

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOUGHBUILT INDUSTRIES, INC.,
Petitioner,
v.
MERIDIAN INTERNATIONAL CO., LTD.,
Patent Owner.

Case IPR2025-01461
Patent 11,986,946

PATENT OWNER'S RESPONSE

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. BACKGROUND	2
A. The Invention Of The '946 Patent.....	2
B. The File History Of The '946 Patent.....	2
C. Person Of Ordinary Skill In The Art.....	3
III. CLAIM CONSTRUCTION	4
A. “Stop Part”.....	5
B. “Mounting Body”	7
C. “Locking Buckle”.....	9
IV. ALLEGED PRIOR ART ASSERTED BY PETITIONER.....	10
A. Li.....	11
B. Baruch.....	12
C. Burchia	13
D. Hammond	14
E. Davidian	15
V. PETITIONER FAILS TO ESTABLISH THAT ANY CHALLENGED CLAIM IS UNPATENTABLE	16
A. Petitioner Fails To Show That Any Reference Anticipates The Claims Of The '946 Patent.....	17
1. Ground 1A: Petitioner fails to show that Li anticipates claims 1-4, 7-12, and 15.....	20

a)	Li does not include the “resilient member located between [a] mounting body and locking buckle,” required by independent claims 1, 11, and 15.....	21
(1)	Petitioner fails to give the terms “mounting body” and “locking buckle” their ordinary meaning.	22
(2)	Li does not disclose a “first resilient member located between said mounting body and said locking buckle.”	26
b)	Dependent claims 2-4, 7-10, and 12 are similarly not anticipated by the teachings of Li.....	28
2.	Ground 2A: Petitioner fails to show that Baruch anticipates claims 1-4, 7-12, and 15.	29
a)	Baruch does not include the “resilient member located between [a] mounting body and locking buckle,” required by independent claims 1, 11, and 15.	30
(1)	Petitioner fails to give the terms “mounting body” and “locking buckle” their ordinary meaning.	30
(2)	Baruch does not disclose a “first resilient member located between said mounting body and said locking buckle.”	34
b)	Dependent claims 2-4, 7-10, and 12 are similarly not anticipated by the teachings of Baruch.....	36
B.	Petitioner Fails To Show That The Claims Of The ’946 Patent Are Rendered Obvious Over The Prior Art.	37
1.	Ground 1B: Petitioner fails to show that claims 1-4, 7-12, and 15 are obvious over Li.....	37
2.	Ground 2B: Petitioner fails to show that claims 1-4, 7-12, and 15 are obvious over Baruch.....	39

3.	None of the claims of the '946 Patent can be rendered obvious by any combination of references because the independent claims of the '946 Patent are neither anticipated nor obvious.	42
4.	The combinations identified by Petitioner cannot render the claims of the '946 Patent obvious because there is no motivation to combine the cited references.	42
a)	There is no motivation to combine Li, Burchia, and Hammond (Ground 1C) or Baruch, Burchia, and Hammond (Ground 2C).	42
(1)	The combination of Li, Burchia, and Hammond (Ground 1C) and Baruch, Burchia, and Hammond (Ground 1D) do not render obvious claims 5 and 6.	48
(2)	Claim 13 is not rendered obvious by the combination of Li, Burchia, and Hammond (Ground 1C) or Baruch, Burchia, and Hammond (Ground 1D).	51
b)	There is no motivation to combine Li and Davidian (Ground 1D) or Baruch and Davidian (Ground 2D).	53
VI.	CONCLUSION.....	55

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Acoustic Tech., Inc. v. Itron Networked Sols., Inc.</i> , 949 F.3d 1366 (Fed. Cir. 2020)	47
<i>Airbus S.A.S. v. Firepass Corp.</i> , 941 F.3d 1374 (Fed. Cir. 2019)	44
<i>AMP Plus, Inc. v. DMF, Inc.</i> , 131 F.4th 1320 (Fed. Cir. 2025)	39, 41
<i>Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.</i> , 876 F.3d 1350 (Fed. Cir. 2017)	43
<i>Belden Inc. v. Berk-Tek LLC</i> , 805 F.3d 1064 (Fed. Cir. 2015)	47
<i>In re Bigio</i> , 381 F.3d 1320 (Fed. Cir. 2004)	44
<i>Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.</i> , 381 F.3d 1371 (Fed. Cir. 2004)	46, 50, 54
<i>CRFD Rsch., Inc. v. Matal</i> , 876 F.3d 1330 (Fed. Cir. 2017)	21
<i>In re Dow Chem. Co.</i> , 837 F.2d 469 (Fed. Cir. 1988)	46, 51, 53
<i>In re Fine</i> , 837 F.2d 1071 (Fed. Cir. 1988)	39, 41, 42, 53
<i>In re Gordon</i> , 733 F.2d 900 (Fed. Cir. 1984)	52
<i>Kinetic Concepts, Inc. v. Smith & Nephew, Inc.</i> , 688 F.3d 1342 (Fed. Cir. 2012)	38, 40, 43
<i>KSR Int’l v. Teleflex Inc.</i> , 550 U.S. 398 (2007)	38, 40, 42, 43

<i>Markforged, Inc. v. Continuous Composites, Inc.</i> , IPR2022-01220, Paper 8 (Jan. 11, 2023).....	49
<i>Metalcraft of Mayville, Inc. v. Toro Co.</i> , 848 F.3d 1358 (Fed. Cir. 2017)	49, 50
<i>Microsoft Corp. v. Biscotti, Inc.</i> , 878 F.3d 1052 (Fed. Cir. 2017)	28, 29, 36
<i>Tris Pharma, Inc. v. Actavis Lab ’ys FL, Inc.</i> , 2022 USPQ.2d 627 (Fed. Cir. 2022)	43
<i>Verdegaal Bros., Inc. v. Union Oil Co. of Cal.</i> , 814 F.2d 628 (Fed. Cir. 1987)	21, 30
<i>Vitronics Corp. v. Conceptronic, Inc.</i> , 90 F.3d 1576 (Fed. Cir. 1996)	8
<i>Xerox Corp. v. Bytemark, Inc.</i> , IPR2022-00624, Paper No. 9 (P.T.A.B., Aug. 24, 2022).....	37, 40

Statutes

35 U.S.C. § 282	4
35 U.S.C. § 102	11, 20, 29, 44
35 U.S.C. § 103	<i>passim</i>
35 U.S.C. § 112	2

Other Authorities

37 C.F.R. § 42.100(b)	4
M.P.E.P. § 2131 (9th ed. 2024).....	21, 30
M.P.E.P. § 2141.01 (9th ed. 2024)	44, 45
M.P.E.P. § 2143.01 (9th ed. 2024)	52
M.P.E.P. § 2143.03 (9th ed. 2024)	38, 40

UPDATED EXHIBIT LIST		
2001	Declaration of Ann G. Fort	Sept. 19, 2025
2002	June 5, 2024 Notice Letter	Nov. 10, 2025
2003	<i>Meridian International v. ToughBuilt</i> Minutes of Hearing RE: Scheduling Conference (Docket No. 80)	Nov. 10, 2025
2004	March 24, 2025 PTAB Memo On IPR Proceedings	Nov. 10, 2025
2005	March 26, 2025 PTAB Memo on Interim Processes	Nov. 10, 2025
2006	<i>Meridian International v. ToughBuilt</i> First Amended Invalidity Contentions	Nov. 10, 2025
2007	Interim Director Discretionary Process (Oct. 3, 2025)	Nov. 10, 2025
2008	U.S. Patent No. 11,642,777 (“Baruch”)	Nov. 10, 2025
2009	FAQs for Interim Processes	Nov. 10, 2025
2010	<i>Meridian International v. ToughBuilt</i> Declaration of John D. Pratt, Ph.D., P.E.	Dec. 9, 2025
2011	<i>Meridian International v. ToughBuilt</i> [Tentative] Claim Construction Order	Dec. 9, 2025
2012	Declaration of Glenn E. Vallee, Ph.D., P.E.	May 20, 2026

UPDATED EXHIBIT LIST		
2013	Curriculum Vitae of Glenn E. Vallee, Ph.D., P.E.	May 20, 2026
2014	Transcript of May 13, 2026 Deposition of J. Michael McCarthy, Ph.D.	May 20, 2026
2015	U.S. Patent Application No. 18/518,200 to Zhang et al. (the “’200 Application”)	May 20, 2026
2016	U.S. Patent Application No. 18/176,907 to Zhang et al. (the “’907 Application”)	May 20, 2026
2017	CN Patent Application No. 202210212862.5 to Zhang et al. (the “CN ’862 Application”)	May 20, 2026
2018	Chinese Patent Application No. 202320135456.3 to Zhang et al. (the “CN ’456 Application”)	May 20, 2026
2019	Certified English Translation of the CN ’862 Application	May 20, 2026
2020	Certified English Translation of the CN ’456 Application	May 20, 2026

I. INTRODUCTION

All claims of the subject patent should be upheld because the art identified by Petitioner does not teach the elements of the invention of U.S. Patent No. 11,986,946 (the “’946 Patent”), and therefore neither anticipates nor renders obvious the claims of the ’946 Patent.

In addition to heavily relying on expert “opinion” to read in claim elements that are simply not present in the references, Petitioner’s arguments are additionally flawed for at least the following reasons:

- The Petition relies on claim constructions that do not give the claim terms their “plain and ordinary” meaning;
- The Petition treats a combination of discrete structures as identical to a single structure found in the ’946 Patent;
- The Petition fails to recognize differences in functionality between the purported prior art and the invention of the ’946 Patent, including treating a compression spring as identical to the torsion spring disclosed in the ’946 Patent; and
- The Petition relies on combinations of purported prior art that include a non-analogous door latch.

The Petition, therefore, fails to credibly argue that the ’946 Patent is invalid.

II. BACKGROUND

A. The Invention Of The '946 Patent

The '946 Patent is a continuation of application 18/176,907 (the "'907 Application") and is the parent of pending divisional application 18/610,470 (the "'470 Application"). The '946 Patent is directed to the connecting mechanisms for attaching modular storage boxes. Specifically, the connecting mechanism of the '946 Patent achieves certain advantages over the prior art, including "the use of the first connecting part and the second connecting part with locking. When the upper locker is placed in place at the same time automatically achieve the function of two boxes locked to each other, do not need the user to put the box after the need to lock the box and then deliberately to operate both sides of the latch, only to open when the two sides of the latch can be pulled open." (**Exhibit 1001** at 4:41-49.)

B. The File History Of The '946 Patent

The prosecution of the '946 Patent was relatively straightforward. The application was subject to a restriction requirement (**Exhibit 1002**, part 3, 0582-0587), which was later withdrawn. (*Id.* at 0708.) A single office action rejected certain claims under 35 U.S.C. § 112 and others as anticipated by Ben-Gigi (U.S. Patent No. 9,725,209) but identified other claims as patentable if rewritten in independent form. (*Id.* at 0637-0645.) After Meridian re-drafted those claims and

amended others accordingly, the application was allowed, and the restriction requirement was withdrawn. (*Id.* at 0702-0710.)

C. Person Of Ordinary Skill In The Art

A person of ordinary skill in the art (“POSA”) would have had:

...at least the equivalent of an undergraduate degree in mechanical engineering or a closely related field, and two years of industry or academic experience with connecting technologies or similar mechanisms, or an equivalent combination of education and experience. Additional relevant industry experience may compensate for lack of formal education or vice versa.¹

(**Exhibit 2012**, Declaration of Glenn E. Vallee, Ph.D., P.E., ¶30; *see also* **Exhibit 2010**, Declaration of John D. Pratt, Ph.D., P.E., ¶ 4 (providing a nearly identical definition but including industrial engineering).)

¹ Petitioner's expert, Dr. McCarthy, is not a person of ordinary skill in the art.

(**Exhibit 2012**, ¶31.) Petitioner's expert does not have industry or academic experience with connecting technologies—his experience pertains to articulated systems. (See **Exhibit 2014**, May 13, 2026 Deposition of J. Michael McCarthy, Ph.D., at 14:16-19.) Petitioner's expert has never developed a consumer product, nor has he ever designed a latching mechanism that was implemented in a product. (*Id.* at 16:4-10.)

III. CLAIM CONSTRUCTION

“In an inter partes review proceeding, a claim of a patent, or a claim proposed in a motion to amend under § 42.121, shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b).

In the Petition's discussion of claim construction, Petitioner proposes a construction for “stop part,” but concludes that “[r]egardless of whether any constructions are adopted, the prior art still discloses and renders obvious the '946 patent claims and the ‘*stop part*’ for the reasons provided below.” (Petition, Paper 2, at 9-10.) Indeed, Petitioner's expert, Dr. McCarthy, confirmed that “[f]or the purpose of [his] analysis, [he] just worked directly with the ordinary meaning of this claim.” (**Exhibit 2014**, 28:21-29:1.) As a result, Meridian's proposed constructions – which apply the plain and ordinary meaning of each term – should be used. In addition to “stop part,” Meridian has identified several additional terms for which Petitioner applies claim constructions that are neither the plain and

ordinary meaning of the term nor the appropriate construction in view of the intrinsic evidence in the record. Meridian traverses these constructions below.

A. “Stop Part”

Petitioner proposes a construction of “stop part” that is defined by the intrinsic evidence, statute, case law, and logic – namely, that “stop part,” a term that does not use the word “means,” is somehow a means-plus-function claim term. In so doing, Petitioner conveniently omits from the record that on July 7, 2025 – well before the present Petition was filed – the District Court in *Meridian International Co., Ltd. v. ToughBuilt Industries, Inc.*, 8:24-cv-01840-JWH-JDE (C.D. Cal.) (the “District Court Case”) issued a “[Tentative] Claim Construction Order,” which rejected Petitioner’s proposed construction. (**Exhibit 2011**, [Tentative] Claim Construction Order.)

The Court concludes that “stop part” is not a means-plus-function limitation. A presumption arises that means-plus-function claiming does not apply because “means” does not appear in the limitation. *See Dyfan LLC v. Target Corp.*, 28 F.4th 1360, 1367 (Fed. Cir. 2022). To overcome that presumption, ToughBuilt bears the burden of proving by a preponderance of evidence that a person of ordinary skill in the art would not have understood “stop part” to connote structure, in light of the patent as a whole. *See id.* at 1370. ToughBuilt’s main argument hinges on the fact that although the specification connotes a structure, the claims themselves do not. ToughBuilt also argues that “stop part”

is a means-plus-function claim limitation because it uses “part” as a nonce word in a manner that reflects only a verbal construct. Meridian disagrees and argues that the plain and ordinary meaning should apply.

The Court is not persuaded by ToughBuilt's argument that “part” is a nonce term, especially in light of its agreed construction of “mounting part,” which is used similarly in Claims 1 and 11.⁴² *See Phillips*, 415 F.3d at 1314 (explaining that “claim terms are normally used consistently throughout the patent”).

The Court is similarly not persuaded by ToughBuilt's argument that the claims do not connote sufficient structure. . . .

. . .

Because ToughBuilt has failed to overcome the presumption against means-plus-function claiming, the Court declines to construe “stop part” as a means-plus-function limitation.

Alternatively, ToughBuilt proposes that “stop part” be construed as “a part that prevents the locking buckle from automatically locking with the mating part.” ToughBuilt does not present argument to support its alternative construction. Accordingly, the Court concludes that plain and ordinary meaning controls.

(**Exhibit 2011**, pp. 17-20.) Meridian agrees that the plain and ordinary meaning of “stop part” should be used for the same reasons provided by the District Court.

(**Exhibit 2012**, ¶38.)

B. “Mounting Body”

Petitioner does not overtly propose a specific construction for this term in its Petition, and in the District Court Case, the parties agreed as to the construction of “mounting part” as “[p]lain and ordinary meaning, and is used interchangeably with ‘mounting body.’” (**Exhibit 2011**, p. 9.) Petitioner does not, however, use a “plain and ordinary” meaning of this term in its invalidity analysis. Petitioner’s interpretation of “mounting body” relies on imported limitations from the specification of the ’946 Patent, and therefore necessarily is not based on the plain and ordinary meaning of this term. This was confirmed by Petitioner’s expert, who conceded that the specification of the ’946 Patent was used to interpret the term “mounting body.” (**Exhibit 2014**, 30:20-32:1.) However, reliance on the specification of the ’946 Patent is not necessary, as the term “mounting body” has a meaning that would be understood by a POSA without referencing the ’946 Patent’s specification. (**Exhibit 2012**, ¶44.)

Specifically, Petitioner argues that the “mounting body” comprises a combination of multiple prior art parts, including a chute, in combination with a snap hole and stop pieces (disclosed in Li) or a combination of carveout, pins, and holes (disclosed in Baruch). This construction is contrary to the plain meaning of the term and the disclosure of the patent specification. “[T]he specification is

always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The ’946 Patent claims refer to a “mounting body **112**,” which is the portion of the first connection part attached to the body of the storage container relative to which the locking buckle slides. (**Exhibit 1001**.) The mounting body **112** is part of the mounting portion **11**, which comprises the mounting slot **111** and the mounting body **112**. (*Id.* at 6:53-57.) It is a single part,² that is either “bolted into the mounting slot **111**,” or it “may also be integrally formed with the mounting slot **111**, or fixedly connected by means such as snap-on.” (*Id.* at 6:55-60.) There are no other parts identified as comprising a part of the mounting body.

Indeed, a POSA would understand that, contrary to the assertions of Petitioner’s expert, “mounting body” has a plain and ordinary meaning, which is the portion of the first connection part attached to the body of the storage container

² During his deposition, Petitioner’s expert, Dr. McCarthy, confusingly stated that despite the plain and ordinary meaning of “mounting body” being singular (as opposed to the plural, “mounting bodies”), “that doesn’t mean mounting body doesn’t have multiple parts.” (**Exhibit 2014**, 32:8-16.)

relative to which the locking buckle slides. (**Exhibit 2012**, ¶44.) The mounting body does not include any additional structures, or any components of the locking buckle and/or locking part that attach the locking buckle and/or the locking part to the mounting body. (*Id.*, ¶45.)

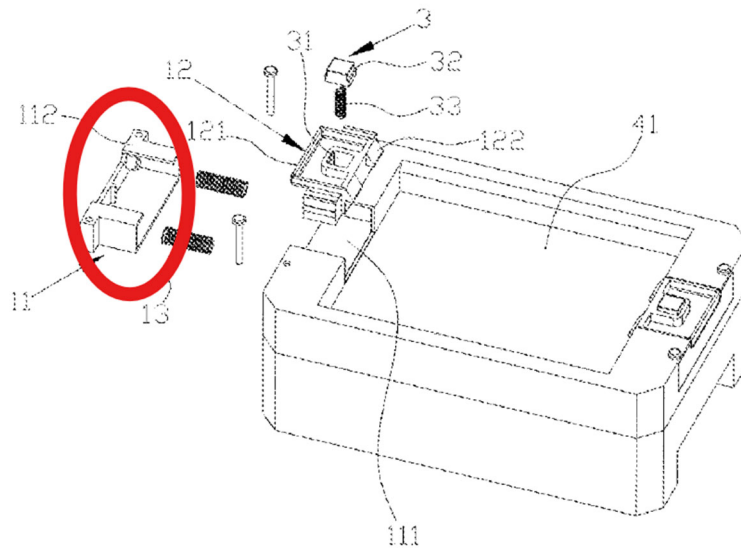


FIG. 7

(**Exhibit 1001** at FIG. 7.)

C. “Locking Buckle”

The '946 Patent also discloses a “locking buckle,” which is “configured to slide inward with respect to the mounting part.” (**Exhibit 1001**, 15:18-19.) Properly construed, the “locking buckle” includes the entire locking or latch component that slides relative to the mounting body. Petitioner, however, interprets this term situationally, designed to suit whatever purpose is needed to argue that the

purported prior art teaches the claim language. First, in its analysis of Li, Petitioner limits its definition of this component to only a pull latch cover, excluding the remainder of the locking component. Petitioner then takes a different approach in its analysis of Baruch and defines the locking buckle as a main body and primary hook that is not configured to slide inward with respect to the mounting body. Neither of Petitioner's constructions is consistent with the plain meaning of the "locking buckle" when viewed in light of the specification and claims, and therefore neither construction is correct. (**Exhibit 2012**, ¶50.)

Petitioner's interpretation of this term relies on imported limitations from the specification of the '946 Patent, and therefore necessarily is not based on plain and ordinary meaning. This was confirmed by Petitioner's expert, who conceded that the specification of the '946 Patent was used to interpret the term "locking buckle." (**Exhibit 2014**, 37:13-38:8.) However, reliance on the specification of the '946 Patent is not necessary, as "locking buckle" has a meaning (the entire locking or latch component that slides relative to the mounting body) that would be understood by a POSA without referencing the '946 Patent's specification. (**Exhibit 2012**, ¶52.)

IV. ALLEGED PRIOR ART ASSERTED BY PETITIONER

Petitioner discusses eight grounds of alleged unpatentability in its Petition, based on five prior art references:

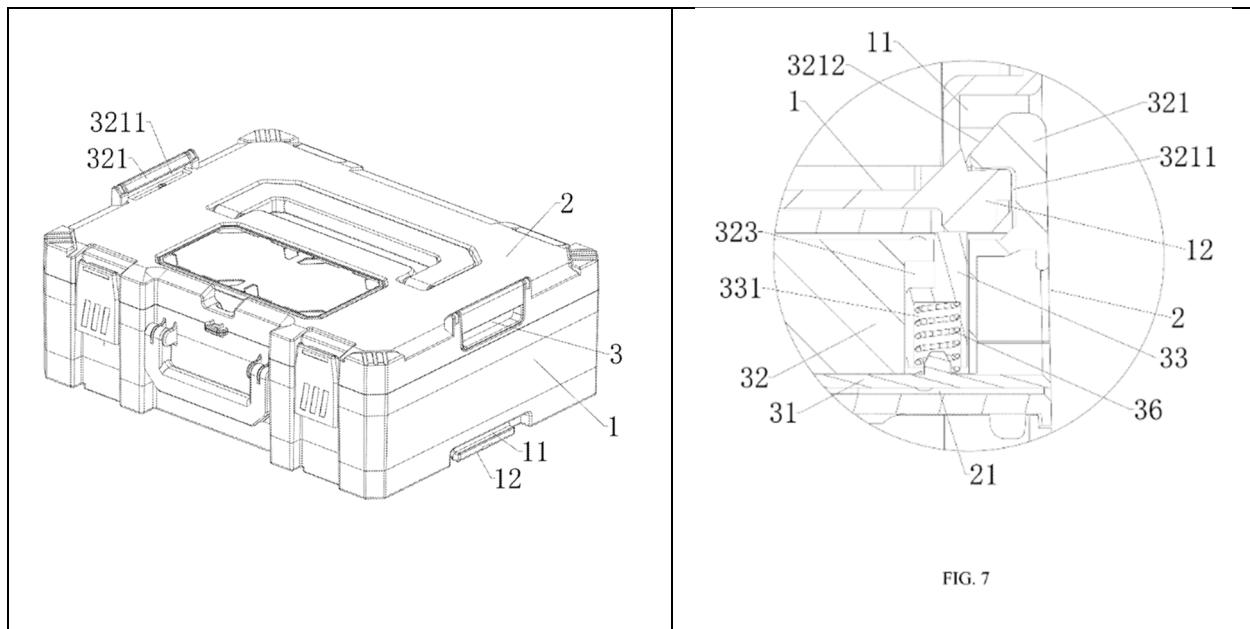
Ground	Claims	Basis	References
1A	1-4, 7-12, 15	35 U.S.C. § 102	Li
1B	1-4, 7-12, 15	35 U.S.C. § 103	Li
1C	5-6, 13	35 U.S.C. § 103	Li, Burchia, Hammond
1D	14, 16	35 U.S.C. § 103	Li, Davidian
2A	1-4, 7-12, 15	35 U.S.C. § 102	Baruch
2B	1-4, 7-12, 15	35 U.S.C. § 103	Baruch
2C	5-6, 13	35 U.S.C. § 103	Baruch, Burchia, Hammond
2D	14, 16	35 U.S.C. § 103	Baruch, Davidian

(See Petition, Paper 2 at 10-11). All of the cited art was previously considered by the Office during prosecution of the '946 Patent or is substantially the same as art considered by the Office during prosecution of the '946 Patent.

A. Li

U.S. 2022/0396985 (“Li,” **Exhibit 1007**), which serves as the primary reference for Petitioner’s Grounds 1A-1D, is directed to a latch structure. More specifically, Li discloses a system for connecting two or more stacked storage containers having a sliding latch and a stopper configured to translate between a

retracted position when the latch is closed, and an extended position when the latch is open to hold the stacked storage containers in an unlocked position. (**Exhibit 2012**, ¶56.)

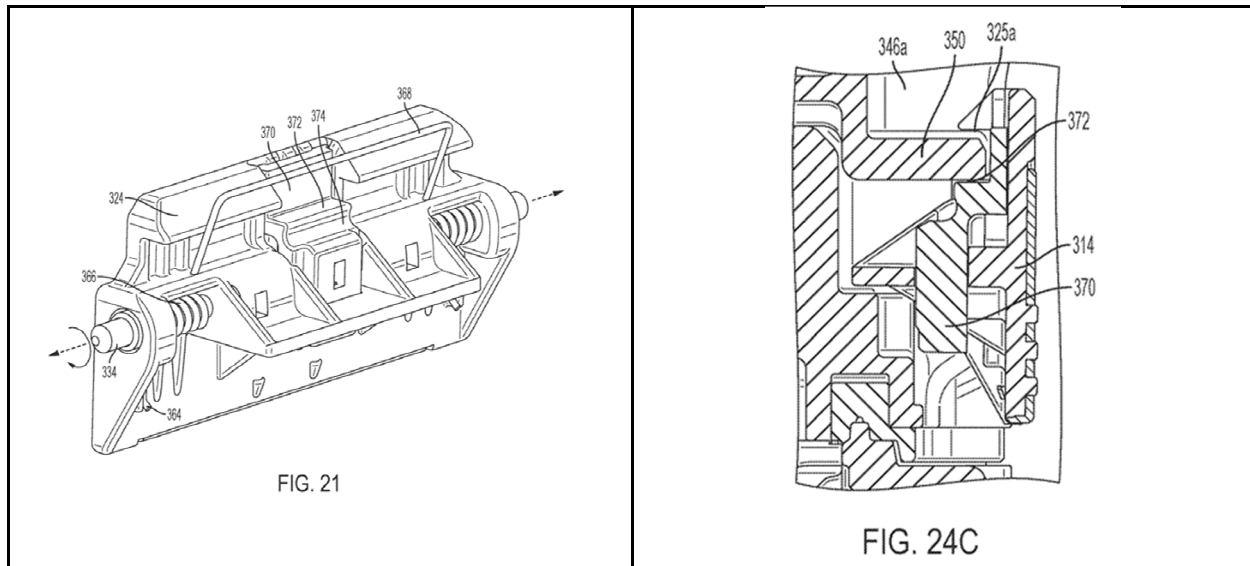


As discussed further below, Li does not disclose critical elements of the '946 Patent, including a “mounting body,” a “locking buckle,” or a “resilient member.” (**Exhibit 2012**, ¶57.)

B. Baruch

US 2020/0298392 (“Baruch,” **Exhibit 1012**), which serves as the primary reference for Petitioner’s Grounds 2A-2D, like Li, teaches the use of locking mechanisms and other alignment tools on both sides of a stackable item. More specifically, Baruch is directed to a system for connecting two or more stacked storage containers having a pivoting latch with a stopper configured to translate

between a retracted position when the latch is closed, and an extended position when the latch is open to hold the stacked storage containers in an unlocked position. (**Exhibit 2012**, ¶59.)



(**Exhibit 1008** at FIGS. 1, 3.) Like Li, and as discussed further below, Baruch does not disclose critical elements of the '946 Patent, including a “mounting body,” a “locking buckle,” or a “resilient member.” (**Exhibit 2012**, ¶60.)

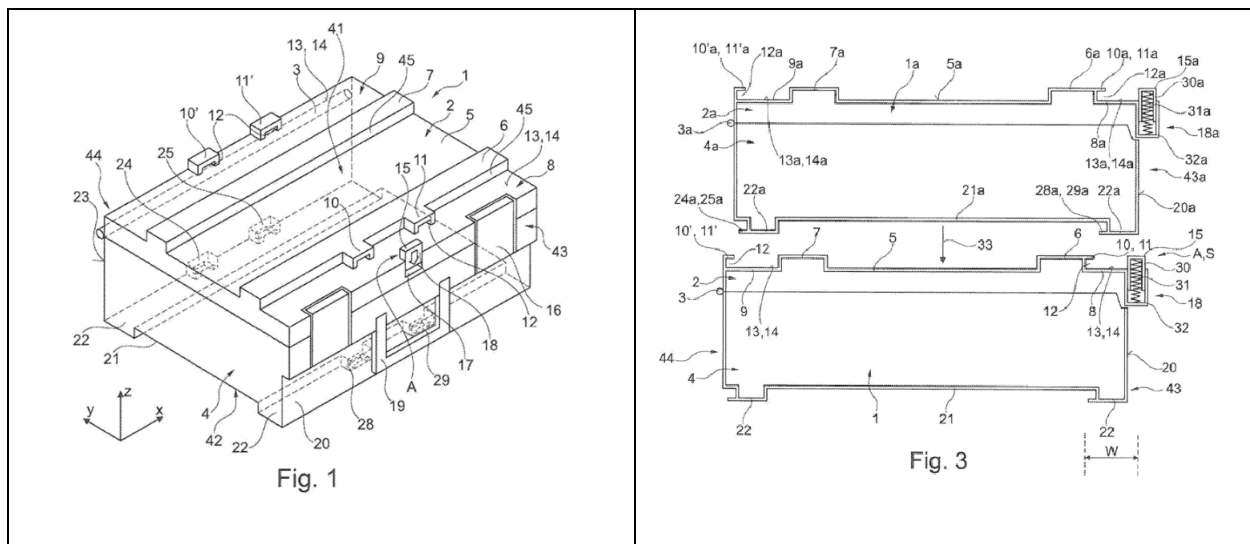
C. Burchia

U.S. 2020/0329837 (“Burchia,” **Exhibit 1008**) is directed to a “Stackable Box.” Burchia teaches the stacking of two identically shaped boxes with corresponding tops and bottoms:

It is useful to configure the bottom of the box corresponding to its top, so that the box, with its bottom, can be stacked onto another box that has a top configured corresponding to the box. In particular, the bottom

of the box is configured corresponding to the bottom of the further box. In this way, stacking of any desired number of boxes can be implemented in simple manner, since for this purpose, the boxes are configured as the same parts and thereby stacking of the boxes toward the bottom and toward the top can take place, proceeding from a reference box, for example.

(**Exhibit 1008** at [0031]).



(*Id.* at FIGS. 1, 3.) As discussed further below, Burchia does not disclose critical elements of the '946 Patent, including a “mounting body,” a “locking buckle,” or a “resilient member,” nor is there a motivation to combine Burchia with either Li or Baruch. (**Exhibit 2012**, ¶62.)

D. Hammond

U.S. Pub. No. 2023/0340804 (“Hammond,” **Exhibit 1009**) is directed to compression latch assemblies for securing doors, drawers, or panels:

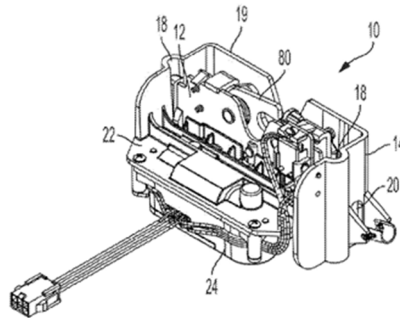


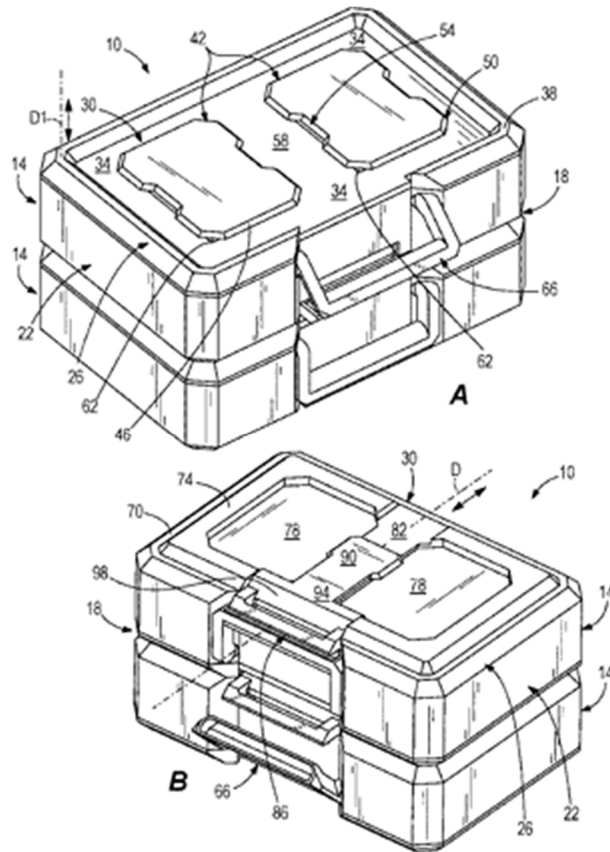
FIG. 1A

(*Id.*, FIG. 1A.) Hammond is neither directed to, nor relevant to, a latch mechanism for use with a stackable box, nor to the structure of the stackable box itself.

(**Exhibit 2012**, ¶64; *see also* **Exhibit 2014**, 58:7-10 (“Q. ... Does Hammond teach a latching mechanism for use with a stackable box? A. No, it teaches a latching mechanism that’s used for doors.”).) As explained below, Hammond is, therefore, non-analogous prior art. (**Exhibit 2012**, ¶65.)

E. Davidian

U.S. 2021/0221561 (“Davidian,” **Exhibit 1011**) is directed to a stackable storage system, where the tops and bottoms of the stackable containers include both recesses and projections that fit into the recesses, which allow a user to stack one container onto another by fitting the recesses of the second container onto the projections of the first container. (**Exhibit 2012**, ¶66.)



(**Exhibit 1011.**) As discussed further below, Davidian does not disclose critical elements of the '946 Patent, including a “mounting body,” a “locking buckle,” or a “resilient member,” nor is there a motivation to combine Davidian with either Li or Baruch. (**Exhibit 2012**, ¶67.)

V. PETITIONER FAILS TO ESTABLISH THAT ANY CHALLENGED CLAIM IS UNPATENTABLE

Petitioner repeatedly fails to explain how or why each and every feature of the claims of the '946 Patent is disclosed in the cited references, repeatedly fails to articulate how the cited references would be combined to arrive at the claims of the

'946 Patent, and repeatedly relies on improper, conclusory reasoning unsupported by the references.

A. Petitioner Fails To Show That Any Reference Anticipates The Claims Of The '946 Patent.

Petitioner alleges that each of Li and Baruch anticipates claims 1-4, 7-12, and 15 of the '946 Patent, but fails to establish that every element of these claims is taught by either Li or Baruch, and therefore neither Li nor Baruch anticipate the claims of the '946 Patent. Specifically, each independent claim asserted includes a “resilient member located between [a] mounting body and locking buckle,” but this element is not taught by Li or Baruch:

Claim One

A storage box comprising:
a first connection part disposed on one area of said storage box
connectable to a second connection part of another storage box;
wherein, **said first connection part comprises a mounting body, a locking buckle movable with respect to said mounting body, and a first resilient member located between said mounting body and said locking buckle**, wherein said first resilient member keeping said locking buckle automatically in a locked state;
wherein, said second connection part of the other storage box comprises a mating part interlockable with the locking buckle,
wherein the locking buckle is configured to slide inward with respect to the mounting part so that the locking buckle is

automatically lockable with the mating part of the other storage box by action of said first resilient member when the locking buckle is aligned with the mating part of the other storage box; a locking part cooperating with the locking buckle, wherein manual movement of the locking part causes the locking buckle to move to an unlocked state; and a stop part, wherein when the stop part projects outward with respect to a locking path of the locking part, said locking part is not automatically lockable and said first connection part is in a state of remaining unlocked from said second connection part, wherein the stop part is retractable, said stop part being extended when said first connection part is in a holding unlocked state with said second connection part of the other storage box, and said stop part being compressed when said first connection part is in a locked state with said second connection part.

Claim Eleven

A storage box comprising:
a first connection part disposed on one area of said storage box connectable to a second connection part of another storage box; wherein, **said first connection part comprises a mounting body, a locking buckle movable with respect to said mounting body, and a first resilient member located between said mounting body and said locking buckle**, wherein said first resilient member keeping said locking buckle automatically in a locked state; wherein, said second connection part of the other storage box comprises a mating part interlockable with the locking buckle,

wherein the locking buckle is configured to slide inward with respect to the mounting part so that the locking buckle is automatically lockable with the mating part of the other storage box by action of said first resilient member when the locking buckle is aligned with the mating part of the other storage box; a locking part cooperating with the locking buckle, wherein manual movement of the locking part causes the locking buckle to move to an unlocked state; and a stop part, wherein when the stop part projects outward with respect to a locking path of the locking part, said locking part is not automatically lockable and said first connection part is in a state of remaining unlocked from said second connection part; a second resilient member, and wherein the locking part comprises of a slot, and wherein the stop part is biased outward from the slot by the second resilient member, wherein the stop part moves perpendicular with respect to a sliding path of the locking part.

Claim Fifteen

A storage box comprising:
a first connection part disposed on one area of said storage box, wherein the **first connection part comprises a mounting body, a locking buckle movable with respect to the mounting body, and a first resilient member located between the mounting body and the locking buckle** to bias the locking buckle automatically outward in a locked state;
a locking part configured to move along a horizontal locking path and to cooperate with the locking buckle, wherein manual movement of

the locking part along the horizontal locking path causes the locking buckle to move between an unlocked state retracted with respect to the mounting body and a locked state extended with respect to the mounting body;

a stop part combined to the locking part comprising an unlocked state corresponding to the unlocked state of the locking buckle with the stop part extended from the locking part and the locking buckle held retracted with respect to the mounting body, and a locked state corresponding to the locked state of the locking buckle with the stop part retracted with respect to the locking part and the locking buckle held extended with respect to the mounting body; and

a second connection part disposed on another area of said storage box, wherein the second connection part comprises a mating part that corresponds to the locking buckle, wherein said locking part further comprises a holding slot opened on the locking part, and further comprising a second resilient member combined between the holding slot and the stop part, wherein the stop part is extended from the slot in the locking part when the stop part is in the unlocked state, and wherein the stop part is retracted in the slot in the locking part when the stop part is in the locked state.

1. Ground 1A: Petitioner fails to show that Li anticipates claims 1-4, 7-12, and 15.

Ground	Claims	Basis	References
1A	1-4, 7-12, 15	35 U.S.C. § 102	Li

- a) Li does not include the “resilient member located between [a] mounting body and locking buckle,” required by independent claims 1, 11, and 15.

Petitioner fails to show where each and every limitation of independent Claims 1, 11, and 15 is disclosed in Li. (**Exhibit 2012**, ¶68.)

Li does not teach a storage box with a first connection part and second connection part, the first connection part comprising “*a mounting body, a locking buckle moveable with respect to said mounting body, and a first resilient member located between said mounting body and said locking buckle, wherein said first resilient member keeping said locking buckle automatically in a locked state.*” (**Exhibit 1001** at 15: 9-14 (emphasis added).)

Li does not teach first and second connection parts arranged as required by independent claims 1, 11, and 15, and therefore does not anticipate those claims. (**Exhibit 2012**, ¶69.) “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987); *CRFD Rsch., Inc. v. Matal*, 876 F.3d 1330, 1338 (Fed. Cir. 2017). “The elements must be arranged as required by the claim, but . . . identity of terminology is not required.” M.P.E.P. § 2131 (9th ed. 2024) (citing *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990).) In alleging that Li teaches the claimed first and

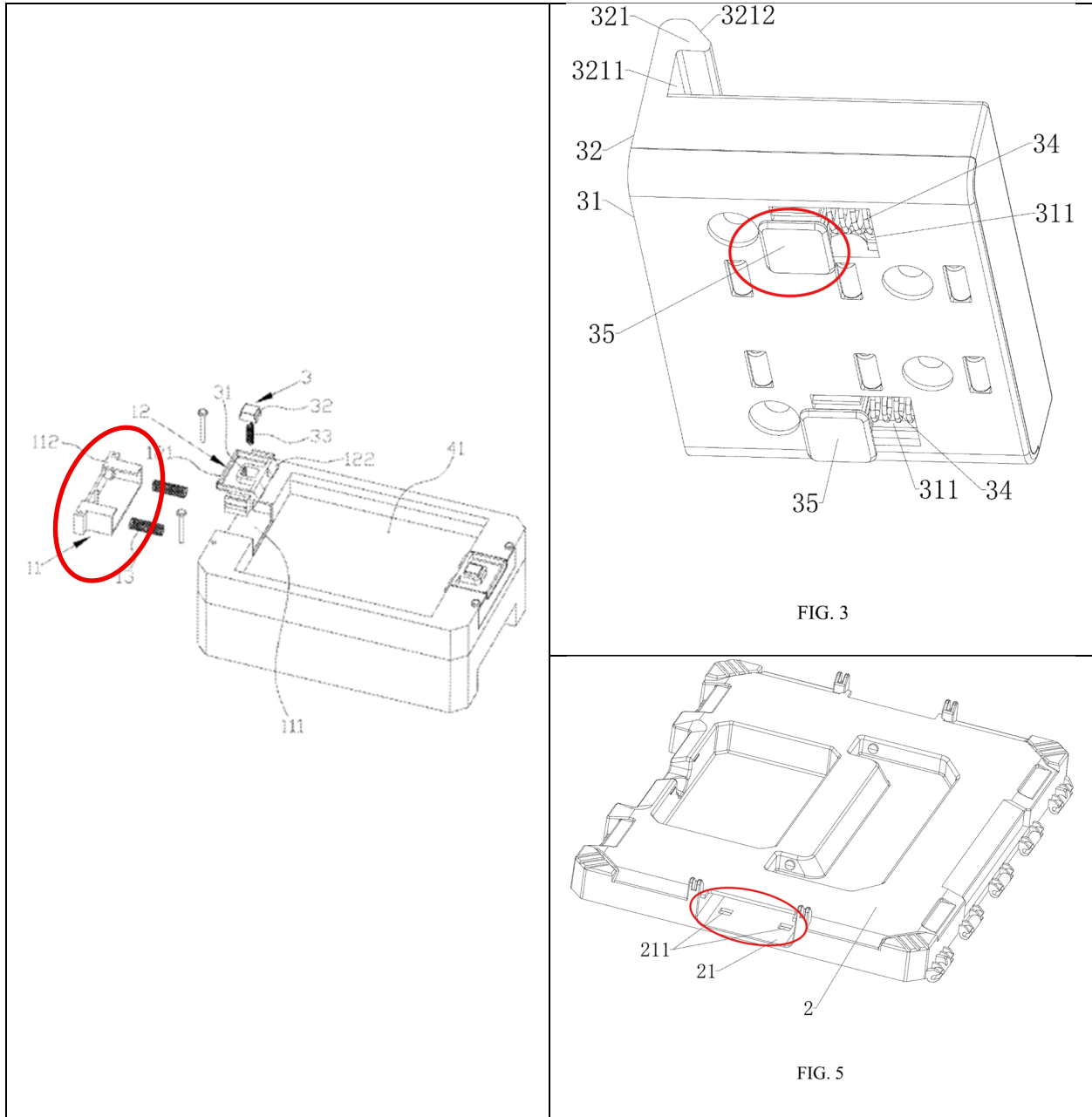
second connection parts, Petitioner relies on an attenuated interpretation of Li and an expert declaration, rather than the intrinsic evidence of Li and the '946 Patent, to arrive at this conclusion. In fact, the components of the first and second connection parts of Li are not arranged as required by claims 1, 11, and 15.

(1) Petitioner fails to give the terms “mounting body” and “locking buckle” their ordinary meaning.

Petitioner's invalidity argument as to Li relies upon a strained construction of the terms “mounting body” and “locking buckle” in order to allege the presence of a “first resilient member located between said mounting body and said locking buckle.”

Regarding the “mounting body,” Petitioner alleges that “Li's ‘stop piece 35’ as attached to ‘chute 21’ via ‘snap-in hole 211’ teaches the claimed ‘*mounting body*.’” (Petition, Paper 2 at 27) (*see Exhibit 1007*, at FIG. 3 and 5, reproduced below). This interpretation of the “mounting body” contradicts the plain and ordinary meaning of the term “mounting body” when interpreted in light of the specification of the '946 Patent. (**Exhibit 2012**, ¶71.) As shown in, for example, FIG. 7 of the '946 Patent (reproduced below), the mounting body **112** is the portion of the first connection part attached to the body of the storage container relative to which the locking buckle slides. (*Id.*, ¶72.) The mounting part does not include any additional structures, or any components of the locking buckle and/or

locking part that attach the locking buckle and/or the locking part to the mounting body. (*Id.*)



'946 Patent "Mounting Body 112 " (Exhibit 1001) ³	Li "Stop Piece 35 ," "Chute 21 ," and "Snap-In-Hole 211 " ⁴ (Exhibit 1007)
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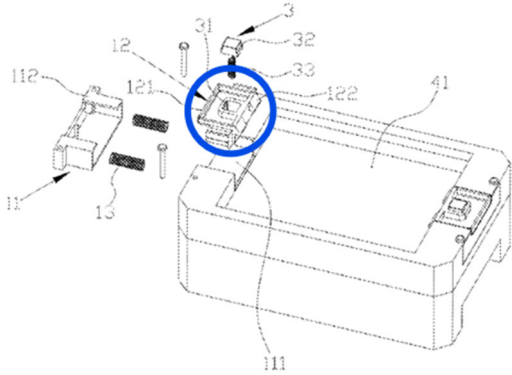
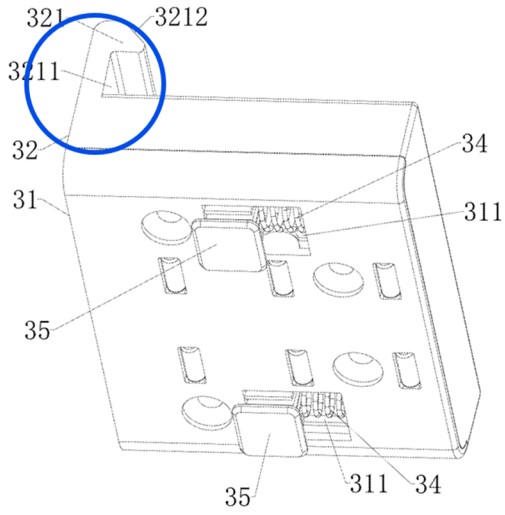
Petitioner's interpretation of the "mounting body" incorporates additional structure that goes beyond the scope of the plain and ordinary meaning of the term as used in the '946 Patent. (**Exhibit 2012**, ¶73.) Petitioner provides no support or evidence for this interpretation and does not provide any reasonable explanation as to why the "mounting body" should also be considered to include the snap-in hole **211** and the stop pieces **35**. The mounting body described in the '946 patent is a separate component intended to facilitate installation of the locking buckle and serves as a fixed boundary in direct contact to springs **13** which bias the buckle in the locked position. Consistent with the way the "mounting body" is defined in the '946 Patent, the correct interpretation of "mounting body" is the chute **21** of Li. (*Id.*, ¶74.) It does not appear that Li considered these three structures to be a single "mounting body;" the stop piece, chute, and snap-in-hole of Li are not pictured

³ In Figures included herein, red indicates the "mounting body," blue indicates the "locking buckle," and green indicates the "resilient member."

⁴ The stop piece, chute, and snap-in-hole of Li are not pictured together in any of the figures.

together in a single figure, nor do they appear to be located in a single location in single embodiment; rather, they are presented as discrete parts. (*Id.*, ¶75.)

Petitioner also alleges that “Li’s ‘pull latch cover 32’ which includes ‘latch bar 321’ teaches the claimed ‘locking buckle movable with respect to said mounting body.’” (Petition, Paper 2 at 28). This interpretation of the “locking buckle” excludes significant portions of the necessary “locking buckle” structure. (**Exhibit 2012**, ¶77.) As shown in, for example, FIG. 7 of the ’946 Patent (reproduced below), the locking buckle **122** is the entire locking or latch component that *slides relative to the mounting body*. (*Id.*, ¶78.)

 FIG. 7	 FIG. 3
'946 Patent “Locking Buckle 122” (Exhibit 1001)	Li “Pull Latch Cover 32” and “Latch Bar 321” (Exhibit 1007)

This would be comparable to the entire latch **3** of Li, and not just the pull latch cover **32**. (**Exhibit 2012**, ¶79.) Indeed, Li is clear that in FIG. 3, the latch bar **321** and pull latch cover **32** are only a portion of the elastic pull latch **3**. (*See Exhibit 1007* at [0020] (“FIG. **3** is a schematic diagram of an overall structure of an elastic pull latch of the present application”) and [0033] (“As shown in FIG. **3** , a top portion of the outer end of the elastic pull latch **3** includes a latch bar **321** that sticks outside the pull latch cover **32**.”).) Petitioner provides no support or evidence for this interpretation of Li and does not reasonably explain why the “locking buckle” should only be considered to be a portion of the latch **3** of Li when the reasonable interpretation of “locking buckle” is that it is the entire latch component. (**Exhibit 2012**, ¶81.)

Petitioner's theories of invalidity, based on Li, therefore rely on interpretations of “mounting body” and “locking buckle” that are contrary to law and fact. Rather than relying on the plain and ordinary meaning of these terms, Petitioner uses support from an expert declaration, even though the meaning of said terms is clear solely based on the intrinsic evidence of the '946 Patent.

(2) Li does not disclose a “first resilient member located between said mounting body and said locking buckle.”

When the terms “mounting body” and “locking buckle” are properly construed (as discussed above) as comprising the chute **21** and latch **3** of Li, Li does not teach “a mounting body, a locking buckle movable with respect to said mounting body, and a first resilient member located *between* said mounting body and said locking buckle.” (Exhibit 1001 at 15:9-12 (emphasis added); Exhibit 2012, ¶82.) The purported resilient member **34** of Li is positioned *within* the body of the latch **3** (*i.e.*, the locking buckle) and therefore is not “located *between* [the] mounting body and [the] locking buckle” as claims 1, 11, and 15 require. (*Id.*, ¶83.)

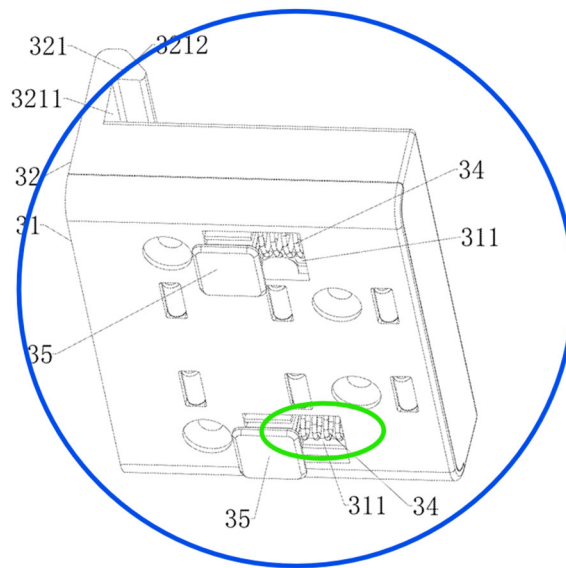


FIG. 3

(See Exhibit 1007 at FIG. 3; see also [0034] (“As shown in FIGS. 3-5, two first springs **34** extending horizontally are mounted *in* the elastic pull latch **3**.”))

(emphasis added).) Indeed, Petitioner's expert, Dr. McCarthy, explained that the dictionary definition of "between" is the plain and ordinary meaning of that term, and that "between" and "within" do not mean the same thing. (**Exhibit 2014**, 38:10-41:15.) And Dr. Vallee, Meridian's expert, concurs. (**Exhibit 2012**, ¶85.) Because the springs **34** are located *inside* the elastic pull latch **3**, they cannot be located *between* the locking mechanism and the mounting body as the claim requires. (*Id.*, ¶86.)

"[A] prior art reference must provide every element of the claimed invention arranged as in the claim in order to anticipate." *Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1069 (Fed. Cir. 2017). Because Li does not teach every element of independent claims 1, 11, and 15, Petitioner fails to establish that claims 1, 11, and 15 are anticipated by Li. (**Exhibit 2012**, ¶87.)

b) Dependent claims 2-4, 7-10, and 12 are similarly not anticipated by the teachings of Li.

Petitioner also fails to establish that one or more of dependent claims 2-4 and 7-10, which depend from claim 1, and 12 which depends from claim 11, are anticipated by Li. Each of claims 2-4, 7-10, and 12 are narrower in scope than the independent claims from which they depend, but each dependent claim also incorporates all of the elements of the independent claim from which they depend. (**Exhibit 2012**, ¶88.) Because Li fails to teach all of the elements of the

independent claims, it necessarily fails to teach all of the elements of the dependent claims, and therefore the dependent claims are also not anticipated by Li. (*Id.*, ¶89.) “[A] prior art reference must provide every element of the claimed invention arranged as in the claim in order to anticipate.” *Biscotti, Inc.*, 878 F.3d at 1069. Because the Petition fails to meet its burden of proving anticipation with respect to claims 1, 11, and 15, it likewise fails to meet its burden for claims 2-4, 7-10, and 12.

2. Ground 2A: Petitioner fails to show that Baruch anticipates claims 1-4, 7-12, and 15.

Ground	Claims	Basis	References
2A	1-4, 7-12, 15	35 U.S.C. § 102	Baruch

Petitioner fails to show where each and every limitation of independent Claims 1, 11, and 15 is disclosed in Baruch. (**Exhibit 2012**, ¶90.) For example, Baruch does not disclose a storage box with a first connection part and second connection part, the first connection part comprising “a mounting body, a locking buckle moveable with respect to said mounting body, and a first resilient member located between said mounting body and said locking buckle, [with] said first resilient member keeping said locking buckle automatically in a locked state.” (**Exhibit 1001** at 15:9-14; **Exhibit 2012**, ¶91.) Nor does it teach a “locking buckle

[] configured to slide inward with respect to the mounting part.” (**Exhibit 1001** at 15:18-19; **Exhibit 2012**, ¶92.)

Baruch does not teach first and second connection parts arranged as required by claims 1, 11, and 15. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros.*, 814 F.2d at 631; M.P.E.P. § 2131 (“The elements must be arranged as required by the claim...””) In alleging that Baruch teaches the claimed first and second connection parts, Petitioner relies on an attenuated interpretation of Baruch and an expert declaration, rather than the intrinsic evidence of Baruch and the '946 Patent, to arrive at the conclusion that Baruch teaches first and second connection parts as claimed, when in fact, the components of the first and second connection parts of Baruch are not arranged as required by claims 1, 11, and 15.

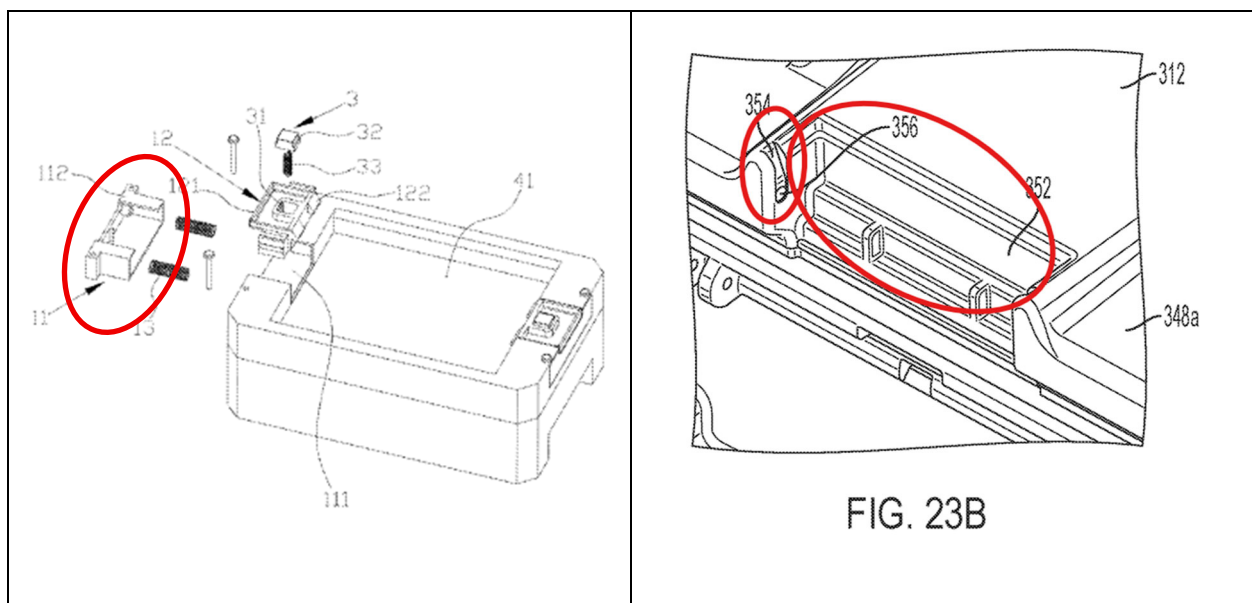
- a) Baruch does not include the “resilient member located between [a] mounting body and locking buckle,” required by independent claims 1, 11, and 15.

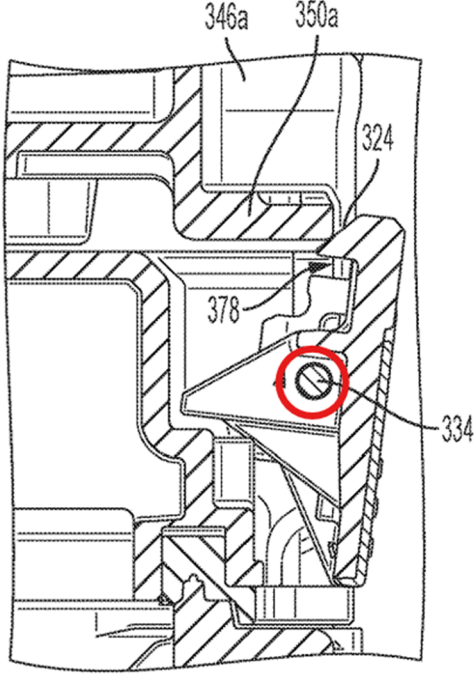
(1) Petitioner fails to give the terms “mounting body” and “locking buckle” their ordinary meaning.

Petitioner alleges that “Baruch’s pins 334 as mounted in carveout 352 via holes 356 on a lid teach the claimed ‘*mounting body*.’” (Petition, Paper 2 at 104). This interpretation of the “mounting body” is contradictory to the plain and

ordinary meaning of the term “mounting body” when interpreted in light of the specification of the '946 Patent. (**Exhibit 2012**, ¶94.) As shown in, for example, FIG. 7 of the '946 Patent, the mounting body **112** is the portion of the first connection part attached to the body of the storage container relative to which the locking buckle slides. (*Id.*, ¶95.) The mounting part does not include any additional structures, or any components of the locking buckle and/or locking part that attach the locking buckle and/or the locking part to the mounting body. (*Id.*, ¶96.)

Petitioner's interpretation of the “mounting body” incorporates additional structure that goes beyond the scope of a plain and ordinary meaning of the term “mounting body.” (**Exhibit 2012**, ¶97.) The “mounting body” is only the carveout **352**, not the combined structures of the carveout **352**, the pins **334**, and the holes **356** as Petitioner alleges. (*Id.*)



	 FIG. 24B
'946 Patent "Mounting Body 112" (Exhibit 1001, FIG. 7)	Baruch "carveout 352," "holes 354," and pins 334⁵ (Exhibit 1012)

Petitioner provides no support or evidence for this proposed interpretation of the "mounting body" of Baruch.

Petitioner also alleges that "Baruch's 'latch 314 [which] includes a main body 315 and a primary hook 316' teaches the claimed '*locking buckle*.'" (Petition,

⁵ It does not appear that the pins 334 are pictured in the same figures depicting the carveout 352 and holes 354 of Baruch.

Paper 2 at 104). However, the latch **314** is not “configured to slide inward with respect to the mounting part” as required by Claims 1 and 13 (*see, e.g., Exhibit 1001* at 15:18-19) and therefore cannot be a “locking buckle” as recited in claims 1, 11, and 15. (**Exhibit 2012**, ¶99.) Indeed, the latch mechanism **310** [the purported locking buckle] of Baruch is not at least partially received within the carveout **352** [the purported mounting body] nor does the latch mechanism **310** slide inward relative to the carveout **352**. (*Id.*, ¶100.)

The latch mechanism **310** is not at least partially received within the carveout **352** because although the pins **334** are received within the holes **356**, the pins **334** are not part of the “locking part” (*i.e.*, the latch mechanism **310**). (**Exhibit 2012**, ¶101.) At best, the latch mechanism **310** is mounted relative to the carveout **352**, but there is no component of the latch mechanism **310** that a POSA would consider to be “received within” the carveout **352**. (*Id.*)

Second, claims 1, 11, and 15 also require that the locking buckle slides inward with respect to the *mounting part*. (**Exhibit 2012**, ¶102.) At most, the latch **314** pivots around the pins **334**, which Petitioner alleges are a part of the “mounting part.” (*Id.*, ¶102.) However, pivoting around the axis defined by the pins **334** cannot be considered “sliding inward” with respect to the pins **334** which define said axis of rotation. (*Id.*, ¶103.) Again, Petitioner fails to address this

fundamental distinction between the rotational movement of the latch **314** of Baruch and the claimed linear movement of the locking buckle.

(2) Baruch does not disclose a “first resilient member located between said mounting body and said locking buckle.”

Even taking Petitioner's assertion that Baruch's pins **334** as mounted in carveout **352** via holes **356** on a lid comprise a “mounting body” or that the latch **314** of Baruch teaches the claimed “locking buckle,” which Meridian does not concede, Baruch does not teach “a mounting body, a locking buckle movable with respect to said mounting body, and a first resilient member located *between* said mounting body and said locking buckle.” (Exhibit 1001 at 15:9-12 (emphasis added); Exhibit 2012, ¶104.) The latch bias **320** of Baruch is not *between* the latch **314** (*i.e.*, the locking buckle) and the carveout **352** (*i.e.*, the mounting body). (*Id.*, ¶105.) Rather, as explained in Baruch: “As best seen in FIG. 21, pins **334** form a rotational axis X. . . . This force causes the latch to rotate around the pins **334** and axis X toward the latch's first position.” (Exhibit 1012, [0054].). Thus, the pins **334** extend across the entire axis, the latch bias **320** is wrapped *around* portions of the axis of the pins, and all of these parts are contained *within* the latch **314**, which rotates *around* the pins. (Exhibit 2012, ¶106.)

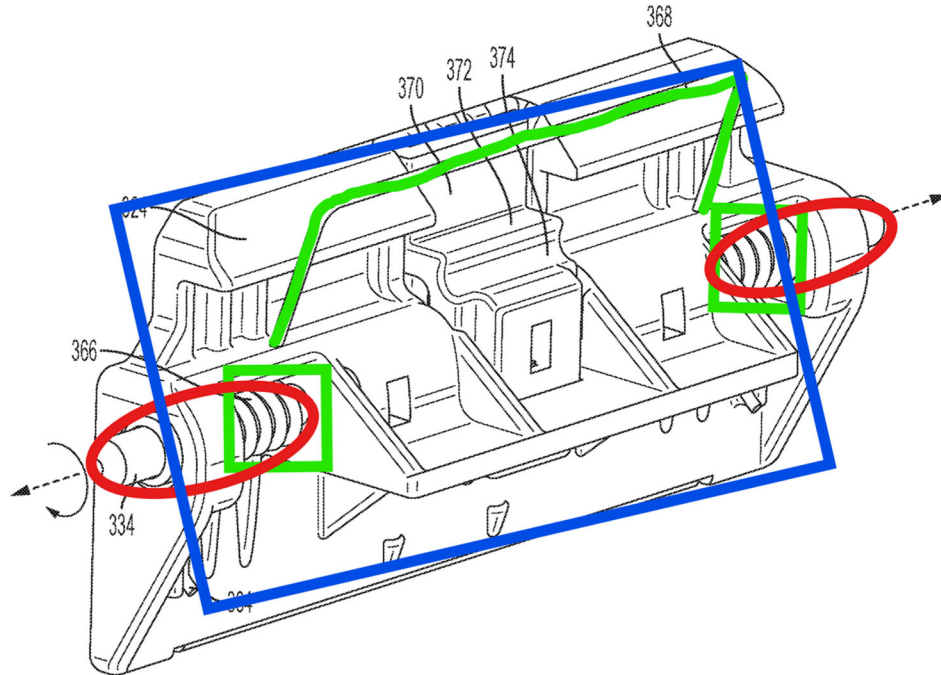


FIG. 21

(**Exhibit 1012**, FIG. 21, annotated.)⁶ When shapes indicating the purported mounting body (red), locking buckle (blue), and resilient member (green) are added, as is shown above, it is clear that the latch bias (green) is located *within* the

⁶ Note that at least the “annotated” version of FIG. 21 included in the Petition, p. 104 and **Exhibit 1003**, p. 196, is misleading and includes labels that are neither original to the Figure nor consistent with the labels applied in the patent. For example, the annotated version of FIG. 22 shown above the annotated FIG. 21 correctly includes the original labels that make clear that the latch is not limited to the lower corner indicated in annotated FIG. 21.

latch **314**, and *around* portions of the pins, and is not, therefore, *between* the pins and the latch. (**Exhibit 2012**, ¶107.)

For at least these reasons, Petitioner fails to prove that claims 1, 11, and 15 are anticipated by Baruch. “[A] prior art reference must provide every element of the claimed invention arranged as in the claim in order to anticipate.” *Biscotti, Inc.*, 878 F.3d at 1069. Because Baruch does not teach every element of independent claims 1, 11, and 15, Petitioner fails to prove that claims 1, 11, and 15 are anticipated by Baruch. (**Exhibit 2012**, ¶108.)

b) Dependent claims 2-4, 7-10, and 12 are similarly not anticipated by the teachings of Baruch.

Petitioner also fails to establish that one or more of dependent claims 2-4 and 7-10, which depend from claim 1, and 12 which depends from claim 11, are anticipated by Baruch. Each of claims 2-4, 7-10, and 12 are narrower in scope from the independent claims from which they depend, but each dependent claim also incorporates all of the elements of the independent claim from which they depend. (**Exhibit 2012**, ¶109.) Because Baruch fails to teach all of the elements of the independent claims, it necessarily fails to teach all of the elements of the dependent claims, and therefore the dependent claims are also not anticipated by Baruch. (*Id.*, ¶110.) *Biscotti, Inc.*, 878 F.3d at 1069. Because the Petition fails to meet its burden

of proving anticipation with respect to claims 1, 11, and 15, it likewise fails to meet its burden for claims 2-4, 7-10, and 12.

B. Petitioner Fails To Show That The Claims Of The '946 Patent Are Rendered Obvious Over The Prior Art.

1. Ground 1B: Petitioner fails to show that claims 1-4, 7-12, and 15 are obvious over Li.

Ground	Claims	Basis	References
1B	1-4, 7-12, 15	35 U.S.C. § 103	Li

Petitioner makes the conclusory statement that, “[t]o the extent Patent Owner argues any element is not disclosed by Li, it was obvious” (Petition, Paper 2 at 65), but fails to set forth any actual reasoning as to why claims 1, 11, 15, or claims dependent thereon, are obvious over Li. Petitioner’s only evidence in support of this conclusory assertion is the Declaration of Dr. McCarthy. (**Exhibit 1003**, ¶¶ 225-229.) However, just as in the Petition, Dr. McCarthy’s discussion of obviousness contains no more than conclusory statements that a POSA would find claims 1-4, 7-12, and 15 to be obvious, fails to address any specific reasons why a POSA would have made the proposed modifications, and merely repeats the conclusory assertions for which it is offered as support. The testimony of Dr. McCarthy is therefore entitled to little or no weight. *See Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper No. 9 at 15 (P.T.A.B., Aug. 24, 2022) (precedential)

(where declaration does not cite to any additional supporting evidence or provide any technical reasoning to support a statement, it is “conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight”). Indeed, Dr. McCarthy conceded that there is no deficiency in Li that would require modification. (**Exhibit 2014**, 45:22-46:18 and 59:9-13.) Indeed, a POSA would not have been motivated to modify Li to arrive at the invention of the '946 Patent. (**Exhibit 2012**, ¶112.)

In order to render a claim obvious, every claim element must be taught in the prior art, and there must be a motivation to use the cited art to solve the problem at hand. *See* M.P.E.P. § 2143.03 (9th ed. 2024) (“Examiners must consider all claim limitations when determining patentability of an invention over the prior art.”); *KSR Int’l v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (“[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.”); *see also Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1366-67 (Fed. Cir. 2012).

Petitioner does not demonstrate that Li teaches all elements of claims 1-4, 7-12, and 15. (**Exhibit 2012**, ¶115.) This failure is fatal to its argument. In reviewing the Petition, the Board is limited to the arguments raised by Petitioner in the Petition, and “failure to direct [the Board] to evidence sufficient to establish”

obviousness of a claim will mean that such an argument is not properly before the Board. *AMP Plus, Inc. v. DMF, Inc.*, 131 F.4th 1320, 1323-24 (Fed. Cir. 2025).

“[T]he law of obviousness does not require the court, or the Board, to develop arguments for a limitation that the petition simply did not make.” *Id.* at 1325.

For at least these reasons, Petitioner fails to establish that independent claims 1, 11, and 15 are obvious over Li. (**Exhibit 2012**, ¶113.)

Nor can Li render obvious the dependent claims of the '946 Patent because each of these claims depends from claims 1 or 11, neither of which is rendered obvious by Li. *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) (“Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.”). Each of claims 2-4, 7-10, and 12 are narrower in scope from the independent claims from which they depend. (**Exhibit 2012**, ¶114.) Because the Petition fails to meet its burden of proving obviousness with respect to independent claims 1, 11, and 15, it likewise fails to meet its burden for dependent claims 2-4, 7-10, and 12. (*Id.*, ¶115.)

2. Ground 2B: Petitioner fails to show that claims 1-4, 7-12, and 15 are obvious over Baruch.

Ground	Claims	Basis	References
2B	1-4, 7-12, 15	35 U.S.C. § 103	Baruch

Petitioner makes the conclusory statement that, “[t]o the extent Patent Owner argues any element is not disclosed by Baruch, it was obvious” (Petition, Paper 2 at 146), but fails to set forth any actual reasoning as to why claims 1, 11, 15, or claims dependent thereon, are obvious over Baruch. Petitioner’s only evidence in support of this conclusory assertion is the Declaration of Dr. McCarthy. (**Exhibit 1003**, ¶¶ 363-366.) However, like the Petitioner, Dr. McCarthy’s discussion of obviousness contains no more than conclusory statements that a POSA would find claims 1-4, 7-12, and 15 to be obvious. The declaration fails to address any specific reasons why a POSA would have made the proposed modifications and merely repeats the conclusory assertions for which it is offered to support. The testimony of Dr. McCarthy is therefore entitled to little or no weight. *See Xerox Corp.*, Paper 9 at 15. Indeed, Dr. McCarthy later conceded that there is no deficiency in Baruch that would require modification by combining it with Burchia. (**Exhibit 2014**, 71:20-72:2.) A POSA would not have been motivated to modify Baruch to arrive at the invention of the ’946 Patent. (**Exhibit 2012**, ¶117.)

In order to render a claim obvious, every claim element must be taught in the prior art, and there must be a motivation to use the cited art to solve the problem at hand. *See M.P.E.P.* § 2143.03; *KSR Int’l*, 550 U.S. at 418; *Kinetic Concepts*, 688

F.3d at 1366-67. Petitioner does not demonstrate that Baruch teaches all elements of claims 1-4, 7-12, and 15. This failure is fatal to its argument. *See AMP Plus*, 131 F.4th at 1323-24. “[T]he law of obviousness does not require the court, or the Board, to develop arguments for a limitation that the petition simply did not make.” *Id.* at 1325.

For at least these reasons, Petitioner fails to prove that independent claims 1, 11, and 15 are obvious over Baruch. (**Exhibit 2012**, ¶118.)

Baruch cannot render obvious the dependent claims of the '946 Patent because each of these claims depends from claims 1 or 11, neither of which is rendered obvious by Baruch. *In re Fine*, 837 F.2d at 1076 (“Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.”). Each of claims 2-4, 7-10, and 12 are narrower in scope from the independent claims from which they depend. (**Exhibit 2012**, ¶119.) Because the Petition fails to meet its burden of proving obviousness with respect to independent claims 1, 11, and 15, it likewise fails to meet its burden for dependent claims 2-4, 7-10, and 12. (*Id.*)

3. *None of the claims of the '946 Patent can be rendered obvious by any combination of references because the independent claims of the '946 Patent are neither anticipated nor obvious.*

The asserted combinations of Li, Burchia, and Hammond (1C), Li and Davidian (1D), Baruch, Burchia, and Hammond (2C), and Baruch and Davidian (2D) cannot render obvious dependent claims 5, 6, and 13 because claims 5, 6, and 13 depend from claim 1, which is neither anticipated nor rendered obvious by the references cited by Petitioner. *In re Fine*, 837 F.2d at 1076 (“Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.”).

4. *The combinations identified by Petitioner cannot render the claims of the '946 Patent obvious because there is no motivation to combine the cited references.*

- a) There is no motivation to combine Li, Burchia, and Hammond (Ground 1C) or Baruch, Burchia, and Hammond (Ground 2C).

Ground	Claims	Basis	References
1C	5-6, 13	35 U.S.C. § 103	Li, Burchia, Hammond
2C	5-6, 13	35 U.S.C. § 103	Baruch, Burchia, Hammond

It is fundamental that in order to render a patent claim obvious, the prior art must, in addition to disclosing every element of the claim, provide a motivation to utilize or combine the references in the manner taught by the patent. *KSR Int'l*, 550

U.S. at 418 (“[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.”); *see also Kinetic Concepts*, 688 F.3d at 1366-67. Petitioner must first demonstrate “that a skilled artisan would have been motivated to combine prior art references disclosing certain subsets of the claimed features with a reasonable expectation of success.” *Tris Pharma, Inc. v. Actavis Lab’ys FL, Inc.*, 2022 USPQ.2d 627 (Fed. Cir. 2022); *KSR Int’l*, 550 U.S. at 418; *see also Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1363 (Fed. Cir. 2017).

A POSA would not been motivated to combine Li and Burchia. (**Exhibit 2012**, ¶120.) In fact, integration of the teachings of Burchia into the design of Li would result in a significant redesign, as Li requires spring-loaded locking mechanisms on opposite sides of containers, while Burchia utilizes only a single spring loaded locking mechanism. (*Id.*) As a result, the Li design allows containers to be connected in two different orientations, while the Burchia design is limited to a single configuration. (*Id.*) This would reduce the flexibility of the Li design, so a POSA would not consider it. (*Id.*) Also, the Petitioner gives no explanation of how this could even be accomplished. (*Id.*)

In addition, a POSA would have no reason to consult Hammond in developing the invention of the '946 Patent. (**Exhibit 2012**, ¶121.) In fact, a POSA would be dissuaded in considering Hammond due to the complexity of the design, which would significantly increase manufacturing costs and provide no apparent benefit. (*Id.*)

In addition, Hammond, which is directed to compression latch assemblies for securing doors, drawers, or panels, is non-analogous art. (**Exhibit 2012**, ¶122.) “References within the statutory terms of 35 U.S.C. § 102 qualify as prior art for an obviousness determination only when analogous to the claimed invention.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). “A reference is analogous art to a claimed invention if: (1) the reference is from the same field of endeavor as the claimed invention; or (2) the reference is reasonably pertinent to the problem faced by the inventor.” M.P.E.P. § 2141.01(a)(I) (9th ed. 2024); *In re Bigio*, 381 F.3d at 1325. In determining the relevant field of endeavor, it is necessary to consider “explanations of the invention’s subject matter in the patent application, including the embodiments, function, and structure of the claimed invention.” *Airbus S.A.S. v. Firepass Corp.*, 941 F.3d 1374, 1380 (Fed. Cir. 2019) (quoting *In re Bigio*, 381 F.3d at 1325). And “[i]n order for a reference to be ‘reasonably pertinent’ to [a] problem, it must ‘logically [] have commended itself to an inventor’s attention in

considering his problem.” M.P.E.P. § 2141.01(a)(I) (quoting *In re ICON Health & Fitness, Inc.*, 496 F.3d 1374, 1379-80 (Fed. Cir. 2007)).

Hammond is neither from the same field of endeavor as the '946 Patent nor is it reasonably pertinent to the problem addressed by the invention of the '946 Patent. (**Exhibit 2012**, ¶123.)

Hammond is not in the same field of endeavor as the '946 Patent because Hammond is directed to compression latches for doors, which is entirely different from a mechanism for attaching one stacked item to another. (**Exhibit 2012**, ¶124.) The '946 Patent describes the structure and function of a mechanism for interlocking two stacked storage containers, and the advantages of using such a system to hold two or more containers together in this way. That Hammond is generally related to latches used to keep a door closed is insufficient to establish that Hammond is in the same field of endeavor as the '946 Patent because the scope of the technology at issue (*i.e.*, a mechanism for attaching one stacked item to another) is far more narrow. (*Id.*, ¶¶124-125.)

Hammond also is not reasonably pertinent to the problem faced by the inventor of the '946 Patent. (**Exhibit 2012**, ¶125.) That is, Hammond would not “logically [] have commended itself to an inventor’s attention” in considering how to stack and interlock two or more storage containers. (*Id.*, ¶126.) A closure latch

for a door is entirely different from the mechanisms described and claimed in the '946 Patent. (*Id.*) A POSA would recognize the inherent differences between latches for closing doors and mechanisms for interlocking two or more storage containers together when stacked, such that a POSA would not have considered Hammond to be relevant when seeking to develop the locking mechanism of the '946 Patent. (*Id.*, ¶127.)

Indeed, in alleging that these claims are obvious over Li or Baruch, in combination with Burchia and Hammond, Petitioner undoubtably relies on hindsight from Meridian's disclosure rather than relying on the teachings of Li or Baruch, Burchia, and Hammond themselves as the basis for the asserted motivation to combine. *In re Dow Chem. Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988) ("There must be a reason or suggestion in the art for selecting the [modification], other than the knowledge learned from the applicant's disclosure."); *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 381 F.3d 1371, 1376 (Fed. Cir. 2004) ("[T]he suggestion to combine references must not be derived by hindsight from knowledge of the invention itself."). Indeed, Petitioner's expert conceded such in his deposition, acknowledging that there is nothing wrong with the latching mechanism taught by Li that would require modification with Burchia and Hammond. (**Exhibit 2014**, at 59:9-13 ("Q. Is there a problem with Li that would

need to be solved by using a combination of Burchia and Hammond? . . . **A.**

No.”).) Nor is there a problem with Baruch that would need to be solved by combining it with Burchia (or Hammond). (*Id.*, 71:20-72:9.)

Indeed, Dr. McCarthy conceded that he performed a hindsight analysis, because he only combined Li with Burchia “to achieve the features that are recited in the claim language of the 5, 6, and 13 patents [sic].” (**Exhibit 2014**, 60:2-8.) Similarly, he explains how adding Burchia and Hammond to Baruch would allow the replacement of a linear spring with a torsional spring, stating that “Burchia says you **can** replace a linear spring with a torsion spring, and Hammond shows an example of a torsion spring. (*Id.* at 73:14-17 (emphasis added).) But “obviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.” *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). And all that Dr. McCarthy has done is stated that one *could* make such a combination, not that they *would* do so. Petitioner’s only evidence of a motivation to combine comes from Dr. McCarthy’s conclusory statements, which are insufficient to demonstrate a motivation to combine. *Acoustic Tech., Inc. v. Itron Networked Sols., Inc.*, 949 F.3d 1366, 1375-76 (Fed. Cir. 2020) (“We have found expert testimony insufficient where, for example, the testimony consisted of

conclusory statements that a skilled artisan *could* combine the references, not that they *would* have been motivated to do so.”).

Because there is no motivation to combine Li or Baruch with Burchia and Hammond to solve the problem addressed by the '946 Patent, their combination cannot render any claims of the '946 Patent obvious. (**Exhibit 2012**, ¶128.)

(1) The combination of Li, Burchia, and Hammond (Ground 1C) and Baruch, Burchia, and Hammond (Ground 1D) do not render obvious claims 5 and 6.

Claim Five

The storage box of claim 4, **wherein said second resilient member is a torsion spring with one end against said stop part and the other end against a bottom of said holding slot**; when said torsion spring is extended, said stop part extends out of said holding slot and when said torsion spring is compressed, said stop part is retracted into said holding slot.

Neither Li, Burchia, and Hammond nor Baruch, Burchia, and Hammond disclose or suggest that “the second resilient member is a torsion spring with one end against [the] stop part and the other end against a bottom of [the] holding slot,” as required by claim 5. (**Exhibit 2012**, ¶129.) Petitioner alleges that substitution of the springs of Li and Burchia or the substitution of the springs of Baruch and Burchia would “have amounted to merely combining known elements or a simple

substitution of known elements to yield predictable results” (Petition, Paper 2 at 76, 149), but this is incorrect.

It would not have been obvious to replace a compression spring, as taught in Li, Baruch, and Burchia, with a torsion spring, as taught in Hammond. (**Exhibit 2012**, ¶131.) *See Metalcraft of Mayville, Inc. v. Toro Co.*, 848 F.3d 1358, 1366 (Fed. Cir. 2017) (“In determining whether there would have been a motivation to combine prior art references to arrive at the claimed invention, it is insufficient to simply conclude the combination would have been obvious *without identifying any reason why a person of skill in the art would have made the combination.*” (emphasis supplied)).

As an initial matter, Burchia’s statement that “a spring element ... is provided” where the spring element may be essentially any kind of spring, including a torsion spring (**Exhibit 1008**, [0014]), is irrelevant to the obviousness analysis. This boilerplate language is commonly found in patent specifications and does not provide any motivation to modify disclosed embodiments when a patent specification is being considered as prior art. *See Markforged, Inc. v. Continuous Composites, Inc.*, IPR2022-01220, Paper 8 at 21–23 (Jan. 11, 2023) (finding that “[a reference] disclos[ing] that combinations of the disclosed embodiments and features is proper’ does not constitute a reasoned explanation regarding why the

skilled artisan would have combined” two aspects *of the same reference* (citations and quotation marks omitted)); *see also Metalcraft of Mayville*, 848 F.3d at 1366 (“In determining whether there would have been a motivation to combine prior art references to arrive at the claimed invention, it is insufficient to simply conclude the combination would have been obvious *without identifying any reason why a person of skill in the art would have made the combination.*” (emphasis supplied)).

Moreover, Li, Baruch, and Burchia utilize compression springs to facilitate linear movement of a spring-loaded component. (**Exhibit 2012**, ¶132.) Torsion springs generate rotational movement, are more expensive, and require the addition of shafts about which to rotate, increasing the complexity of the design and the manufacturing costs. (*Id.*, ¶133.) A POSA therefore would not have had any reason to replace the compression spring of Li, Baruch, and/or Burchia with a torsion spring as taught in Hammond, as torsion springs are not suitable for use with components configured for linear motion. (*Id.*, ¶134.) The alleged motivation to combine Hammond with Li and Burchia or Baruch and Burchia therefore necessarily stems from improper hindsight based on the disclosure of the '946 Patent. *Cardiac Pacemakers*, 381 F.3d at 1376 (“the suggestion to combine references must not be derived by hindsight from knowledge of the invention

itself”). “There must be a reason or suggestion in the art for selecting the [modification], other than the knowledge learned from the applicant’s disclosure.”

In re Dow Chem. Co., 837 F.2d at 473.

Claim 5 is therefore not rendered obvious by either the combination of Li, Burchia, and Hammond (Ground 1C) or Baruch, Burchia, and Hammond (Ground 1D). (**Exhibit 2012**, ¶135.) Claim 6, which depends from Claim 5, is not obvious for the same reasons.

(2) Claim 13 is not rendered obvious by the combination of Li, Burchia, and Hammond (Ground 1C) or Baruch, Burchia, and Hammond (Ground 1D).

Claim 13

The storage box of claim 11, **wherein the second resilient member is a torsion spring and the stop part rotates relative to the locking part.**

Neither Li, Burchia, and Hammond (Ground 1C) nor Baruch, Burchia, and Hammond (Ground 1D) disclose or suggest that “the second resilient member is a torsion spring and the stop part rotates relative to the locking part,” as required by claim 13. (**Exhibit 2012**, ¶136.) Petitioner provides no support for the general assertion that “[w]hen implementing Hammond with [Li or Baruch], such a rotation would have been obvious based on the rotation of pawl 80.” (Petition, Paper 2 at 82, 152). The pawl **80** has no relevance to the elastic boss **33** (*i.e.*, the

stop part) of Li or the stopper **370** of Baruch. The fact that an entirely unrelated component of Hammond rotates under action from a torsion spring is insufficient to provide any motivation or suggestion to modify the elastic boss **33** of Li or the stopper **370** of Baruch to be rotatable as Petitioner alleges. (**Exhibit 2012**, ¶139.)

Furthermore, such a modification would render the systems of Li and Baruch inoperable. (**Exhibit 2012**, ¶140.) Neither the elastic boss **33** of Li nor the stopper **370** of Baruch would be capable of functioning to hold the stacked storage containers in an unlocked position if the movement thereof were to be rotational rather than linear. (*Id.*) There is no way in which the elastic boss **33** of Li could rotate, rather than linearly translate, and still project from the pull latch cover **32** when the latch **3** is in the unlocked position to hold said latch **3** in the unlocked position. (*Id.*, ¶141.) Nor could the stopper **370** of Baruch rotate, independent of the rotation of the latch **314**, and hold the latch **314** in an unlocked position, and still project outward to hold the latch **314** in its unlocked position. (*Id.*, ¶142.)

It therefore would not have been obvious to modify the elastic boss **33** in Li or the stopper **370** in Baruch in view of the teachings of Hammond, as doing so would have rendered both the Li and Baruch systems to be inoperable. (**Exhibit 2012**, ¶143.) *See In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984); *see also* M.P.E.P. § 2143.01(V) (9th ed. 2024) (“If a proposed modification would render

the prior art invention being modified unsatisfactory for its intended purpose, there may be no suggestion or motivation to make the proposed modification”).

Moreover, any attempt to integrate the teachings of Hammond into the Li or Baruch devices would increase the complexity of the design and increase manufacturing costs. (**Exhibit 2012**, ¶143.)

For at least these reasons, Petitioner fails to prove that claims 5, 6, and 13 are obvious over Li in view of Burchia and Hammond. *In re Fine*, 837 F.2d at 1076 (“Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.”).

- b) There is no motivation to combine Li and Davidian (Ground 1D) or Baruch and Davidian (Ground 2D).

Ground	Claims	Basis	References
1D	14, 16	35 U.S.C. § 103	Li, Davidian
2D	14, 16	35 U.S.C. § 103	Baruch, Davidian

In alleging that these claims are obvious over Li or Baruch, in combination with Davidian, Petitioner undoubtably relies on hindsight from Meridian's disclosure rather than relying on the teachings of Li, Baruch, or Davidian themselves as the basis for the asserted motivation to combine. *In re Dow Chem. Co.*, 837 F.2d at 473 (“There must be a reason or suggestion in the art for selecting

the [modification], other than the knowledge learned from the applicant's disclosure."); *Cardiac Pacemakers*, 381 F.3d at 1376 ("[T]he suggestion to combine references must not be derived by hindsight from knowledge of the invention itself."). Indeed, Petitioner's expert admitted such in his deposition:

Q. So, Dr. McCarthy, it's my understanding that, in paragraph 264, you're saying that a person of ordinary skill in the art would be motivated to combine Li and Davidian to provide stability for the device of Li; is that correct?

A. That's correct.

Q. Was a lack of stability a known problem for Li?

MR. TANG: Objection. Scope.

A. No. It's really *the -- effort here is to do the same thing for the Claims 14 and 16 using Davidian, which is to add a feature that's not in Li that is recited in the -- in Claims 14 and 16. It's the same -- it's the same reason that I added Burchia and Hammond to Li to read onto the 5, 6, and 13 -- Claims 5, 6, and 13.*

(Exhibit 2014, 68:1-15 (emphasis added).)

Am I correct in understanding it is your opinion that a motivation to combine Baruch and Davidian was to provide stability to the device of Baruch?

A. The motivation -- yes. That, *for the same reasons we discussed with Li*, the Claims 4 -- 14 and 16 recite projections and recesses in the upper box and lower box that engage when the boxes are stacked.

Baruch doesn't recite those elements. So in order for a person of ordinary skill in the art to understand that the -- that there is the ability to do this and *compare it to the claim language in the '946 patent I needed a patent from -- in the art*, that shows this engagement and the benefits of it. And so that's how Davidian is used in combination with Baruch.

Q. Was lack of stability a problem with Baruch?

A. I don't recall it being described.

(Exhibit 2014, 76:13-77:10.) Indeed, the Petitioner does not even explain how such a combination would be implemented, and such an unnecessary combination would result in the addition of unnecessary components which would increase the complexity of the design and increase manufacturing costs. **(Exhibit 2012, ¶144.)** There is, therefore, no motivation to combine Li and Davidian, or Baruch and Davidian, to teach the storage boxes of claims 14 and 16.

VI. CONCLUSION

None of the references identified by Petitioner contain all of the elements of independent claims 1, 11, and 15 of the '946 Patent, and therefore these references

fail to anticipate or render obvious any of the claims of the '946 Patent. Moreover, there is no motivation to combine these references, and the dependent claims of the '946 Patent are similarly neither anticipated by nor rendered obvious by the references identified by Petitioner. Meridian therefore respectfully requests that all claims of the '946 Patent be upheld, and that the Board find that none of the challenged claims are unpatentable.

Dated: May 20, 2026

Respectfully Submitted,

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CERTIFICATION OF WORD COUNT

This Petition complies with the type-volume limitations as mandated in 37 C.F.R. § 42.24, totaling 11,125 words. Counsel has relied upon the word count feature provided by Microsoft Word.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing ***Patent Owner's Response*** was served via electronic mail, per agreement of the parties, in its entirety, on Petitioner's attorneys of record in IPR2025-01461 on the date indicated below.

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