

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

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Case IPR2025-01462  
Patent 11,192,689

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**PATENT OWNER'S SUR-REPLY**

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| 2004                 | March 26, 2025 PTAB Memo on Interim Processes                                                                  | Nov. 10, 2025  |
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| 2006                 | Exemplary Meridian Product on Sale 2022                                                                        | Nov. 10, 2025  |
| 2007                 | <i>Meridian International v. ToughBuilt</i><br>Declaration of Tony Kriz                                        | Nov. 10, 2025  |
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| 2011                 | <i>Meridian International v. ToughBuilt</i><br>Declaration of John D. Pratt, Ph.D., P.E.                       | Dec. 9, 2025   |
| 2012                 | Declaration of Glenn E. Vallee, Ph.D., P.E.                                                                    | May 14, 2026   |
| 2013                 | Curriculum Vitae of Glenn E. Vallee, Ph.D., P.E.                                                               | May 14, 2026   |

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| 2014                        | Transcript of May 7, 2026 Deposition of J. Michael McCarthy, Ph.D.               | May 14, 2026  |
| 2015                        | U.S. Patent Application No. 16/846,878 to Cai (the “’878 Application”)           | May 14, 2026  |
| 2016                        | CN Patent Application No. 201922118361.7 to Cai (the “CN ’361 Application”)      | May 14, 2026  |
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| 2023                        | Declaration of Glenn E. Vallee, Ph.D., P.E.                                      | Sept. 8, 2026 |

## **I. INTRODUCTION**

This Petition should be denied because the art identified by Petitioner neither anticipates nor renders obvious any of the claims of U.S. Patent No. 11,192,689 (the “’689 Patent”). Petitioner’s arguments are cobbled together by the use of non-analogous art, for which there is no viable motivation to combine other than via improper hindsight rationale identifying disclosed elements of the ’689 patent. Nevertheless, none of the cited art teaches all elements of the claims of the ’689 patent. As a result, the Petition fails to credibly argue that the ’689 Patent is invalid.

## **II. PETITIONER’S ARGUMENTS IMPROPERLY RELY UPON NON-ANALOGOUS ART**

Petitioner argues that Niles, Morel, Weng, and Heinrichs are analogous art. They are not.

“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) (Ninth ed. Rev.01.2024, Nov. 2024) (citing *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004).) “When a patent owner challenges whether an asserted prior art reference is analogous, the petitioner must devote care and effort to carefully defining the field of the invention, addressing the reasonably pertinent

problem test where necessary, and fully responding based on the facts and law.”

*Apple Inc. v. Gesture Tech. Partners, LLC*, No. 2023-1494, 2025 U.S. App. LEXIS 13763, at \*17 (Fed. Cir. June 5, 2025). Petitioner, however, did not do so.

*1. Petitioner's definition of the field of endeavor is overly broad.*

The field of endeavor is determined “by reference to explanations of the invention's subject matter in the patent application, including the embodiments, function, and structure of the claimed invention.” *Bigio*, 381 F.3d at 1325; *see In re Deminski*, 796 F.2d 436, 442 (Fed. Cir. 1986) (references were within the field of endeavor of the invention where they shared the same “function and structure”). Petitioner proposes that “container latching mechanisms” are the relevant “field of endeavor.” But this is far too broad, as this would encompass literally all latches, including ones that are not suited to the purpose of the '689 patent. Rather, the correct field of endeavor is a latching “mechanism for attaching one stacked container to another.” (**Exhibit 2012**, ¶33.)

Niles teaches a closure latch that is not used for connecting one stacked container to another and that is not strong enough to connect two containers. (*Id.*, ¶¶35-39.) It is intended only to accommodate the low stresses developed when the closure mechanism must prevent opening of a magnetic cassette case. (*Id.*) The Morel device is intended only to prevent motion of a movable partition, and not to

interlock two potentially heavy storage cases. (*Id.*, ¶¶40-43.) And Heinrichs teaches “a latching mechanism for ... connect[ing] a container to a pallet,” not connecting two containers. (*Id.* ¶¶48-50.) These references are, therefore, outside the field of endeavor of the '689 patent.<sup>1</sup>

***2. Petitioner defines the problem to be solved by the '689 patent inconsistently and incorrectly.***

Nor does Petitioner make a good faith argument that these references are “reasonably pertinent” to the problem addressed by the '689 patent. “[A] prior art reference is reasonably pertinent only if a person of ordinary skill would reasonably have consulted those references and applied their teachings in seeking a solution to the problem that the inventor was attempting to solve.” *Netflix, Inc. v. DivX, LLC*, 80 F.4th 1352, 1361-62 (Fed. Cir. 2023) (internal quotation omitted.). Petitioner inconsistently defines the problem of the '689 patent as “securing a latching mechanism in locked and unlocked positions,”<sup>2</sup> (Reply, 11), “to prevent

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<sup>1</sup> Petitioner does not argue that Weng is from the same field of endeavor as the patent because it cannot; Weng teaches a mechanism for a drawer. (**Exhibit 2012**, ¶¶44-47.)

<sup>2</sup> Petitioner suggests that Dr. Vallee testified that “latches used in other applications, including water bottles and nailers, are relevant to the '689 patent.”

its slider from detaching from the storage container” (*id.*, 17), and to “have a robust, straightforward, linear attachment/detachment method” (reply, 27). But the problem that Meridian was attempting to solve was far more specific: the creation of a stackable storage system latch that permits the selective connection of one container to another container, where the container systems are designed to be “more efficient, easy to use, modular, and/or multifunctional.” (**Exhibit 1001**, 1:1, 17-27.) And as is apparent in the figures of the ’689 patent, those containers are heavy-duty.

Niles, Morel, and Weng do not relate to the connection of one heavy-duty container to another, nor does Heinrichs. Additionally, Heinrichs is not efficient or easy to use; rather, the invention of Heinrichs requires the use of an actuator which may be actuated using a forklift tine. (**Exhibit 2012**, ¶49.) These references are

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But that is not what he said. Rather, his testimony was that such other latches are *not* relevant prior art and are only relevant to showing Dr. Vallee’s understanding of the design process for latches generally, and understanding of design considerations that one might want to keep in mind for a latch that was going to be used in a consumer product. (**Exhibit 1038** at 217:5-218:7.)

not, therefore, relevant to the problem Meridian was attempting to solve and are not analogous art. This is reason enough to deny the petition.

### **III. PETITIONER FAILED TO PROVE THAT DUVIGNEAU TEACHES CLAIMS 1-4, AND 14-15 OF THE '689 PATENT**

To anticipate or render obvious the claims of the '689 patent, the prior art must teach “each and every element” of the claim. *Verdegaal Bros. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987); 37 C.F.R. §42.104(b)(4).

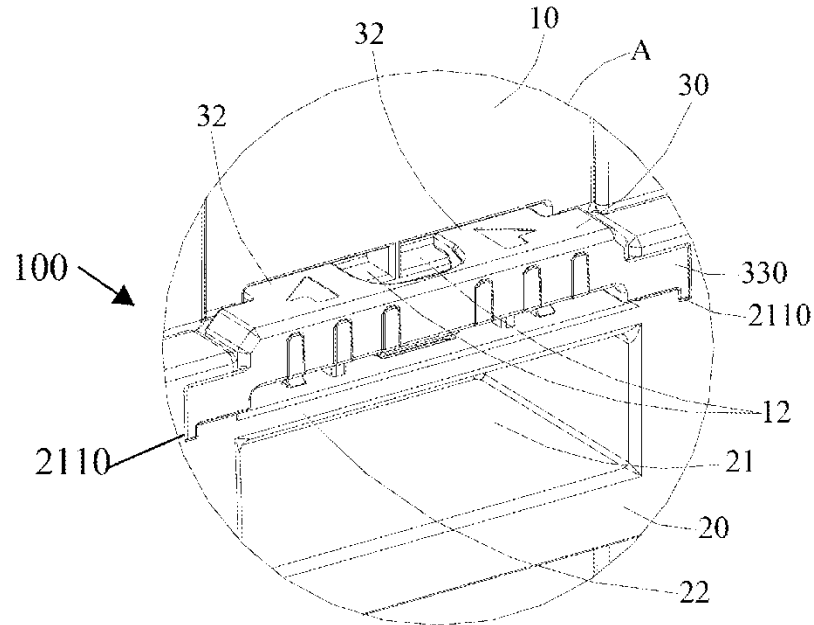
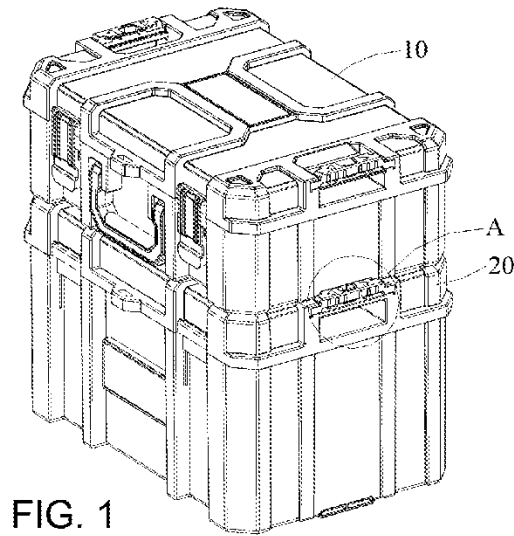
#### **A. Petitioner failed to show that Duvigneau teaches that “the sliding mechanism is coplanar with the side surface of the second container” as required by independent claims 1 and 14.**<sup>3</sup>

The '689 patent is clear that the side surface of the second container is, consistent with the plain language, one of the side walls of the container, and not an inset region: “At this time, the side surface of the second storage container **20** is

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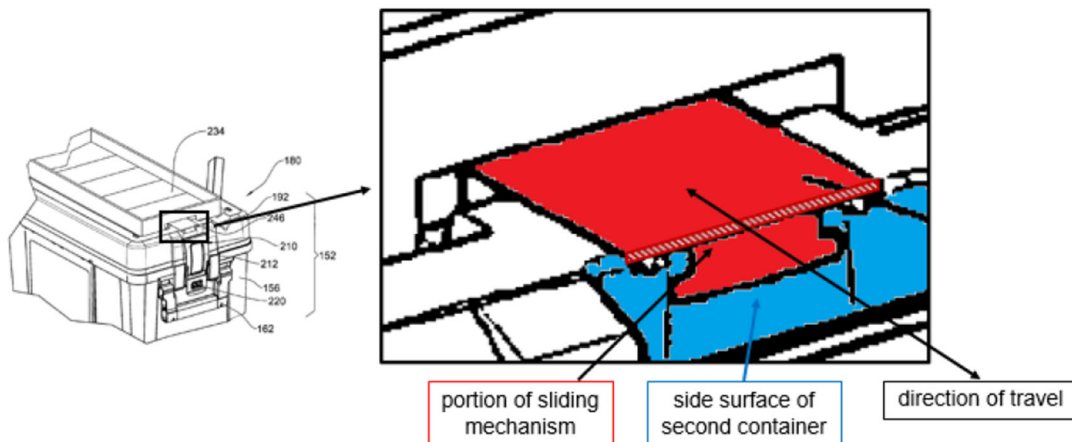
<sup>3</sup> Meridian previously argued Duvigneau did not teach a “lid” that is part of the cabinet assembly, but rather a separate “cover” structure (and not, as Petitioner argued, that a container does not include a lid). Meridian subsequently identified a paragraph of Duvigneau which indicates that the “cover” is intended to be a part of the base cabinet, and therefore Meridian has dropped this argument. (**Exhibit 1007**, [0055].)

coplanar with the outer side surface of the slider 30.” (Exhibit 1001, 5:20-22;  
Exhibit 2012, ¶¶ 66-73.)



(Exhibit 1001 (showing a sliding mechanism that is coplanar with the side wall.))

Petitioner alleges that the surface highlighted in blue in the annotation of Figure 6 of Duviagneau is “the side surface” of the storage container:



EX1007, FIG. 6 (cropped and annotated).

(Petition, 31). But the blue part is not one of the side walls of the container body.

(**Exhibit 2012** ¶68.) As conceded by Petitioner’s expert, Dr. McCarthy,<sup>4</sup> parallel is not the same as coplanar. (**Exhibit 2014**, 49:10-50:4.) Indeed, he conceded that a recessed latch, such as the one identified here, cannot be coplanar with the side surface of the container. (*Id.*, 51:7-13; **Exhibit 2012**. ¶70.)

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<sup>4</sup> Dr. McCarthy, although strong academically, has no experience with consumer products and is therefore not a POSA, as a POSA must have some practical experience. (**Exhibit 2012**, ¶31.)

Because *every* claim of the '689 patent requires that there be a sliding mechanism [that] is coplanar with the side surface of the second container," Duvigneau cannot anticipate any claims of the '689 patent.

**B. Petitioner failed to show that Duvigneau teaches all elements of dependent claims 2-4 and 15.**

***1. Because the independent claims are not anticipated, none of the dependent claims are anticipated.***

Duvigneau cannot anticipate dependent claims 2-4 and 15 because each dependent claim depends from an independent claim which is not anticipated. "[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 all the elements of the independent claims must also be present in the dependent claims, and because Duvigneau does not teach all elements of the independent claims, it similarly cannot anticipate claims 2-4 and 15.

***2. Nor does Duvigneau teach the elements of the dependent claims.***

**(a) The cited art fails to disclose the "sliding mechanism further comprises of a slider" of claims 2, 3, and 15.<sup>5</sup>**

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<sup>5</sup> Claims 3 and 15 also require that the slider be coplanar with the second container, however, because Petitioner treats the sliding mechanism as synonymous with the

The Petition identified only the sliding latch 246 as comprising the sliding mechanism. (Petition, 31.) Meridian's Response pointed out that, pursuant to the doctrine of claim differentiation, the sliding latch cannot be both the sliding mechanism and the slider. Petitioner now argues that such other structure was disclosed by pointing to Dr. McCarthy's declaration and separate parts of its Petition having nothing to do with claim 2 and argues a different structure than that disclosed in the Petition. (Reply, 5-7.) This is not proper.

First, arguments may not be incorporated by reference. 37 C.F.R. §42.6(a)(3). *See also Instrumentation Lab. Co. v. Hemosonics LLC*, IPR2017-00855, Paper 55, p.20 (Feb. 13, 2019) (citations to an expert declaration "without adequate substantive discussion in the Petition," constitutes impermissible incorporation by reference and "are not entitled to consideration."). Internal references are also improper. *Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00800, Paper 7, p.13 (Nov. 2, 2021) ("This approach of forcing the reader to follow a web of nested cross-references to find Petitioner's arguments improperly

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slider, this claim element is not present for the same reasons that Duvigneau does not disclose a sliding mechanism coplanar with the second container, as discussed at III.(A).

shifts the burden of deciphering Petitioner's arguments onto Patent Owner and the Board.”)

Second, “[t]he petitioner’s reply is not an opportunity to raise new theories or arguments or to submit new evidence that reasonably could have been presented in the initial petition.” *Apple Inc., et al. v. Universal Secure Registry, LLC*, IPR2018-00810, Paper 42, p.17 (Oct. 7, 2019). Petitioner’s new definition of a slider should have been presented in the initial petition,<sup>6</sup> and not for the first time in a reply brief.

(b) The cited art fails to disclose “the second storage container further comprises of a slot in the side surface of the container with a support arm extending across the slot.” as required by claims 4 and 15.

A support arm extending “across” the slot extends laterally within the slot between the sidewalls thereof, not longitudinally therein as taught in Duvigneau. (Exhibit 2012 ¶¶87-89.) Petitioner contends that Meridian does not cite any support for this construction. To the contrary, Meridian cited the testimony of both its own expert and Petitioner’s expert. (Response, 28-30.) Indeed, Petitioner’s

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<sup>66</sup> Indeed, Petitioner made a conscious choice not to list the “components other than the slider” that McCarthy hints make up the sliding mechanism in the Petition. (Petition, 31; Reply, 5.)

expert conceded that Petitioner's interpretation of "across" is not consistent with the plain and ordinary meaning thereof but rather was used in the Petition solely to support the assertion that Duvigneau teaches a support arm extending across the slot as recited in claim 4 (*i.e.*, was the result of improper hindsight from the teachings of the patent):

Q. What do you understand to be the plain and ordinary meaning of the word "across"?

A. That it goes from one side to the other.

Q. In the context of this claim then, would you understand it to mean that the support arm would need to extend from one side of the slot to the other?

A. Yes, but in our analysis of this, to use the Duvigneau patent to show an equivalent to this claim element, we interpreted the support arm to run from the front side to the backside of the slot.

(**Exhibit 2014**, 62:9-19.). Moreover, this is just common sense – if one was told to go across a river, one would not interpret that to mean to run alongside the river, but rather to go from one bank of the river to another. Petitioner's construction defies common sense and does not carry Petitioner's burden.

**C. Petitioner failed to establish that claims 1-4 and 14-15 are rendered obvious by Duvigneau.**

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 Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

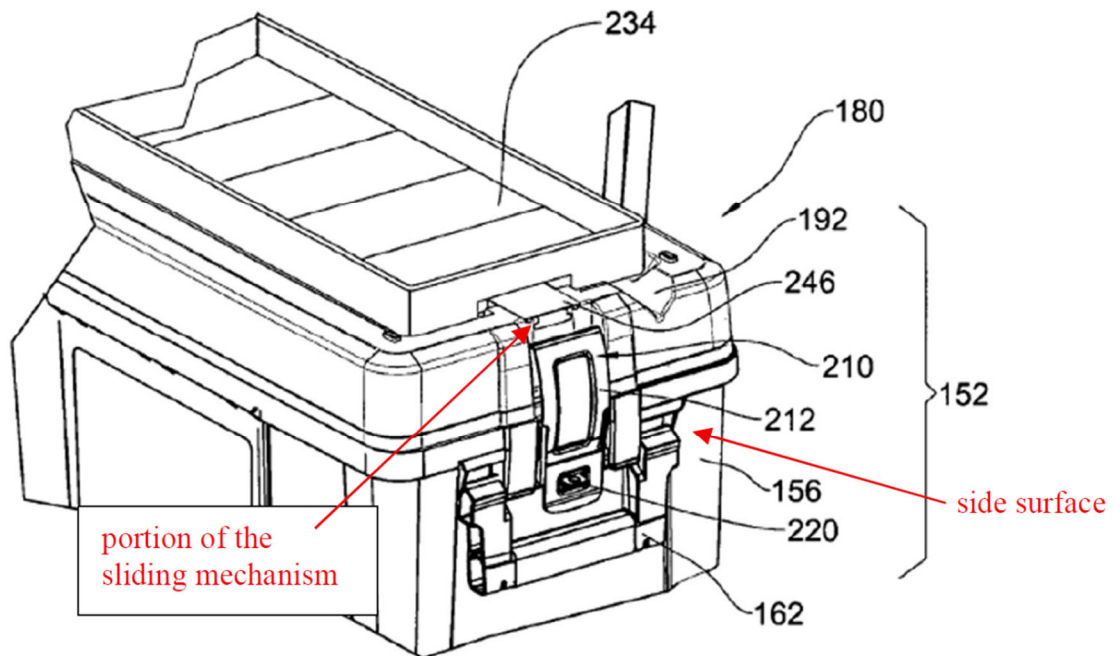
Petitioner claims that “[a] deficiency in the prior art is not needed to demonstrate obviousness,” citing *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380-81 (Fed. Cir. 2023), but that is not what *Intel* says. Rather, *Intel* states:

There is a motivation to combine when a known technique “has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way...It’s enough for Intel to show that there was *a known problem* [] in the art, that [the reference] helped address that issue, and that combining the teachings of [the references] wasn’t beyond the skill of an ordinary artisan.

*Id.* Whether you call it a “deficiency” or a “known problem,” it is necessary to show that there is an issue to address leading to a motivation to combine or to make the specific improvement at issue. Petitioner has not met that burden.

The Petition fails to make an argument that the missing elements from claims 1-4, 14, and 15 are rendered obvious by Duvigneau. The Petition either fails to make any argument beyond the anticipation arguments already made or fails to

disclose any motivation in Duvigneau to make any of the changes needed for Duvigneau to render the claims of the '689 patent obvious. The only relevant attempt to do so is where Petitioner argues that the coplanar relationship taught in claim 1 of the '689 patent “advantageously prevents the latch from protruding, which increases the risk of snagging on unwanted objects (including human skin) and causing accidental disengagement or damage to the latch.” (Petition, 41.) But this argument is unavailing because the sliding mechanism of Duvigneau is *recessed*, not *protruding* when compared to the parts surrounding it:



(**Exhibit 1007**, FIG. 6 (annotated); **Exhibit 2012**, ¶70). Thus, the asserted motivation to make the latch coplanar is inapplicable to Duvigneau. Indeed, Petitioner's expert repeatedly indicated that there was nothing wrong with the

Duvigneau product (**Exhibit 2014**, 76:4-22; 79:20-80:2; 83:4-7), which would leave a POSA with no motivation to make the changes needed in order to read upon the '689 Patent.

**IV. PETITIONER FAILED TO SHOW THAT ANY OTHER CITED ART RENDERS THE CLAIMS OF THE '689 PATENT OBVIOUS**

**A. Because Petitioner has not shown that the independent claims of the '689 patent are invalid, none of the dependent claims are invalid.**

The dependent claims of the '689 Patent cannot be obvious because they depend from Claims 1 and 14, neither of which is obvious. *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988). For the additional reasons discussed below, the prior art also fails to teach the elements of each of the dependent claims.

**B. The combination of Duvigneau with other art does not render the claims of the '986 patent obvious.**

- 1. Neither Duvigneau, Niles, or Morel disclose that “the support arm further comprises of a first engaging groove for holding the slider in the unlocked position and a second engaging groove for holding the slider in the locked position” as required by Claims 5-7 and 16.*

As an initial matter, and as discussed above, neither Niles nor Morel are analogous art and are therefore not a proper basis for an invalidity argument.

Petitioner's substantive arguments also fail. In its Reply, Petitioner ignores Meridian's argument that Claim 5 requires that the support arm comprise engaging grooves, which is not taught by the T-shaped rails of Niles or by the locking

notches of Morel. Instead, Petitioner seeks to incorporate by reference arguments – which appear to be pure hindsight – from Dr. McCarthy's declaration. Neither is proper. 37 C.F.R. §42.6(a)(3); *Instrumentation Lab.*, IPR2017-00855, Paper 55, p.20; *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 the knowledge of the invention itself”).

Moreover, Petitioner fails to address the fact that the suggested combination of Duvigneau and Niles would not be functional, dismissing this argument as an “improper bodily incorporation analysis.” It is not; rather, it is **Petitioner's** burden to show that the combined art would lead to a reasonable expectation of success, which Petitioner did not do. M.P.E.P. §2143.01(V); *Teva Pharms. USA, Inc. v. Corcept Therapeutics, Inc.*, 18 F.4th 1377, 1383 (Fed. Cir. 2021) (“But without showing a reasonable expectation of success, Teva did not prove obviousness.”); *In re Urbanski*, 809 F.3d 1237, 1243 (Fed. Cir. 2016) (if references taken in combination would produce a “seemingly inoperative device,” “such references

teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness.”)

Similarly, Petitioner fails to address that the sole reason for the Duvigneau-Morel combination was based on hindsight, as admitted by Petitioner's expert:

Q. Why would Duvigneau benefit from having a mechanism to hold a latch?

A. *When we were discussing this, I did not take the perspective that Duvigneau needed to be improved.* ... I used the Meridian claims and its specification as the description of why those features are beneficial.  
...

*The direction of, at least the way I view this, is not how to improve Duvigneau, it's how to achieve a final product that has the benefits of these features.* ...

Q. ...

Was there a known shortcoming with Duvigneau that would require a mechanism to hold the latch?

A. I don't know.

(Exhibit 2014, 101:2-21 (emphasis added).)

2. *Petitioner failed to show that Duvigneau, Morel, or Weng disclose that “the support arm further comprises at least one block comprising a bevel, and the slider further comprises of a recess with a sloped entry surface and a stopping surface for*

*receiving the bevel and arresting outward movement of the slider” as required by Claim 8.*

Notwithstanding that neither Morel nor Weng are analogous art and are therefore not a proper basis for a non-infringement argument, this argument fails for additional reasons. Petitioner contends that there was a way to combine the elements of the three pieces of art, but its sole support for this argument is to material outside the petition, namely, Dr. McCarthy's declarations. (Reply, 19.) This is improper and violates the rule against incorporation by reference. 37 C.F.R. §42.6(a)(3); *Instrumentation Lab.*, IPR2017-00855, Paper 55, p.20. As previously explained by Meridian, a POSA would not have had any motivation to combine Duvigneau, Morel, and/or Weng as alleged in the Petition. (**Exhibit 2012** ¶156.) Indeed, the teachings of Morel and Weng are entirely different than the single stop surfaces of the block described in the '689 patent. (*Id.* ¶157.)

In addition, despite its protests to the contrary, and despite attempts to rehabilitate this testimony on re-cross, Petitioner's expert conceded that the only reason for the combination of Duvigneau, Morel, and Weng is to identify all the elements of claims 8 and 17, not for any functional or practical purpose (or other typical motivation of a POSA):

Q. How is Duvigneau improved by the addition of the teachings of Morel and Weng?

...

A. Duvigneau is not improved by the addition of elements from Morel and from Weng. What happens is that elements that Duvigneau is missing that are recited in Claim 5 are -- appear in Morel and appear in -- and another element that is missing in Duvigneau and Morel appears in Weng.

...

So in order to fully capture the elements of Claim 8, I need all of the things that we've been talking about, all of the elements of Duvigneau and Morel...

(**Exhibit 2014**, 79:20-80:20.) Based on Dr. McCarthy's testimony, the "motivation to combine" was to try and show all the elements of the '689 patent were taught somewhere and was not the result of a genuine desire to solve a problem.

***3. Petitioner failed to show that Duvigneau and Frydenberg teach a support arm and slider comprising a cooperating guide to constrain lateral movement of the slider, as required by claims 9-11.***

Petitioner relies on the fiction that it was necessary to introduce the teachings of Frydenberg to the teaching of Duvigneau in order to constrain lateral movement of the slider of Duvigneau.

To have a motivation to combine, there must be some sort of improvement needed to the original product disclosed by the prior art. *Intel Corp.*, 61 F.4th at

1380-81 (there must be a “known problem” to contribute to a motivation to combine). But Petitioner cannot show that Duvigneau needed to constrain the lateral movement of its slider, because “there is no reason that a POSA would seek to modify Duvigneau in the manner indicated because Duvigneau is already inherently capable of preventing lateral displacement with its unmodified structure.” (**Exhibit 2012**, ¶169.) Sliding latch 246 already moves along tracks that prevent lateral movement. Indeed, Petitioner’s Opposition “emphasize[s] the slot’s rails that guide/track the slider along its direction of travel.” (Preliminary Guidance, 16.) And Dr. McCarthy was unable to identify any reason that an additional structure would be needed to constrain lateral movement of the slider of Duvigneau, and admitted that he merely created this combination in order to include all the elements of the ’689 patent, a blatant admission of a hindsight rationale

Q. Does Duvigneau have an issue with lateral displacement of the slider?

...

A. I don't know whether it does or it doesn't. But in order to sort of meet the elements recited in Claims 9 and 10, I identified the structure in Frydenberg as an element that is essentially identical to what is described in the specification of the Meridian patent.

(Exhibit 2014, 83:4-12.)

Q. ... And am I correct that during redirect, you testified that the benefit of this combination was to prevent lateral displacement of the support arm?

A. Yes.

Q. Am I also correct that when you testified during our original cross, you stated that this was not an issue in Duvigneau due to the structure?

A. Again, I don't view the -- I didn't view the goal of my analysis as to improve Duvigneau, as more to obtain a device that has features that are described in the specification of the Meridian patent. And that would be obtained by adding these characteristics to Duvigneau.

(Exhibit 2014, 102:22-103:12.)

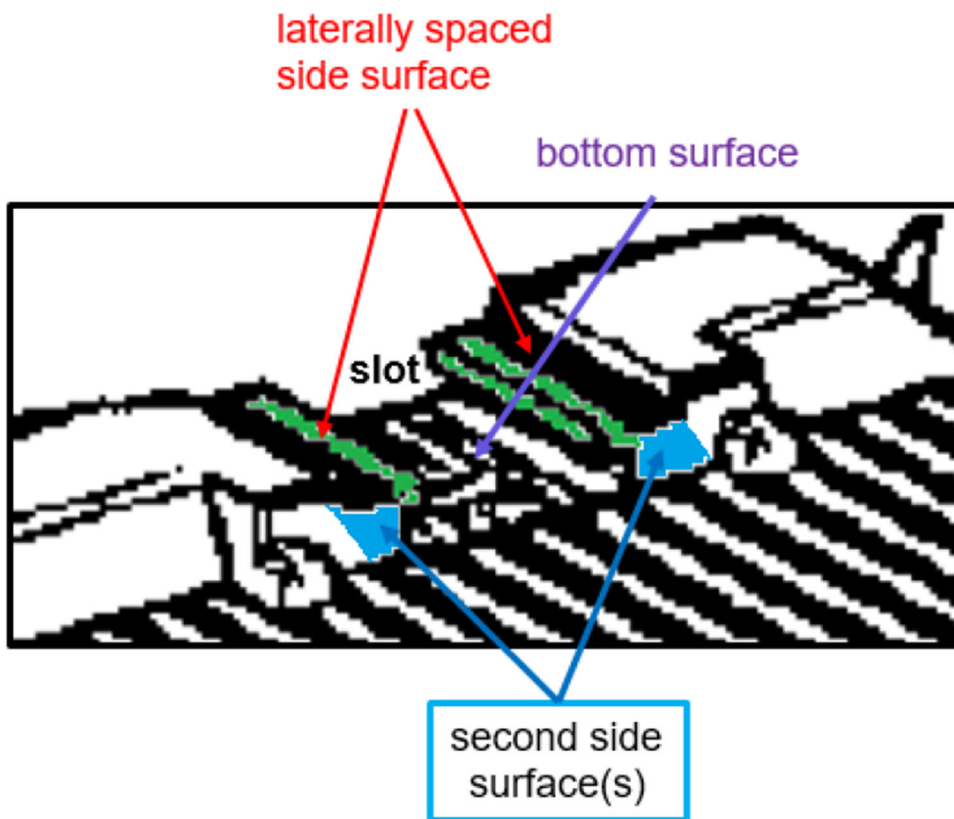
***4. Petitioner failed to show that Duvigneau and Brunner teach all elements of claims 12-13 and 19-20.***

(a) The cited art fails to disclose “two laterally spaced apart side surfaces ... wherein the support arm is located across the slot between the two laterally spaced apart side surfaces ... for gripping and carrying the second storage container” of claims 12, 13, and 19.

Petitioner attempts to argue that this element is met by Duvigneau by ignoring most of the positional language of the claim (asserting that “[c]laims 12 and 19 only require that the support arm ‘*is located across*’ the slot” (p. 23). But the plain language of the claim requires that “the support arm is located ***across*** the

slot *between* the two laterally spaced apart side surfaces. (**Exhibit 2012**, ¶173.) It is clear from the plain and ordinary meaning of the claim language, that the support arm *extends across the width of the slot, spanning the distance between the two laterally spaced apart side surfaces*, rather than just being located at a position within the slot between the two laterally spaced apart side surfaces as Petitioner alleges. (*Id.* ¶174.)

Claims 12 and 19 also require that the support arm is “spaced apart from the second side surface *for gripping and carrying the second storage container.*” (*Id.*, ¶175.) Rather than addressing this issue in a constructive manner, Petitioner pretends it does not exist by implying that it is not “entitled to patentable weight.” (Reply, 24.) Petitioner presents an annotated FIG. 5 where the alleged support arms and second side surfaces directly abut one another:



EX1007, FIG. 5 (cropped and annotated).

(Petition, 71). The support arm is not *spaced apart* from a second side surface as recited in claims 12 and 19. (**Exhibit 2012** ¶176.) Indeed, Petitioner's expert conceded that the phrase "spaced apart" requires that there is a distance between the two items. (**Exhibit 2014**, at 64:14-17). Nor does the teaching of a storage container with one or more handles, as allegedly taught in Brunner, provide any teaching or suggestion of the specific means for gripping and carrying the storage container as recited in claims 12 and 19. (**Exhibit 2012**, ¶181.)

(b) The cited art fails to disclose all limitations of claim 20.

As discussed *supra* in Section (V)(A)(1)(e) and (3), Duvigneau fails to teach all the elements of Claim 15, from which claim 20 depends. (**Exhibit 2012 ¶¶186-192.**) The addition of Brunner does not cure these defects. (*Id.*, ¶193.) Indeed, the Petition (p. 75) fails to describe Brunner's role in rendering claim 20 obvious.<sup>7</sup>

**5. *Petitioner failed to show that Duvigneau, Morel, Weng, and Frydenberg teach a support arm and slider that comprise a cooperating guide as required by Claim 18.***

Notwithstanding the fact that Morel and Weng are non-analogous art, a POSA would not have had any motivation to combine Duvigneau, Morel, and/or Weng with Frydenberg as alleged in the Petition. Petitioner relies on hindsight from Meridian's disclosure rather than relying on the teachings of the art itself as the basis for the asserted motivation to combine. *See In re Dow Chem.*, 837 F.2d at 473; *Cardiac Pacemakers*, 381 F.3d at 1376.

Q. What is the motivation to combine all four of these pieces of art together?

---

<sup>7</sup> Petitioner asserts that the Petition's "mapping" explains the role of Brunner in rendering Claim 20 obvious. But it does not; there is no mention of Brunner in the referenced portion of the Petition. (Petition, 75.)

A. Well, when you -- when Claim 18 is -- Claim 18 is, again, a dependent patent – dependent claim. When you combine it with its previous claims, you get pretty much every element that's recited for the latching mechanism of the Meridian patent. ***So I had to find all of those elements.***

(Exhibit 2014, 85:16-86:1 (emphasis added).) The motivation to combine employed by Petitioner's expert was a motivation to combine pieces of art, however, unrelated, to assert obviousness, and not a valid motivation to combine to solve a problem in the art.

Petitioner also does not explain how this combination could be implemented, other than a cursory description that fails to account for or address the differences between the four pieces of art, such as how the comparatively large slider of Weng could possibly be implemented given the limited space allowed in Duvigneau for such a mechanism or how Morel could be implemented without creating problems with the other art, since Morel is primarily intended to prevent movement of a partition in the axial direction, not only in the lateral direction as described in the '689 patent. (Exhibit 2012, ¶¶206-207.)

**C. Petitioner failed to show that Brocket and Heinrichs teach all elements of claims 1-4, 14, and 15.**

- 1. Petitioner failed to show that Brocket and Heinrichs teach “wherein a portion of the sliding mechanism extends laterally***

***away from a side surface of the second container” as required by independent claims 1 and 14.***

Notwithstanding the fact that Heinrichs is non-analogous art, a POSA would not have had any motivation to combine Brocket and Heinrichs as alleged in the Petition. (**Exhibit 2012 ¶¶98-100.**) Petitioner's expert states that Heinrichs is just “prior art that a person of ordinary skill in the art ***could use*** to combine with the other patents to meet the specific claims of the Meridian patent.” (**Exhibit 2014**, at 57:15-18). However, “conclusory expert testimony and attorney argument cannot constitute substantial evidence of a motivation to combine.” *Acoustic Tech., Inc. v. Itron Networked Sols., Inc.*, 949 F.3d 1366, 1375-1376 (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” (emphasis original)).

In addition, this combination is untenable because Petitioner's proposed combination of Brocket and Heinrichs is inoperable. (**Exhibit 2012 ¶¶99-100.**) M.P.E.P. §2143.01(V); *see also* *Teva Pharms.*, 18 F.4th at 1383; *In re Urbanski*, 809 F.3d at 1243.

Moreover, the locking mechanism of Heinrichs does not even meet the limitations of the claimed locking mechanism. Specifically, the locking bolt 72 does not “extend laterally away from a side surface of the second container” within

the meaning of claims 1 and 14. (**Exhibit 2012** ¶104.) The locking bolt 72 extends towards the midline of the structure of Heinrichs, rather than away from the midline of the storage box as is implicit in the aforementioned limitation of claims 1 and 14. (*Id.* ¶105.) This can be shown readily by reference to, for example, FIG. 6 of the '689 patent, which shows the disengaged locking mechanism moves away from the midline of the storage container.

Petitioner's arguments are solely the product of hindsight. Petitioner's expert conceded such in his deposition, acknowledging that there is nothing wrong with the latching mechanism taught by Brocket that would require modification with elements of Heinrichs. (**Exhibit 2014**, at 88:12-14.) *In re Dow Chem.*, 837 F.2d at 473; *Cardiac Pacemakers*, 381 F.3d at 1376.

***2. Petitioner failed to show that Brocket and Heinrichs teach a separate “sliding mechanism” and “slider,” as required by claims 2, 3, and 15.***

Petitioner's sole response to Meridian's arguments regarding Claim 2 is that it “rests on the false premise that the Petition relies only on locking bolt 72 for the ‘*sliding mechanism*.’” (Reply, 31.) This premise is not false. The Petition, when discussing claim 2, indeed discloses only locking bolt 72 as the slider, and does not mention a slider 70. (Petition, 83-84 (“A POSA would have understood locking bolt 72 teaches the claimed “*slider*” because the bolt slidingly the “*locking groove*”

(interface 90).”) All other citations to Heinrichs in the Petition relate to *claim 1*, and not claim 2, the claim at issue here. In addition, because Petitioner only identifies the locking bolt 72 as both the slider and the sliding mechanism, this element is not taught. (**Exhibit 2012 ¶¶112-113.**) As discussed *supra* with Duvigneau, pursuant to the doctrine of claim differentiation, a single part cannot be the entire structure of both the slider and the sliding mechanism.

***3. Petitioner failed to show that Brocket and Heinrichs teach the “support arm extending across the slot” as Required by Claim 4.***

As an initial matter, and as discussed above, Heinrichs is not analogous art and therefore is not a proper basis for an obviousness argument. Petitioner contends – for the first time – that “Claim 4 does not require the support arm to be stationary,” but the specification of the ’689 patent is clear. The support arm comprises stationary features, such as an engaging groove (1:55-56), and a block comprising a bevel (1:64-65). Indeed, because the movement of the slider is to be constrained with respect to the support arm, it is logical and necessary that the support arm is static and not a moving part. Nor is Petitioner’s argument that the undefined cavity of Heinrichs is a slot availing, because even if the cavity within the beam 60 of Heinrichs is considered a slot (which Meridian does not concede), the device 78 of does not extend across the cavity – as the support arm of this

claim element must do – because it does not extend from one side to the other—it terminates at a midpoint thereof. (**Exhibit 2014**, 62:9-11)

***4. Petitioner failed to show that Brocket, Heinrichs, and Morel teach “the support arm further comprises of a first engaging groove ... and a second engaging groove” of Claims 5-6.***

As an initial matter, and as discussed above, neither Heinrichs nor Morel are analogous art and therefore are not a proper basis for an invalidity argument.

Petitioner's reply also fails to address the substance of Meridian's argument: none of Brocket, Heinrichs, and/or Morel disclose a support arm with first and second engaging grooves. (**Exhibit 2012** ¶149.) There is no disclosure – by any of the three references – of a sliding element to be held in an unlocked position or a locked position, via engaging grooves, as recited in claim 5. (*Id.* ¶150)

## **V. CONCLUSION**

None of the references identified by Petitioner contain all of the elements of independent claims 1 and 14 of the '689 Patent, or the elements of dependent claims 2-13 and 15-20, and therefore these references fail to anticipate or render obvious any of the claims of the '689 Patent. Patent Owner therefore respectfully requests that all claims of the '689 Patent be upheld, and that the Board find that none of the challenged claims is unpatentable.

Dated: September 8, 2026

*Respectfully Submitted,*

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**CERTIFICATION OF WORD COUNT**

This Response complies with the type-volume limitations as mandated in 37 C.F.R. §42.24, totaling **5,563** words. Counsel has relied upon the word count feature provided by Microsoft Word.

Dated: September 8, 2026

By: /Anna C. Halsey/  
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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the foregoing ***Patent Owner's Sur-Reply*** was served via electronic mail, per agreement of the parties, in its entirety, on Petitioner's attorneys of record in IPR2025-01462 on the date indicated below.

|                 |                                                                                                                                                                                                                                                                                                                                                       |
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