

EXHIBIT 2012

Declaration of Glenn E.
Vallee, Ph.D., P.E.

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

**DECLARATION OF GLENN E. VALLEE, Ph.D., P.E. IN SUPPORT OF
PATENT OWNER'S RESPONSE TO PETITION FOR *INTER PARTES*
REVIEW OF U.S. PATENT NO. 11,986,946**

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I, Glenn E. Vallee, Ph.D., P.E., hereby declare as follows:

I. INTRODUCTION

1. I have been retained as an expert witness on behalf of Patent Owner Meridian International Co., Ltd. (“Meridian”) in the above *inter partes* review (“IPR”). I am being compensated for my time on this matter at my standard consulting rate, \$450/hr. I understand that this Declaration accompanies Patent Owner’s Response to Petitioner’s Petition for *Inter Partes* Review of U.S. Patent No. 11,986,946 (the “’946 patent”).

II. QUALIFICATIONS AND EXPERIENCE

2. I am currently the Owner and Principal Engineer of G. Vallee Consulting, LLC and I hold the rank of Professor Emeritus at Western New England University where I was formerly an Associate Professor and Chair of Mechanical Engineering. My background is in the areas of mechanical engineering, design, product development, and quality assurance. I have a Ph.D. in Mechanical Engineering from the University of Rhode Island and my Ph.D. dissertation research focused on the use of polymetric materials in pneumatic nailers. As an Assistant then Associate Professor of Mechanical Engineering, I served the university from 2002 to 2025 and taught courses in Mechanical Design, Materials Science, Kinematics, Vibrations, Mechanics of Materials, and a Product Development and Innovation (PDI) course where students design consumer products having commercial potential.

Six utility patents have been issued for student inventions developed in the course, and many products developed were related to the DIY and Industrial markets, including a stackable transportation system for tool storage containers. I have for over 20 years taught machine and product design at Western New England University, which involves the design of a wide range of locking and latching mechanisms.

3. As the Owner and Principal Engineer of G. Vallee Consulting, I also serve as a consultant in the areas of mechanical engineering design, product development, numerical stress analysis, and mechanical testing, as well as serving as a technical expert in product liability and patent litigation. I designed a novel hammer tacker utilizing polymeric staples with embedded wires (US Patent No. 10,599,969), and this product utilized a spring-loaded latching mechanism in the staple magazine. I have given deposition testimony over 20 times and testified before the ITC twice, all in patent related matters, and I have supported over 20 IPR matters before the PTAB. I have also provided testimony related to a wide variety of products, some of which utilize latching mechanisms, such as reusable beverage bottles, vacuum cleaners, and pneumatic and electric nailers. I have reviewed many patents as I worked with patent attorneys to file the patent applications. I am an inventor on nine patents, including an electrical power strip, devices related to hand

tools, water purification, pneumatic nailers, and surgical devices. I am a member of the American Society of Mechanical Engineers (ASME member no. 1259837), and I am a licensed Professional Engineer (RI Lic. No. 6765).

4. As set forth in more detail in my curriculum vitae (**Exhibit 2013**), I have substantial expertise in the areas of mechanical engineering, consumer product design and development, quality assurance, mechanical testing, and the design of a wide variety of products utilizing methods of mechanical securement and latching. Prior to joining Western New England University, I served as the Director of Engineering and Quality Assurance, Worldwide for the Remington Products Company, L.L.C., in Bridgeport, CT, from 1997 until 2002. Remington Products Company is a major manufacturer of consumer products, including electric shavers, beard trimmers, hair dryers, and hair setters. My responsibilities included directing the activities of Design and Product Engineering, Quality Assurance, and Manufacturing departments in the U.S., U.K., and Asia, responsible for the design and development of international consumer products, and for focusing new product engineering toward continuously improving customer satisfaction through improved product design, performance, and quality.

5. Prior to my employment at Remington Products, I served as the Manager of the Engineering Laboratories at the Stanley Bostitch Company, now a

division of Stanley/Black & Decker. Stanley Bostitch is a leading manufacturer of pneumatic nailers and staplers, a variety of hand tools such as hammer tackers and staplers, and a number of other office products. I was employed by Stanley Bostitch from 1985 until 1997, serving first as a Technician, then Test Engineer, then Product Design/Development Engineer, and was promoted to Manager of the Engineering Laboratories in 1995. During my employment at Stanley Bostitch, I acquired extensive experience in the design and testing of a variety of mechanical, pneumatic, and electromechanical products, including pneumatic fastening tools, electric trackers and staplers, and electric pencil sharpeners. My work as a Technician and then Test Engineer allowed me to acquire experience in conducting and developing test methodologies for all products. My work as a Product Design/Development Engineer involved designing and developing products from conception through manufacture and quality control, most of which required the design of fluid containment systems and methods of sealing. Here I also designed spring-loaded latching mechanisms for nailer nail magazines, and feed systems. I am an inventor on two patents related to fastening tools that issued during this time, U.S. Patent Nos. 5,551,620 and 5,551,621, both of which utilize a spring-loaded latching mechanism in a novel combination triggering system. As the Manager of the Engineering Laboratories, I managed the largest of the Engineering Laboratories in Stanley

Works and supervised 18 employees. This position required that I coordinate testing and allocate resources to meet stringent scheduling requirements of the Product Development, Manufacturing, and Marketing departments.

6. **Exhibit 2013** is a copy of my curriculum vitae, which further expands on my qualifications and expertise and includes a list of my publications and prior testimony over the past five years.

III. SUMMARY OF OPINIONS

7. In forming my opinions, I considered Petitioner's arguments regarding unpatentability, in addition to the art cited by Petitioner. I did not find Petitioner's arguments persuasive because (1) the art cited by Petitioner does not teach all of the elements of the claims of the '946 patent; and (2) there is no motivation to combine the art cited by Petitioner.

IV. MATERIALS CONSIDERED

8. In preparing this Declaration, I have reviewed the '946 patent, the Petition (Paper 2), the exhibits to the Petition (**Exhibits 1001-1030**), and Patent Owner's Preliminary Response (Paper 12). In formulating my opinion, I have relied upon my experience, education, and knowledge in the relevant art, and have considered the viewpoint of a person of ordinary skill in the art ("POSA") at the time of the invention (March 4, 2022).

V. APPLICABLE LEGAL PRINCIPLES

9. Counsel for Meridian has informed me of the relevant legal principles in analyzing references to determine if they render the '946 patent anticipated or obvious. They have provided me with the following case law and materials that are relevant to my analysis.

A. 35 U.S.C. § 112 Rejection: Lacking Antecedent Basis

10. A rejection for lack of antecedent basis occurs when the following conditions are present:

A claim is indefinite when it contains words or phrases whose meaning is unclear. *In re Packard*, 751 F.3d 1307, 1314, 110 USPQ2d 1785, 1789 (Fed. Cir. 2014). The lack of clarity could arise where a claim refers to “said lever” or “the lever,” where the claim contains no earlier recitation or limitation of a lever and where it would be unclear as to what element the limitation was making reference. Similarly, if two different levers are recited earlier in the claim, the recitation of “said lever” in the same or subsequent claim would be unclear where it is uncertain which of the two levers was intended. A claim which refers to “said aluminum lever,” but recites only “a lever” earlier in the claim, is indefinite because it is uncertain as to the lever to which reference is made. Obviously, however, the failure to provide explicit antecedent basis for terms does not always render a claim indefinite. If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite. *Ex parte Porter*, 25 USPQ2d 1144, 1145 (Bd. Pat. App. & Inter. 1992) (“controlled stream of fluid” provided

reasonable antecedent basis for “the controlled fluid”). Inherent components of elements recited have antecedent basis in the recitation of the elements themselves. For example, the limitation “the outer surface of said sphere” would not require an antecedent recitation that the sphere has an outer surface. See *Bose Corp. v. JBL, Inc.*, 274 F.3d 1354, 1359, 61 USPQ2d 1216, 1218-19 (Fed. Cir 2001) (holding that recitation of “an ellipse” provided antecedent basis for “an ellipse having a major diameter” because “[t]here can be no dispute that mathematically an inherent characteristic of an ellipse is a major diameter”).

M.P.E.P. § 2173.05(E) (9th ed., Rev. 01.2024).

B. Claim Construction

11. “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).

12. I understand that in this proceeding, Petitioner’s expert, Dr. McCarthy, has stated that “[f]or the purpose of [his] analysis, [he] just worked directly with the ordinary meaning of the claim.” (**Exhibit 2014**, 28:21-29:1.) I also understand that

Meridian believes that the plain and ordinary meaning of the claims is appropriate.

C. Non-Analogous Art

13. “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) (citing *In re Bigio*, 381 F.3d at 1325.)

14. 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).

15. “In 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)).

D. Anticipation

16. “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. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987). *CRFD Research, Inc. v. Matal*, 876 F.3d 1330, 1338 (Fed. Cir. 2017).

17. “The elements must be arranged as required by the claim, but . . . identity of terminology is not required.” M.P.E.P. § 2131 (citing *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990)).

18. “[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).

E. Obviousness

19. 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 (“Examiners must consider all claim limitations when determining patentability of an invention over the prior art.”); *KSR Int’l Co. 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) (noting that “[e]ven if the references disclosed all of the limitations of the asserted claims, which they do

not, [defendant] still needed to proffer evidence indicating why a person having ordinary skill in the art would combine the references to arrive at the claimed invention” and discussing requirement of a motivation to combine). It is insufficient to show that the references “*could be combined*,” rather, there must be “a motivation to pick out those two references and combine them to arrive at the claimed invention.” *PersonalWebTechs., LLC v. Apple, Inc.*, 848 F.3d 987, 993-994 (Fed. Cir. 2017); *see also Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness 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.”); *InTouch Techs., Inc. v. VGo Commc’ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014) (“VGo’s expert also succumbed to hindsight bias in her obviousness analysis. Dr. Yanco’s testimony primarily consisted of conclusory references to her belief that one of ordinary skill in the art *could* combine these references, not that they *would* have been motivated to do so. *See ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012) (“[T]he expert’s testimony on obviousness was essentially a conclusory statement that a person of ordinary skill in the art would have known, based on the ‘modular’ nature of the claimed components, how to combine any of a number of references to achieve the claimed inventions. This is not sufficient and is fraught with hindsight

bias.’).”)

20. 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.

21. A challenger may not rely on hindsight from the patent rather than relying on the teachings of the alleged prior art as the basis for the asserted motivation to combine. *See 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.”).

22. “Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988)

23. “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.” M.P.E.P. § 2143.01(V); *see also In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984).

VI. U.S. PATENT NO. 11,986,946

A. The Invention of the ‘946 Patent

24. It is my understanding that 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”).

25. The ‘946 Patent is directed to the connecting mechanisms for attaching modular storage boxes.

26. 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 4:41-53.)

B. The File History of the ‘946 Patent

27. I have reviewed the file history of the ‘946 patent. (Exhibit 1002.) The prosecution of the ‘946 Patent was relatively straightforward.

28. The application was subject to a restriction requirement (*id.*, part 3, 0582-0587), which asked the patentee to limit the prosecution to only one species of claims, but the restriction requirement was later withdrawn (*id.*, 0708).

29. A single office action rejected certain claims under 35 U.S.C. § 112(b) as lacking antecedent basis and others as anticipated by Ben-Gigi (U.S. Patent No. 9,725,209) but identified still 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

30. In my opinion, 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.

31. It is also my opinion that Dr. McCarthy, Petitioner’s expert, is not a POSA under this definition. Although his academic record is impeccable, he has only theoretical experience in designing connecting technologies and has never

made a consumer product of any kind, much less a latching device. (**Exhibit 2014**, 16:4-10.)

D. Construction of Key Terms of the '946 Patent

32. It is my understanding that the Petitioner proposes only a single construction, for the term “*stop part*,” but nevertheless 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 [in the Petition.]” (Petition, Paper 2, p. 9-10.)

33. It is also my understanding that 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.)

34. As a result, Meridian’s proposed constructions – which apply the plain and ordinary meaning of each term – should be used.

35. 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. I have been asked to construe these terms and do so below.

A. “Stop Part”

36. Petitioner proposes that “*stop part*,” a term that does not use the word “means,” is a means-plus-function claim term.

37. It is my understanding, however, that on July 7, 2025 –before the present Petition was filed – the District Court in *Meridian International Co., Ltd. v. ToughBuilt Industries, Inc.*, 8:24-cv-01840 (C.D. Cal.) (the “District Court Case”) issued a “[Tentative] Claim Construction Order,” which addressed Petitioner’s proposed construction, as follows:

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 appears 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.)

38. It is my opinion that a POSA would understand the term “*stop part*” to be given it’s plain and ordinary meaning which, in the context of the claims, is “a retractable part, which is extended into the locking path of the locking part when the connection parts are in an unlocked state, and which is compressed out of the locking path of the locking part when the connection parts are in a locked state.”

B. “Mounting Body”

39. It is my understanding that Petitioner does not overtly propose a specific construction for this term in its Petition.

40. It is my further understanding that 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.)

41. Upon reading the Petition, however, it does not appear that Petitioner has applied a “plain and ordinary” meaning of this term in its invalidity analysis. 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).

42. In fact, it is my understanding that, contrary to using a “plain and ordinary meaning” for this term, Petitioner’s expert conceded that the specification of the ’946 Patent was used to interpret the term “*mounting body*.” (**Exhibit 2014**, 30:20-32:1.)

43. 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, 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 the mounting body.

44. In my opinion, the term “*mounting body*” has a plain and ordinary meaning that would be understood by a POSA without referencing the '946 Patent's specification, which is “the portion of the first connection part attached to the body of the storage container relative to which the locking buckle slides.”

45. 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.

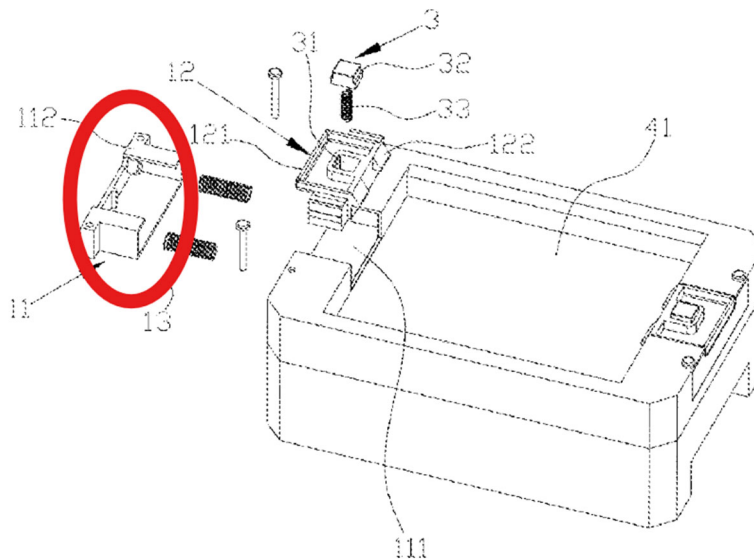


FIG. 7

(Exhibit 1001. at FIG. 7.)

C. “Locking Buckle”

46. 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.)

47. In my opinion, a POSA would understand the *“locking buckle”* to include the entire locking or latch component that slides relative to the mounting body.

48. It is my understanding that when analyzing Li, Petitioner limited its definition of this component to only a pull latch cover, excluding the remainder of the locking component.

49. It is my further understanding that when analyzing Baruch, Petitioner defined the locking buckle as a main body and primary hook that is not configured to slide inward with respect to the mounting body.

50. In my opinion, 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.

51. Based on the testimony of Dr. McCarthy, Petitioner’s expert, rather than applying plain and ordinary meaning, the specification of the ’946 Patent was used to interpret the term *“locking buckle.”* (Exhibit 2014, 37:13-38:8.)

52. In my opinion, 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.

VII. REFERENCES IDENTIFIED BY PETITIONER

53. Based on my review of the Petition, it appears 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

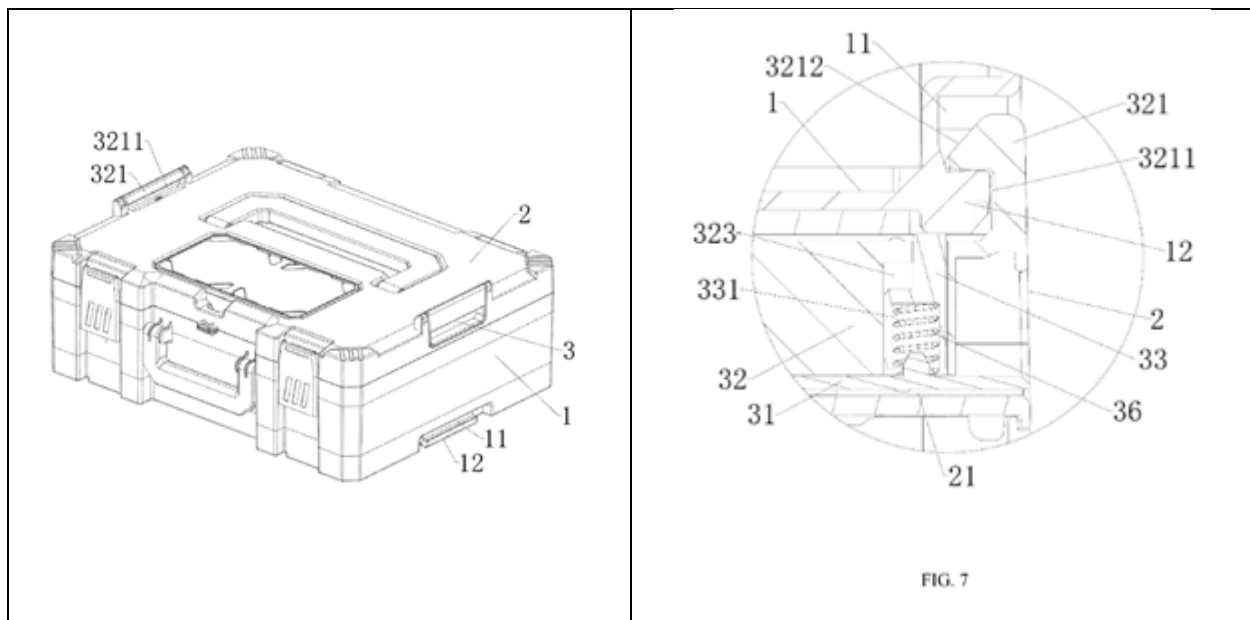
(See Petition, Paper 2 at 10-11).

54. It is my understanding that 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

55. U.S. 2022/0396985 (“Li,” **Exhibit 1007**) is directed to a latch structure.

56. 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.



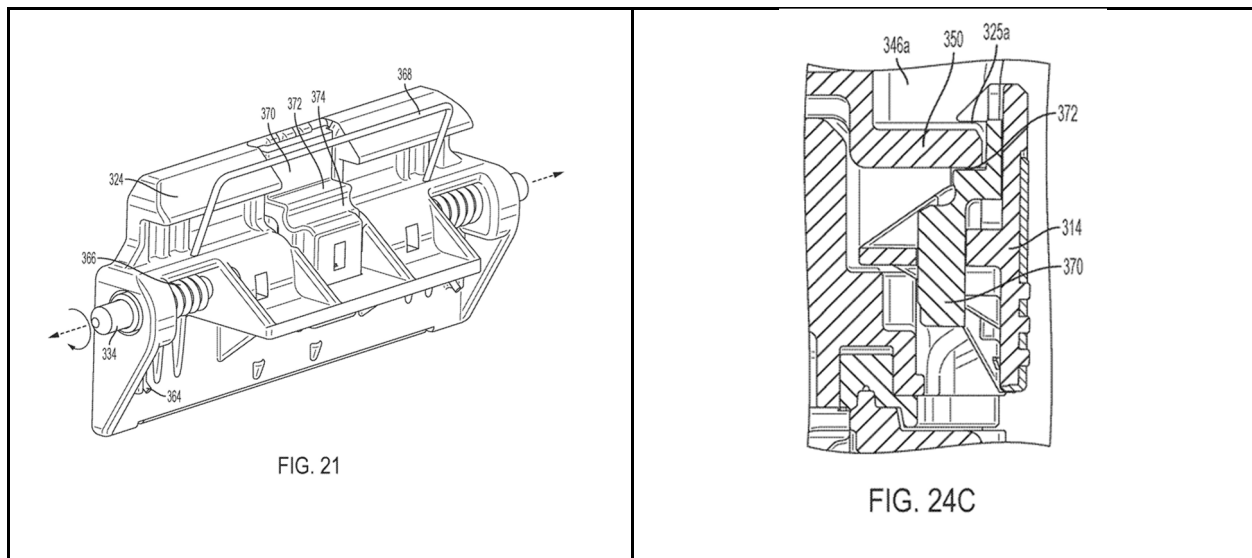
57. As discussed further below, Li does not disclose critical elements of the '946 Patent, including a “*mounting body*,” a “*locking buckle*,” or a “*resilient member*.”

B. Baruch

58. US 2020/0298392 (“Baruch,” **Exhibit 1012**), like Li, teaches the use of

locking mechanisms and other alignment tools on both sides of a stackable item.

59. 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 1012, FIGS. 21, 25C.)

60. 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*.”

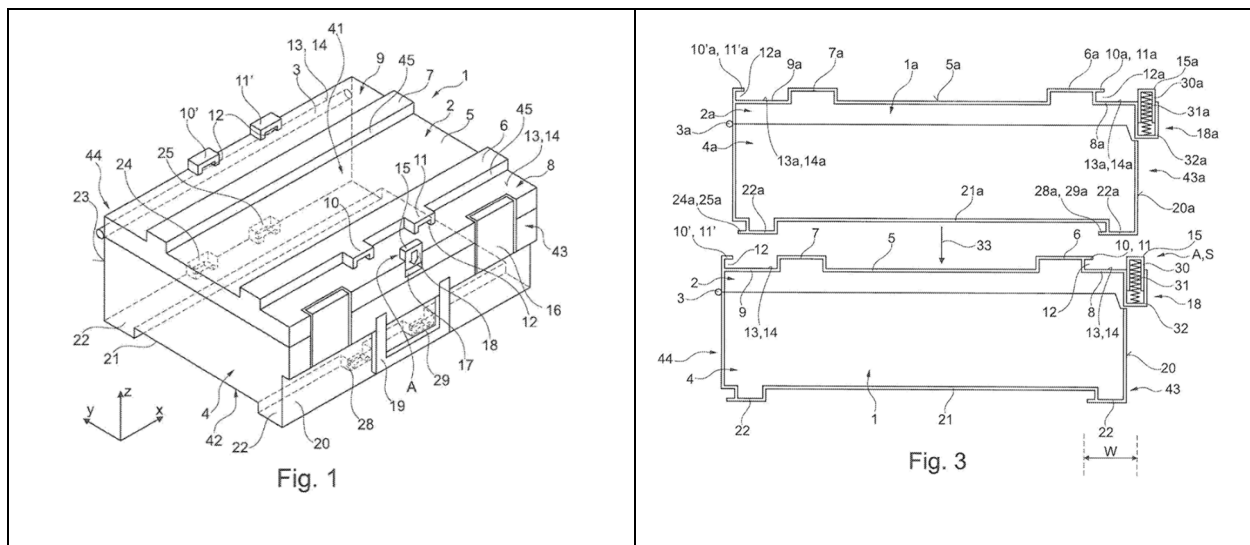
C. Burchia

61. 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.)

62. 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.

D. Hammond

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

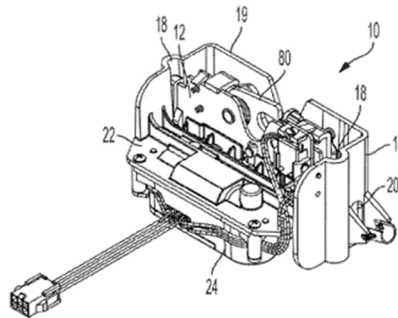


FIG. 1A

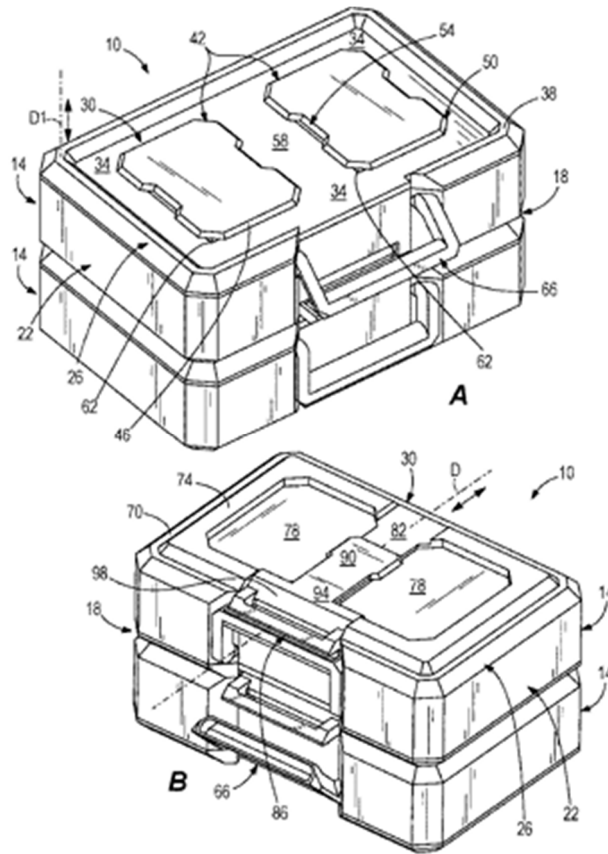
(*Id.*, FIG. 1A.)

64. 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.

65. As explained below, Hammond is, therefore, non-analogous prior art.

E. Davidian

66. 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.



(*Id.*)

67. 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.

VIII. THE REFERENCES IDENTIFIED BY THE PETITIONER DO NOT TEACH ALL OF THE ELEMENTS OF THE PATENT CLAIMS AND THEREFORE DO NOT ANTICIPATE OR RENDER OBVIOUS THE CLAIMS OF THE '946 PATENT

A. None Of The Claims Of The '946 Patent Are Anticipated By The Cited Art.

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.

68. In my opinion, Petitioner fails to show where each and every limitation of independent Claims 1, 11, and 15 is disclosed in Li.

69. 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).)

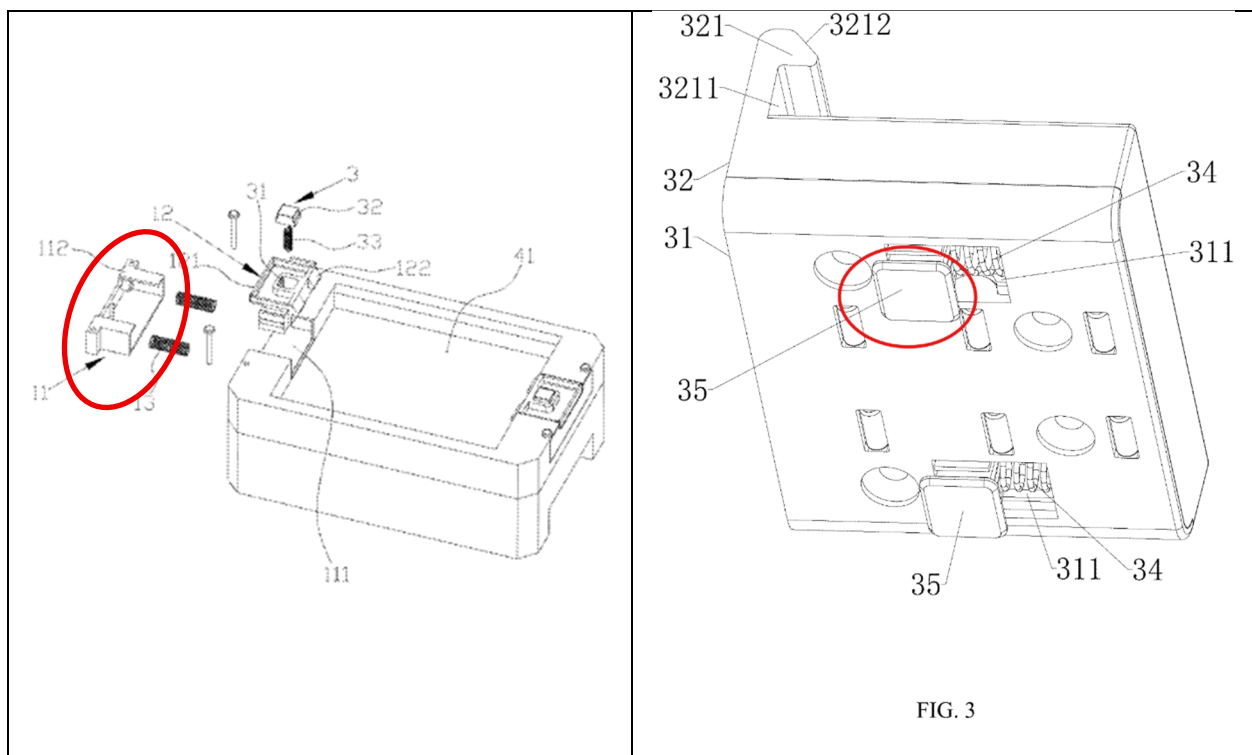
(1) Petitioner fails to give the terms “***mounting body***” and “***locking buckle***” their ordinary meaning.

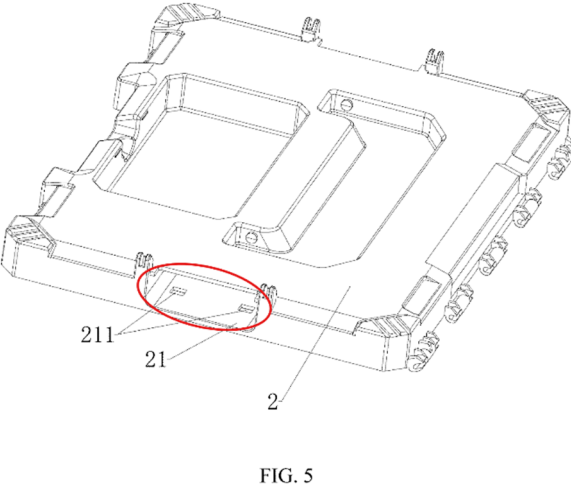
70. Regarding the “***mounting body***,” Petitioner alleges that “Li’s ‘stop piece **35**’ as attached to ‘chute **21**’ via ‘snap-in hole **211**’ teaches the claimed ‘*mounting body*.’” (Petition, Paper 2 at 27) (see Exhibit 1007, at FIG. 3 and 5,

reproduced below).

71. Petitioner's 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.

72. 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. 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.



	 FIG. 5
'946 Patent “<i>Mounting Body 112</i>” (Exhibit 1001)¹	Li “Stop Piece 35,” “Chute 21,” and “Snap-In-Hole 211” (Exhibit 1007)

73. 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. 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.

74. In my opinion, a POSA would understand the “*mounting body*” of Li to be the chute 21, but not the snap-in hole 211 and the stop pieces 35.

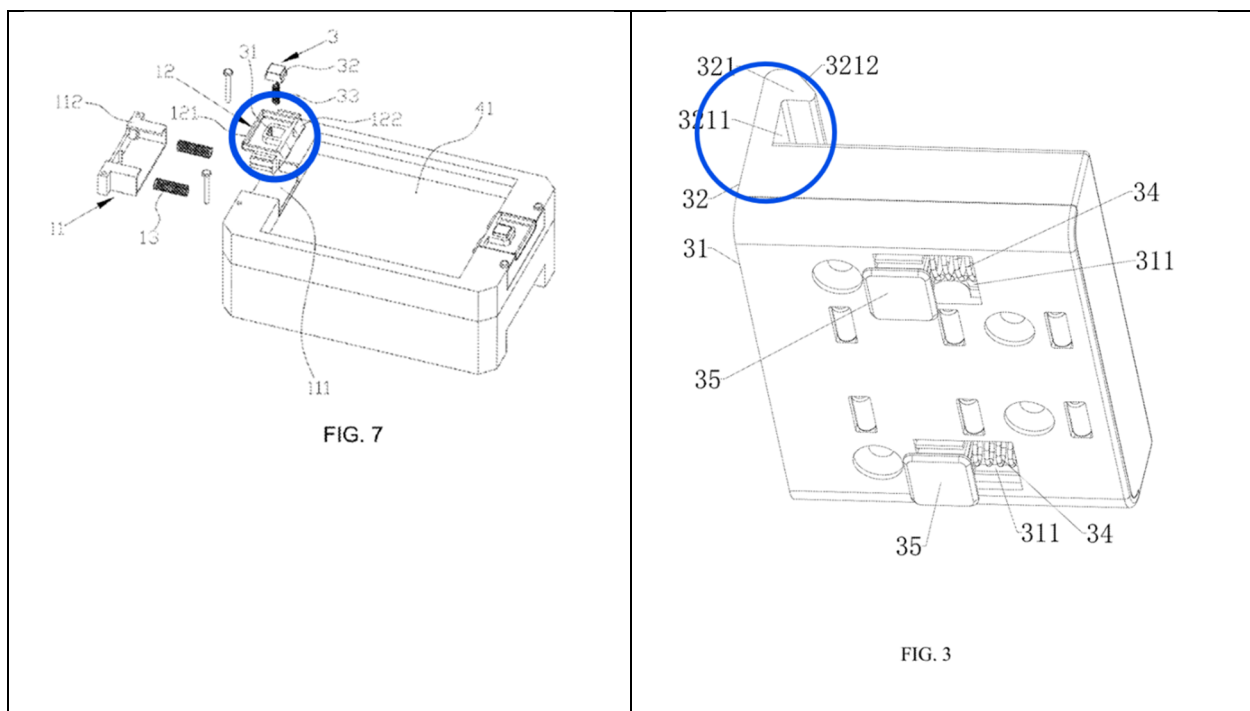
¹ In Figures included herein, red indicates the “mounting body,” blue indicates the “locking buckle,” and green indicates the “resilient member.”

75. In my opinion, if Li had intended to treat these three structures as comprising a single body, Li would have made that clear by addressing their combined purpose in either the specification or the figures, but they did not.

76. Petitioner also alleges that “Li’s ‘pull latch cover **32**’ which includes ‘latch bar **321**’ teaches the claimed ‘*locking buckle moveable with respect to said mounting body.*’” (Petition, Paper 2 at 28).

77. In my opinion, Petitioner’s interpretation of the “***locking buckle***” excludes significant portions of the necessary “***locking buckle***” structure.

78. 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.***



'946 Patent “ <i>Locking Buckle 122</i> ” (Exhibit 1001)	Li “Pull Latch Cover 32 ” and “Latch Bar 321 ” (Exhibit 1007)
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79. In my opinion, the locking buckle would be comparable to the entire latch **3** of Li, and not just the pull latch cover **32**.

80. 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**.”).)

81. The Petitioner does not explain why the “***locking buckle***” should only be considered to be a portion of the latch **3** of Li when the plain and ordinary meaning of “***locking buckle***” is that it is the entire latch component.

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

82. In my opinion, 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).)

83. 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.

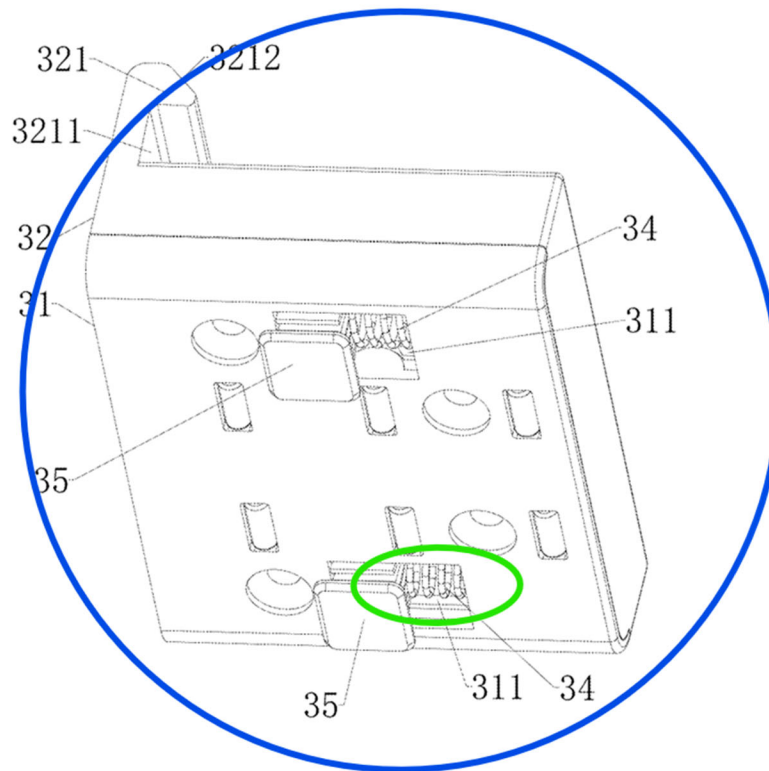


FIG. 3

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

84. 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.)

85. I concur with Dr. McCarthy. The dictionary definition of “*between*” as used in the ’946 Patent is “in an intermediate space or interval,” such as “two beds with a nightstand *between*.” The dictionary definition of “within” is “used to indicate enclosure.”

86. In my opinion, 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.

87. In my opinion, Petitioner does not establish that all elements of claims 1, 11, and 15 are taught by Li.

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

88. 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.

89. In my opinion, 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.

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

90. In my opinion, Petitioner fails to show where each and every limitation of independent Claims 1, 11, and 15 is disclosed in Baruch.

91. 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.)

92. Nor does it teach a “locking buckle [] configured to slide inward with respect to the mounting part.” (Exhibit 1001 at 15:18-19.)

(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.

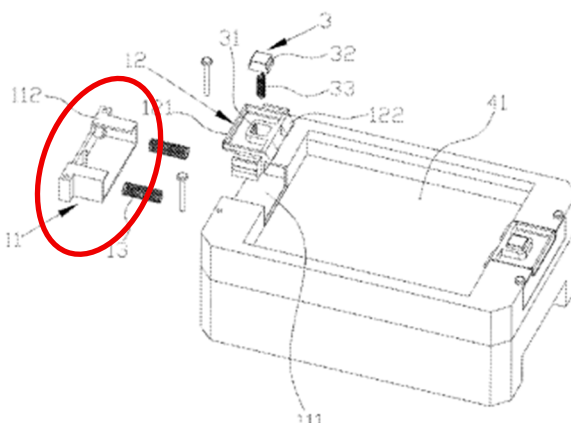
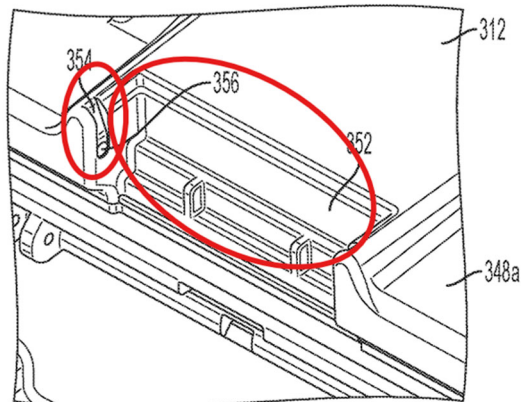
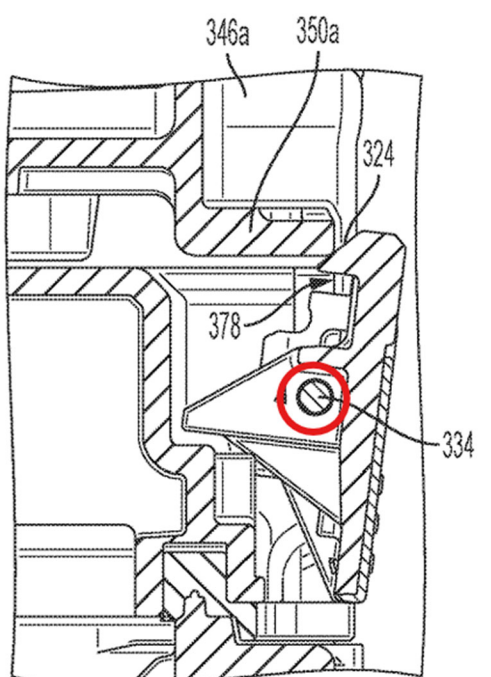
93. Petitioner asserts that “Baruch’s pins 334 as mounted in carveout 352 via holes 356 on a lid teach the claimed ‘*mounting body*.’” (Petition, Paper 2 at 104).

94. In my opinion, Petitioner’s 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.

95. 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.

96. 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.

97. In my opinion, Petitioner’s interpretation of the “*mounting body*” incorporates additional structure that goes beyond the scope of the plain and ordinary meaning of the term “*mounting body*.” The “*mounting body*” of Baruch is only the carveout **352**, not the combined structures of the carveout **352**, the pins **334**, and the holes **356** as Petitioner alleges.

	 FIG. 23B  FIG. 24B
'946 Patent "<i>Mounting Body 112</i>" (Exhibit 1001, FIG. 7)	Baruch "carveout 352," "holes 354," and pins 334 (Exhibit 1012)

98. 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, Paper 2 at 104).

99. However, based on my review, the Baruch 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.

100. My review indicates that the Baruch latch mechanism **310** [the purported locking buckle] 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**.

101. Specifically, 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**). At best, the latch mechanism **310** is mounted relative to the carveout **352**, but, in my opinion, there is no component of the latch mechanism **310** that a POSA would consider to be received within the carveout **352**.

102. Claims 1, 11, and 15 also require that the locking buckle slides inward with respect to the *mounting part*. In my opinion, the only disclosed movement of the latch **314** of Baruch is that it pivots around the pins **334**, which Petitioner alleges

are a part of the “*mounting part.*”

103. In my opinion, 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.

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

104. Even if Baruch’s pins **334** as mounted in carveout **352** via holes **356** on a lid comprise a “*mounting body*” and 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).)

105. 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). 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].).

106. Thus, I understand that in Baruch, 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.

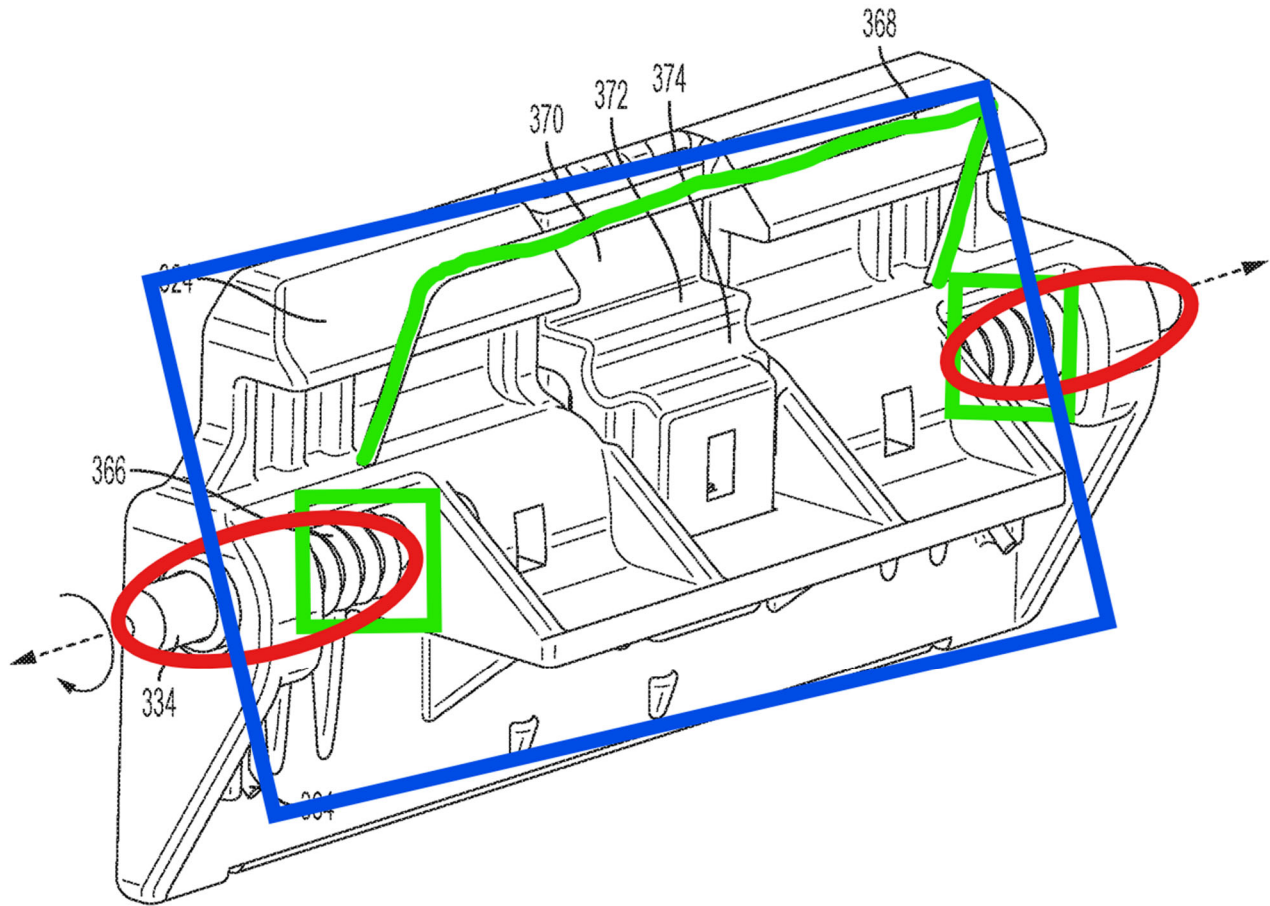


FIG. 21

(**Exhibit 1012**, FIG. 21, annotated.)

107. As shown above, the latch bias (green) is located *within* the latch **314**, and *around* portions of the pins, and is not, therefore, *between* the pins and the latch.

(**Exhibit 1003**, p. 196.)

108. In my opinion, Baruch does not teach every element of independent claims 1, 11, and 15, and therefore Petitioner fails to prove that claims 1, 11, and 15

are anticipated by Baruch.

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

109. 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.

110. 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.

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

111. It is my understanding that Dr. McCarthy conceded that there is no deficiency in Li that would require modification. (**Exhibit 2014**, 45:22-46:18 and 59:9-13.)

112. Because there was no deficiency in Li that would require modification, a POSA would not have been motivated to modify Li to arrive at the invention of the '946 Patent.

113. For at least these reasons, independent claims 1, 11, and 15 are not obvious over Li.

114. In addition, each of claims 2-4, 7-10, and 12 are narrower in scope from the independent claims from which they depend.

115. Because independent claims 1, 11, and 15 are not obvious over Li, neither are dependent claims 2-4, 7-10, and 12.

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

116. It is my understanding that during his deposition, Dr. McCarthy conceded that there is no deficiency in Baruch that would require modification by combining it with Burchia. (**Exhibit 2014**, 71:20-72:2).

117. It is my opinion that because there was no deficiency in Baruch that would require modification, a POSA would not have been motivated to modify Baruch to arrive at the invention of the 946 Patent..

118. In my opinion, independent claims 1, 11, and 15 are not, therefore, obvious over Baruch.

119. In addition, each of claims 2-4, 7-10, and 12 are narrower in scope from

the independent claims from which they depend and are therefore not obvious over Baruch for the same reasons.

3. None of the claims of the '946 Patent can be rendered obvious by any combination of references 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

120. In my opinion, a POSA would not have been motivated to combine Li and Burchia. 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. 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. This would reduce the flexibility of the Li design, so a POSA would not consider it. Also, the Petitioner gives no explanation of how this could even be accomplished.

121. In addition, in my opinion, a POSA would have no reason to consult

Hammond in developing the invention of the '946 Patent. 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.

122. In my opinion, Hammond, which is directed to compression latch assemblies for securing doors, drawers, or panels, is non-analogous art.

123. 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.

124. In my opinion, 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.

125. Even though Hammond is generally related to latches used to keep a door closed, a POSA would not think this technology would be applicable to a mechanism for attaching one stacked item to another.

126. In addition, Hammond would not “logically [] have commended itself to an inventor’s attention” in considering how to stack and interlock two or more storage containers because a closure latch for a door is entirely different from the mechanisms described and claimed in the '946 Patent.

127. In my opinion, 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.

128. In my opinion, there is no motivation to combine Li or Baruch, Burchia, and Hammond to solve the problem addressed by the '946 Patent, their combination cannot render any claims of the '946 Patent obvious.

(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.

129. 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.

130. 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 75-76, 149), but this is incorrect.

131. In my opinion, 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.

132. Li, Baruch, and Burchia utilize compression springs to facilitate linear movement of a spring-loaded component.

133. 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 manufacturing costs.

134. In my opinion, a POSA 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.

135. In my opinion, Claim 5 is not rendered obvious by either the combination of Li, Burchia, and Hammond (Ground 1C) or Baruch, Burchia, and Hammond (Ground 1D), and 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).

136. 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.

137. Petitioner claims that “[w]hen implementing Hammond with Li, such a rotation would have been obvious based on the rotation of pawl 80.” (Petition, Paper 2 at 82).

138. The pawl **80**, however, has no relevance to the elastic boss **33** (*i.e.*, the stop part) of Li or the stopper **370** of Baruch.

139. In my opinion, 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.

140. Furthermore, such a modification would render the systems of Li and Baruch inoperable. 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.

141. 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.

142. 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.

143. 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. 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.

(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

144. It is my understanding that Dr. McCarthy conceded that there was no issue with the stability of the Li and Baruch inventions that would cause a POSA to combine the teachings of Davidian with the Li and Baruch inventions to make them more stable. (**Exhibit 2014**, 68:1-15; 76:13-77:10.). 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.

145. There is, therefore, no motivation to combine Li and Davidian, or

Baruch and Davidian, to teach the storage boxes of claims 14 and 16.

IX. MERIDIAN'S CONTINGENT MOTION TO AMEND

146. I have also reviewed Meridian's Contingent Motion to Amend, and the priority documents and associated translations cited in the Motion. I am of the opinion that the substitute claims, as set forth in Appendix A of the Motion, are fully supported by the disclosures of the '200 Application, the '907 Application, the CN '862 Application, and the CN '456 Application to which priority is claimed. It is my opinion that the substitute claims do not introduce new matter and are otherwise valid.

147. I also believe that the substitute claims are not anticipated by or obvious over any of the art of record and overcome all the grounds of unpatentability set forth by Petitioner. To the extent that substitute claims 17, 27, and 31 incorporate limitations from the original claims of the '946 Patent, all my remarks herein are equally applicable to Meridian's Contingent Motion to Amend. Nonetheless, the substitute claims recite some additional features that are not discussed herein, which I will address as follows.

A. Substitute Claim 17

148. Li does not teach a first connection part with a mounting body, a locking part, and a first resilient member located between the mounting body and the locking part, where the locking part is at least partially received within the

mounting body.

149. As previously described herein, when interpreting the terms “mounting body” and “locking part” according to their plain and ordinary meanings, Li does not teach or suggest a mounting body, a locking part, and a first resilient member arranged in the configuration recited in substitute claim 17.

150. I am therefore of the opinion that Li does not teach or suggest the features of substitute claim 17.

151. Baruch does not teach a first connection part with a mounting body, a locking part, and a first resilient member located between the mounting body and the locking part, where the locking part is at least partially received within the mounting body, and where the locking part slides inward with respect to the mounting body.

152. As previously described herein, when interpreting the “mounting body” and “locking part” according to their plain and ordinary meanings, Baruch does not teach or suggest a mounting body, a locking part, and a first resilient member arranged in the configuration recited in substitute claim 17.

153. I am therefore of the opinion that Baruch does not teach or suggest the features of substitute claim 17.

B. Substitute Claim 27

154. Li does not teach a first connection part with a mounting body, a locking part, and a first resilient member located between the mounting body and the locking part, where the mounting body is configured to receive at least a portion of the locking part therein.

155. As previously described herein, when interpreting the terms “mounting body” and “locking part” according to their plain and ordinary meanings, Li does not teach or suggest a mounting body, a locking part, and a first resilient member arranged in the configuration recited in substitute claim 27.

156. I am therefore of the opinion that Li does not teach or suggest the features of substitute claim 27.

157. Baruch does not teach a first connection part with a mounting body, a locking part, and a first resilient member located between the mounting body and the locking part, where the mounting body is configured to receive at least a portion of the locking part therein, and where the locking part slides inward with respect to the mounting body.

158. As previously described herein, when interpreting the terms “mounting body” and “locking part” according to their plain and ordinary meanings, Baruch does not teach or suggest a mounting body, a locking part, and a first resilient

member arranged in the configuration recited in substitute claim 27.

159. I am therefore of the opinion that Baruch does not teach or suggest the features of substitute claim 27.

C. Substitute Claim 31

160. Li does not teach a first connection part with a mounting body, a locking part, and a first resilient member located between the mounting body and the locking part, where the locking part is configured to slide within the mounting body and move along a horizontal path relative to the mounting body.

161. As previously described herein, when interpreting the terms “mounting body” and “locking part” according to their plain and ordinary meanings, Li does not teach or suggest a mounting body, a locking part, and a first resilient member arranged in the configuration recited in substitute claim 31

162. I am therefore of the opinion that Li does not teach or suggest the features of substitute claim 31.

163. Baruch does not teach a first connection part with a mounting body, a locking part, and a first resilient member located between the mounting body and the locking part, where the locking part is configured to slide within the mounting body and move along a horizontal path relative to the mounting body.

164. As previously described herein, when interpreting the terms “mounting body”

and “locking part” according to their plain and ordinary meanings, Baruch does not teach or suggest a mounting body, a locking part, and a first resilient member arranged in the configuration recited in substitute claim 31.

165. I am therefore of the opinion that Baruch does not teach or suggest the features of substitute claim 31.

X. CONCLUSION

166. In signing this Declaration, I recognize that this Declaration will be filed as evidence in an *inter partes* review before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in this case and that cross-examination will take place within the United States. If cross-examination is required, I will appear for cross-examination within the United States within the time allotted.

167. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and believe are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed on this 20th day of May, 2026, in Westbrook, CT.



Glenn E. Vallee, Ph.D., P.E.