18 As explained in the attached charts and below, Garbez '646 discloses each of the
19 limitations of the '454 Patent, expressly, inherently, or as a matter of common sense, and/or it
20 would have been obvious to add missing aspects of the limitation in light of other prior art,
21 including the Freemie Independence, the Freemie Freedom, Park, Chen '355, Fang, Chang,
22 Myer's '386, Weber, Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Yuen, Phillips,
23 Etienne, Rigert '677, Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, Garbez '389, and/or
24 Zheng. Each of these prior art references are from the same field of endeavor (breast milk
25 collection devices), address the same or similar technical issues (e.g., bulkiness, heaviness,
26 complexity, inefficiency, lack of discreteness, inconvenience, discomfort, difficulty in cleaning,
27 difficulty in monitoring pumping) and suggests the same or similar solutions to those issues.

1 (f) Zheng

2 Zheng discloses a “The utility model [] an exempt from hand breast pump.” Zheng at 1-2.
3 Zheng further discloses a suction cup 12 that is “funnel-shaped for receiving the breast of the
4 body.” *Id.* at [0025]. The utility model disclosed by Zheng further includes a milking tray. *Id.*
5 at 1-2. Zheng further discloses an “upper cavity gland 53 to generate negative pressure in the
6 elastic diaphragm 52 so as to allow the deformation of the lower cavity 51 to achieve the effect
7 of milk to produce a negative pressure.” *Id.* at [0025].

8 As explained in the attached charts and below, Zheng discloses each of the limitations of
9 the ’454 Patent, expressly, inherently, or as a matter of common sense, and/or it would have been
10 obvious to add missing aspects of the limitation in light of other prior art, including Freemie
11 Independence, the Freemie Freedom, Park, Chen ’355, Fang, Chang, Myers ’386, Weber,
12 Kurihara, Guthrie ’166, O’Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Rigert ’677,
13 Weniger, Silver ’466, Luzbetak, Marcelo, Chen ’082, and/or Garbez ’389. Each of these prior
14 art references are from the same field of endeavor (breast milk collection devices), address the
15 same or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of
16 discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping)
17 and suggests the same or similar solutions to those issues.

18 (g) Kim

19 Kim discloses “a breast pump,” specifically a “breast milk extractor.” Kim at 2. Kim
20 further discloses “a tightly contacting housing including a protrusion part which is formed at a
21 portion corresponding to a nipple of a lactating woman.” *Id.* Kim discloses a “close housing
22 100.” *Id.* at 9. Kim also discloses “[a] storage housing having a coupling hole at a portion
23 corresponding to the second inner space of the funnel connector, the storage housing being
24 detachably coupled to the tight housing.” *Id.* at cl. 1. Kim further discloses “a protrusion 110
25 that is formed at a portion corresponding to the mother’s nipple and extends toward the front.”
26 *Id.* at 9.
27

1 As explained in the attached charts and below, Kim discloses each of the limitations of
2 the '454 Patent, expressly, inherently, or as a matter of common sense, and/or it would have been
3 obvious to add missing aspects of the limitation in light of other prior art, including Freemie
4 Independence, the Freemie Freedom, Park, Chen '355, Fang, Chang, Myers '386, Weber,
5 Kurihara, Guthrie '166, O'Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Rigert '677,
6 Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, Garbez '089, and/or Zheng. Each of these
7 prior art references are from the same field of endeavor (breast milk collection devices), address
8 the same or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of
9 discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping)
10 and suggests the same or similar solutions to those issues.

11 **(h) O'Toole**

12 O'Toole discloses "a wearable breast pump system including a housing shaped at least in
13 part to fit inside a bra." O'Toole at Abstract. O'Toole also discloses "a breast shield for
14 engagement with the user's breast" and "a housing for receiving at least a portion of the breast
15 shield and a detachable rigid milk collection container" *Id.* at [0079]. O'Toole further discloses
16 that "[t]he housing inside also includes a pump for generating a negative pressure in the breast
17 shield, as well as battery and control electronics." *Id.* O'Toole also discloses that "[t]he housing
18 1 (including the one or more pumps and a battery) and the container 3 are provided as a unit with
19 a convex outer surface contoured to fit inside a bra." *Id.* [0086]. O'Toole further discloses that
20 "[t]he breast shield 7 is designed to engage with the user's breast, and comprises a concave inner
21 flange 7A which contacts the breast." *Id.* at [0100].

22 As explained in the attached charts and below, O'Toole discloses each of the limitations
23 of the '454 Patent, expressly, inherently, or as a matter of common sense, and/or it would have
24 been obvious to add missing aspects of the limitation in light of other prior art, including the
25 Freemie Independence, the Freemie Freedom, Park, Chen '355, Fang, Etienne, Rigert '677,
26 Weniger, Silver '466, Luzbetak, Marcelo, Chen '082, Garbez '389, and/or Zheng. Each of these
27 prior art references are from the same field of endeavor (breast milk collection devices), address

1 the same or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of
2 discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping)
3 and suggests the same or similar solutions to those issues.

4 **(i) Park**

5 Park discloses “a breast pump which enables a lactating woman to freely use both hands
6 during milking, is capable of preventing breast milk from flowing backward, and is easily
7 cleaned and maintained.” Park at [8]. Park’s breast pump includes a “close-contact housing 100
8 having a protruding part 110, which extends forward and is formed in the portion corresponding
9 to a nipple of a lactating woman,” and a “breast milk discharging hole 120” on the “bottom
10 surface of the protruding part 110.” *Id.* at [37]. Park’s breast pump is electrically powered by
11 “electric pump 800,” an “automatic breast pump in which a vacuum pressure.” *Id.* at [49].
12 Park’s breast pump also includes a “flow separation membrane 500 formed of a ductile material
13 so as to be easily bendable” that is housed within a “cover 400” and a “funnel connector 300”
14 and that forms vacuum pressure to enable breast milk to be extracted. *Id.* at [39]. Park further
15 discloses a “a storing housing coupled to the close-contact housing in a detachable structure . . .
16 provided with a space in which breast milk discharged through the breast milk discharge tube is
17 stored.” *Id.* at [12].

18 As explained in the attached charts and below, Park discloses each of the limitations of
19 the ’454 Patent, expressly, inherently, or as a matter of common sense, and/or it would have been
20 obvious to add missing aspects of the limitation in light of other prior art, including the Freemie
21 Independence, the Freemie Freedom, Chen ’355, Fang, Chang, Myers ’386, Weber, Kurihara,
22 Guthrie ’166, O’Toole, Hu, Jian, Alvarez, Yuen, Phillips, Etienne, Rigert ’677, Weniger, Silver
23 ’466, Luzbetak, Marcelo, Chen ’082, Garbez ’089, and/or Zheng. Each of these prior art
24 references are from the same field of endeavor (breast milk collection devices), address the same
25 or similar technical issues (e.g., bulkiness, heaviness, complexity, inefficiency, lack of
26 discreteness, inconvenience, discomfort, difficulty in cleaning, difficulty in monitoring pumping)
27 and suggests the same or similar solutions to those issues.

1 Each of the prior art references identified above renders obvious one or more of the
2 Asserted Claims of the '454 Patent, alone and/or when viewed in combination with other prior
3 art references as described below and in the attached claim charts. Momcozy's contentions that
4 the references described in these Invalidity Contentions, in various combinations, render those
5 Asserted Claims obvious under 35 U.S.C. § 103 are in no way an admission or suggestion that
6 each reference does not independently anticipate those Asserted Claims under 35 U.S.C. § 102.
7 Furthermore, the specific combinations described in these Invalidity Contentions are not
8 intended to be exhaustive, as there are many possible combinations of these references, and it is
9 not practical, particularly at this early stage before further factual investigation and claim
10 construction proceedings, to identify and list all potentially relevant combinations. Momcozy
11 reserves the right to identify additional combinations in later stages of the case.

12 **3. Motivations to Combine**

13 Each limitation of the Asserted Claims of the '454 Patent was well-known to POSAs by
14 March 26, 2020. As explained below and in the attached charts, all of the elements recited in the
15 Asserted Claims are mere combinations of and modifications to well-known features, and a
16 POSA would have been able, and motivated, to improve the existing technology in the same or
17 similar manner by combining or modifying the individual elements using known techniques and
18 apparatuses according to their known and ordinary uses to yield predictable results.

19 **(a) Control Unit Limitations**

20 To the extent any reference is found not to include a control unit, as noted in the attached
21 charts, it would have been obvious in view of at least the Freemie Independence, the Freemie
22 Freedom, and/or O'Toole to modify the reference to include such a feature. In addition to the
23 reasons identified above, a POSA would have been motivated to make this modification at least
24 because a control unit would advantageously enable a user to use and control the device settings,
25 such as the suction level.
26
27

1 **(b) Battery Limitations**

2 To the extent any reference is found not to include a battery, as noted in the attached
3 charts, it would have been obvious in view of at least Park, Chen '355, Freemie Independence,
4 Chang, Myers '386, Weber, Kurihara, Guthrie '166, Makower, O'Toole, Jian, Yuen, Alvarez,
5 and/or Phillips to modify the reference to include such a feature. In addition to the reasons
6 identified above, a POSA would have been motivated to make this modification at least because
7 the use of a battery to provide the electrical power for the device, which is electrically-driven,
8 would have enabled the device to be used wirelessly and discretely, without needing to be
9 plugged into an AC power source during use.

10 **(c) Pump Limitations**

11 To the extent any reference is found not to include a pump configured to generate
12 negative air pressure, as noted in the attached charts, it would have been obvious in view of at
13 least Park '452, Chen '355, the Freemie Independence, the Freemie Freedom, and/or O'Toole to
14 modify the reference to include such a feature. In addition to the reasons identified above, a
15 POSA would have been motivated to make this modification at least because electric pumps are
16 preferable over manual pumps as they are more efficient at extracting milk and are more
17 convenient for the user.

18 **(d) Outer Shell Limitations**

19 To the extent any reference is found not to include an outer shell comprising a rear end
20 configured to removably attach to the breast shield and an interior volume between the outer
21 shell and the breast shield defining a chamber to receive expressed milk, as noted in the attached
22 charts, it would have been obvious in view of at least Park '452, Chen '355, Garbez '646, Garbez
23 '389, the Freemie Independence, the Freemie Freedom, O'Toole, Etienne, Kim, and/or Marcelo
24 to modify the reference to include such a feature. In addition to the reasons identified above, a
25 POSA would have been motivated to make this modification at least because providing an outer
26 shell obviates the need for a separate milk collection container, such as a bottle, and allows for
27

1 the discrete storage of milk upon expression by forming a shape that fits comfortably inside the
2 user's bra.

3 **(e) Wearable Milk Collection Hub and Air Line Limitations**

4 To the extent any reference is found not to include a wearable milk collection hub
5 connected to the control unit via an air line, as noted in the attached charts, it would have been
6 obvious in view of at least Park '452, Chen '355, Garbez '646, Garbez '389, the Freemie
7 Independence, the Freemie Freedom, O'Toole, Etienne, Kim, and/or Marcelo to modify the
8 reference to include such a feature. In addition to the reasons identified above, a POSA would
9 have been motivated to make this modification at least because an air line connection between
10 the control unit and the milk collection hub enables the user to control the pump discretely by
11 eliminating the need to remove or reach into the bra in order to adjust the settings or power of the
12 pump. A POSA would also recognize that a control unit that is connected to the wearable milk
13 collection hub, instead of integrated into the milk collection hub, also advantageously improves
14 the comfort of the user and the lightness of the device by separating the heavier pump
15 components from the wearable components of the device.

16 **(f) Breast Shield Limitations**

17 To the extent any reference is found not to include a breast shield comprising a breast
18 flange and a nipple tunnel extending from the breast flange, as noted in the attached charts, it
19 would have been obvious in view of at least Etienne, Rigert '677, Weniger, Silver '466, and/or
20 O'Toole to modify the reference to include such a feature. In addition to the reasons identified
21 above, a POSA would have been motivated to make this modification at least because a breast
22 shield comprising a flange and a nipple tunnel applies the suction of the vacuum pump to the
23 lactating woman's breasts and mimics the suction generated by a feeding child.

24 **(g) Diaphragm and Diaphragm Cap Limitations**

25 **Diaphragm.** To the extent any reference is found not to include a diaphragm, as noted in
26 the attached charts, it would have been obvious in view of at least Park '452, Chen '355,
27

1 O'Toole, Etienne, Weniger, and/or Fang to modify the reference to include such a feature. In
2 addition to the reasons identified above, a POSA would have been motivated to make this
3 modification at least because a diaphragm assists in distributing the vacuum pressure causing the
4 lactating mother's breast to express milk. Additionally, the inclusion of a diaphragm creates a
5 closed pumping system by providing a protective barrier against milk backflow for pump
6 components, which in turn prevents buildup of bacteria and other contaminants during or after
7 milk expression, improves hygiene, and makes the system easier to clean.

8 Further, to the extent any reference is found not to include a milk port through which
9 expressed milk flows into the chamber and wherein the diaphragm is configured to extend over
10 and adjacent to the milk port in a relaxed state, it would have been obvious in view of at least
11 Park '452, Chen '355, Kim, Chen '082, Garbez '389, Garbez '646, Etienne, Luzbetak, Silver
12 '466 Rigert '677, Weniger, Fang, the Freemie Independence, the Freemie Freedom, and/or
13 O'Toole to modify the reference to include such a feature. In addition to the reasons identified
14 above, a POSA would have been motivated to make this modification at least because, together
15 with the non-return valve, the milk port transmits the milk to the collection hub without allowing
16 milk to regress up the tubing.

17 **Concentric diaphragm arrangement.** To the extent any reference is found not to
18 include at least part of a diaphragm arranged concentric with the nipple tunnel, it would have
19 been obvious in view of at least Etienne, Rigert '677, Luzbetak, Marcelo, and/or Chen '082 to
20 modify the reference to include such a feature. In addition to the reasons identified above, a
21 POSA would have been motivated to make this modification at least because the concentric
22 diaphragm arrangement permits the formation of a compact breast shield unit and opens up the
23 line of sight down from the lactating mother's eyes to the nipple to ensure proper nipple
24 placement and pumping.

25 **Diaphragm extended over and adjacent to milk port.** To the extent any reference is
26 found not to include a diaphragm that is configured to extend over and adjacent to the milk port
27 in a relaxed state, it would have been obvious in view of at least Etienne, Rigert '677, and Fang

1 to modify the reference to include such a feature. In addition to the reasons identified above, a
2 POSA would have been motivated to make this modification at least because the user's view
3 would be unobstructed to the nipple tunnel to ensure proper nipple placement and pumping.

4 **Diaphragm cap on front surface of outer shell.** To the extent any reference is found
5 not to include a diaphragm cap configured to cover and seal the diaphragm at a front end of the
6 outer shell, the front end being opposite to the rear end, and forming a central region on a front
7 surface of the outer shell, as noted in the attached charts, it would have been obvious in view of
8 at least Park '452, Chen '355, Etienne, Rigert '677, Luzbetak, Fang, Marcelo, and/or Chen '082
9 to modify the reference to include such a feature. In addition to the reasons identified above, a
10 POSA would have been motivated to make this modification at least because positioning the cap
11 on the front surface minimizes obstruction of the line of site to the interior of the device and the
12 nipple, enables the user to better position the wearable collection hub on the breast and achieve
13 correct nipple alignment, and improves the user's ability to observe the rate and extent of milk
14 expression.

15 **Diaphragm cap that receives an air line.** To the extent any reference is found not to
16 include a diaphragm cap comprising an air port configured to receive an end of an air line, it
17 would have been obvious in view of at least Chen '355, Etienne, Rigert '677, Silver '466,
18 Luzbetak, Marcelo, and/or Chen '082 to modify the reference to include such a feature. In
19 addition to the reasons identified above, a POSA would have been motivated to make this
20 modification at least because it would deliver air pressure to the milk collection hub and keep the
21 view unobstructed from the user to the nipple tunnel.

22 **Diaphragm cap with air port located above nipple tunnel.** To the extent any reference
23 is found not to include a diaphragm cap configured such that the air port can be located above the
24 nipple tunnel, it would have been obvious in view of at least Chen '355, Etienne, Fang, Marcelo,
25 and/or Chen '082 to modify the reference to include such a feature. In addition to the reasons
26 identified above, a POSA would have been motivated to make this modification at least because
27

1 it is more convenient when the user is wearing a brassiere to have the air line come up and out of
2 the bra rather than directly from the front.

3 **Diaphragm finger grip features.** To the extent any reference is found not to include a
4 diaphragm cap comprising a pair of recessed finger grip features, it would have been obvious in
5 view of at least the Freemie Independence, the Freemie Freedom, Garbez '389, and/or Zheng to
6 modify the reference to include such a feature. In addition to the reasons identified above, a
7 POSA would have been motivated to make this modification at least to improve ease of handling
8 and to make it easier for the user to adjust the position of the air port and lines.

9 **(h) Other Limitations**

10 **Non-return valve.** To the extent any reference is found not to include a non-return valve
11 configured to be mounted to the milk port, as noted in the attached charts, it would have been
12 obvious in view of at least Park '452, Chen '355, Garbez '646, Garbez '349, Kim, O'Toole,
13 Zheng, the Freemie Independence, the Freemie Freedom, Etinne, Luzbetak, Silver '466, Rigert
14 '677, Weinger, Fang and/or Chen '082 to modify the reference to include such a feature. In
15 addition to the reasons identified above, a POSA would have been motivated to make this
16 modification at least because the valve prevents milk from backflowing onto the breast and/or up
17 the tubing causing hygienic and functional concerns.

18 **Bounded interior volume.** To the extent any reference is found not to include an
19 interior volume bounded by the rear end of the outer shell and a front end of the breast shield, as
20 noted in the attached charts, it would have been obvious in view of at least Park '452, Chen '355,
21 the Freemie Freedom, the Freemie Independence, Garbez '389, Garbez '646, Kim, O'Toole, and
22 Zheng to modify the reference to include such a feature. In addition to the reasons identified
23 above, a POSA would have been motivated to make this modification at least because it provides
24 a collection hub for the expressed milk as well as a compact unit for discrete and efficient
25 pumping.

1 **VI. INVALIDITY UNDER 35 U.S.C. § 112**

2 The grounds identified below both individually and collectively render certain of the
3 Asserted Claims invalid under the statutory requirements of § 112. By identifying certain claim
4 language below, Momcozy does not imply that such language is entitled to any patentable weight
5 when comparing the claim as a whole to the prior art. Momcozy's identifications are made
6 based on Momcozy's present understanding of the Asserted Claims and Elvie's apparent
7 interpretation of these claims as reflected in its Infringement Contentions, and Momcozy
8 reserves the right to amend these identifications, including in response to claim constructions and
9 claim interpretations that would render claim limitations not enabled, lacking in written
10 description, or indefinite. Momcozy also reserves the right to assert that a claim is indefinite, not
11 enabled, or fails to meet the written description requirement based on any claim construction
12 position Elvie may take in this case or based on any claim construction the Court may adopt in
13 this case. To the extent a claim element is contained within an element identified below or
14 encompasses an element identified below, that claim element also renders the claim invalid
15 under 35 U.S.C. § 112.

16 **A. Indefiniteness**

17 Section 112(b) includes a definiteness requirement: "[T]he specification shall conclude
18 with one or more claims particularly pointing out and distinctly claiming the subject matter
19 which the applicant regards as his invention." 35 U.S.C. § 112(b). "[A] patent is invalid for
20 indefiniteness if its claims, read in light of the patent's specification and prosecution history, fail
21 to inform, with reasonable certainty, those skilled in the art about the scope of the invention."
22 *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014).

23 The definiteness requirement requires that the claim must set forth what the applicant
24 regards as the invention and do so with sufficient particularity and definiteness. *Allen Eng'g*
25 *Corp. v. Bartell Indus.*, 299 F.3d 1336, 1348 (Fed. Cir. 2002). Where it would be apparent to
26 one of skill in the art, based on the patent specification, that the "invention" set forth in a claim is
27 not what the patent applicant regarded as the invention, the claim is invalid. *Id.*

Based on Momcozy's present understanding of the Asserted Claims and Elvie's apparent interpretation of these claims as reflected in its Infringement Contentions, the following limitations of the Asserted Claims fail to satisfy the requirements of § 112(b) because the precise scope of at least the terms listed below cannot be determined with reasonable certainty by a POSA when reading the claims in light of the specification and prosecution history.

Patent-in-Suit	Claim(s)	Indefinite Claim Limitation(s)
'893 Patent	3	"at or close to a base of the housing"
	4	"a total mass of the breast pump device, unfilled with milk, is less than 250 gm"
	12	"the housing is configured to slide onto the breast shield, when the breast shield has been placed onto a breast, using guide members"
	6, 16	"substantially rigid"
	7	"configured to rotate smoothly around a nipple inserted into the nipple tunnel to provide a correct positioning of the breast shield onto a breast"
	13	"only the breast shield and the milk container that are directly removable from the housing in normal use or normal dis-assembly"
	18	"held comfortably inside the bra"
	20	"sufficiently pressed on to the housing with a single push action"
'380 Patent	2, 30	"configured to rotate smoothly around a nipple inserted into the nipple tunnel to provide a correct positioning of the breast shield onto a breast"
	7, 34	"substantially circular"
	8, 35	"substantially rigid"
	9, 28, 46	"held comfortably [inside / in] a bra"
	19	"generally circular diaphragm and the second diaphragm housing has a corresponding generally circular shape"
	24, 42	"generally circular [diaphragm / membrane]"
	33	"only the breast shield and the milk container that are directly removable from the housing in normal use or normal dis-assembly"

Patent-in-Suit	Claim(s)	Indefinite Claim Limitation(s)
	37	“sufficiently pressed on to the housing with a single push action”
’454 Patent	17	“diaphragm cap forms a central region on a front surface of the outer shell”
	22	“the diaphragm is configured to extend over and adjacent to the milk port in a relaxed state”
	27	“part of the diaphragm is arranged concentric with the nipple tunnel”
’381 Patent	2	“configured to rotate smoothly around a nipple inserted into the nipple tunnel to provide a correct positioning of the breast shield onto a breast”
	8	“the housing is configured to slide onto the breast shield, when the breast shield has been placed onto a breast, using guide members”
	9	“only the breast shield and the milk container that are directly removable from the housing in normal use or normal dis-assembly”
	10	“diaphragm is substantially circular and is configured to self-seal under the negative air pressure to a substantially circular diaphragm holder”
	13	“substantially rigid”
	15	“held comfortably inside the bra”
	17	“sufficiently pressed on to the housing with a single push action”
	27	“a total mass of the breast pump device, unfilled with milk, is less than 250 gm”
	29	“maximum suction of approximately 240 mmHg”

B. Lack of Enablement

Section 112(a) includes an enablement requirement: “The specification shall contain a written description . . . of the manner and process of making and using [the invention] in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.” 35 U.S.C. § 112, ¶ 1. To satisfy the enablement requirement, the disclosure “must teach those skilled in the art how to make and use the full scope of the claimed invention without ‘undue experimentation.’”

Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1366 (Fed. Cir. 1997); *MagSil Corp. v. Hitachi Glob. Storage Techs., Inc.*, 687 F.3d 1377, 1381 (Fed. Cir. 2012); *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 999 (Fed. Cir. 2008). If a specification teaches away from a substantial portion of the claim or does not enable the full scope of the claim, there is no enablement. *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1239-1241, 1244-1245 (Fed. Cir. 2003); *see also MagSil Corp.*, 687 F.3d at 1383-84 (Fed. Cir. 2012).

Based on Momcozy's present understanding of the Asserted Claims and Elvie's apparent interpretation of these claims as reflected in its Infringement Contentions, the following limitations of the Asserted Claims fail to satisfy the requirements of § 112(a) because the specification and original patent application fail to provide an enabling disclosure of at least the following limitations.

Patent-in-Suit	Claim(s)	Claim Limitation(s) Lacking Enablement
'893 Patent	1	"a diaphragm holder that forms a recess or cavity at least in part with an external surface of the housing"
	12	"the housing is configured to slide onto the breast shield, when the breast shield has been placed onto a breast, using guide members"
	13	"only the breast shield and the milk container that are directly removable from the housing in normal use or normal dis-assembly"
	19	"milk container includes a flexible valve that self-seals under negative air pressure against a milk, opening in the nipple tunnel"
	24	"wireless data communications system"
'380 Patent	1, 14, 40	"a recess or cavity that defines a pumping chamber" / "the recess or cavity in the pump housing"
	33	"only the breast shield and the milk container that are directly removable from the housing in normal use or normal dis-assembly"
'454 Patent	25	"the diaphragm cap is configured such that the air port can be located above the nipple tunnel"

Patent-in-Suit	Claim(s)	Claim Limitation(s) Lacking Enablement
'381 Patent	8	"the housing is configured to slide onto the breast shield, when the breast shield has been placed onto a breast, using guide members"
	9	"only the breast shield and the milk container that are directly removable from the housing in normal use or normal dis-assembly"
	12	"a diaphragm holder that sits above the breast flange and the nipple tunnel"
	16	"milk container includes a flexible valve that self-seals under negative air pressure against the milk port"
	22	"wireless data communication system"

C. Lack of Written Description

Section 112(a) further includes a written description requirement: "The specification shall contain a written description of the invention" 35 U.S.C. § 112(a). "To satisfy the written description requirement, a patent applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention." *ICU Med. Inc. v. Alaris Medical Sys., Inc.*, 558 F.3d 1368, 1377 (Fed. Cir. 2009) (internal quotation marks and citations omitted); *see also Synthes USA, LLC v. Spinal Kinetics, Inc.*, 734 F.3d 1332, 1340 (Fed. Cir. 2013). "The test [for written description support] requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed." *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*).

The specification must describe the claimed invention in sufficient detail so that a POSITA can recognize what is claimed. "The appearance of mere indistinct words in a specification or a claim, even an original claim, does not necessarily satisfy that requirement." *Univ. of Rochester v. G.D. Searle & Co.*, 358 F.3d 916, 923 (Fed. Cir. 2004) (internal quotation marks and citations omitted).

Based on Momcozy's present understanding of the Asserted Claims and Elvie's apparent interpretation of these claims as reflected in its Infringement Contentions, the following limitations of the Asserted Claims fail to satisfy the requirements of § 112(a) because the specification and original patent application fail to provide written description support for at least the following limitations.

Patent-in-Suit	Claim(s)	Claim Limitation(s) Lacking Written Description Support
'893 Patent	1	"a diaphragm holder that forms a recess or cavity at least in part with an external surface of the housing"
	1	"a pump powered by the battery and generating negative air pressure"
	6	"breast shield is substantially rigid"
	12	"the housing is configured to slide onto the breast shield, when the breast shield has been placed onto a breast, using guide members"
	24	"wireless data communications system"
	13	"only the breast shield and the milk container that are directly removable from the housing in normal use or normal dis-assembly"
	19	"milk container includes a flexible valve that self-seals under negative air pressure against a milk, opening in the nipple tunnel"
'380 Patent	26	"visual or haptic indicator that indicates whether milk is flowing or not flowing"
	1, 14, 40	"a recess or cavity that defines a pumping chamber" / "the recess or cavity in the pump housing"
	1, 29	"a pump powered by the rechargeable battery and configured to generate negative air pressure"
'454 Patent	33	"only the breast shield and the milk container that are directly removable from the housing in normal use or normal dis-assembly"
	25	"the diaphragm cap is configured such that the air port can be located above the nipple tunnel"
'381 Patent	1	"a diaphragm configured to prevent milk from reaching an air pump by forming a seal around its outer edge"

Patent-in-Suit	Claim(s)	Claim Limitation(s) Lacking Written Description Support
	1	“the air pump powered by the battery and configured to generate negative air pressure by driving the diaphragm”
	8	“the housing is configured to slide onto the breast shield, when the breast shield has been placed onto a breast, using guide members”
	9	“only the breast shield and the milk container that are directly removable from the housing in normal use or normal dis-assembly”
	12	“a diaphragm holder that sits above the breast flange and the nipple tunnel”
	16	“milk container includes a flexible valve that self-seals under negative air pressure against the milk port”
	22	“wireless data communication system”
	24	“visual or haptic indicator that indicates whether milk is flowing or not flowing”

VII. DOCUMENT PRODUCTION ACCOMPANYING [PRELIMINARY] INVALIDITY CONTENTIONS

A. Protective Order

The Court has issued a Protective Order (D.I. 82). Momcozy’s document production is made pursuant to the provisions of that Protective Order.

B. Local Patent Rule 122 Production

Pursuant to the Scheduling Order (D.I. 124) and Local Patent Rule 122, Momcozy has produced or made available for inspection and copying the prior art it has identified: MCZY0001200–3964. Momcozy reserves the right to supplement this production as the case progresses in view of, for example, additional information revealed during discovery regarding Elvie’s allegations, amendments to Elvie’s Infringement Contentions, a claim construction order, or other information learned through discovery or otherwise.

1 DATED this 5th day of September 2024.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on September 5, 2024, they caused the foregoing
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