

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EUNSUNG GLOBAL CORP.,
Petitioner

v.

HYDRAFACIAL LLC,
Patent Owner

Case IPR2025-00445
Patent 9,550,052 B2

**PETITIONER'S OPPOSITION TO PATENT OWNER'S REQUEST FOR
DISCRETIONARY DENIAL OF INSTITUTION**

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EXHIBITS

- EUNSUNG-1001 U.S. Pat. No. 9,550,052 to Ignon (“the ’052 patent”)
- EUNSUNG-1002 Excerpts from the Prosecution History of the ’052 patent (“the Prosecution History”)
- EUNSUNG-1003 Declaration of Mr. Eric Simon
- EUNSUNG-1004 U.S. Patent Publication No. 2003/0212415 (“Karasiuk”)
- EUNSUNG-1005 U.S. Patent No. 5,199,604 (“Palmer”)
- EUNSUNG-1006 U.S. Patent Publication No. 2003/0093089 (“Greenberg”)
- EUNSUNG-1007 U.S. Patent No. 6,390,815 (“Pond”)
- EUNSUNG-1008 U.S. Patent No. 6,684,880 (“Trueba”)
- EUNSUNG-1009 U.S. Patent No. 4,512,764 (“Wunsch 1982”)
- EUNSUNG-1010 U.S. Patent Publication No. 2003/0018252 (“Duchon”)
- EUNSUNG-1011 U.S. Patent No. 4,215,476 (“Armstrong”)
- EUNSUNG-1012 Friedman, et al., Chemical peels, dermabrasion, and laser therapy, *Disease-a-Month* 55.4 (2009): 223-235 (“Friedman”)
- EUNSUNG-1013 Burgess, Cheryl M., *Cosmetic dermatology*, Heidelberg, Germany: Springer, 2005 (“Burgess”)
- EUNSUNG-1014 Pickering, J. A., Touch-sensitive screens: the technologies and their application, *International Journal of Man-Machine Studies* 25.3 (1986): 249-269 (“Pickering”)
- EUNSUNG-1015 Friedman, Mark J. et al., The AMSA injection: A new concept for local anesthesia of maxillary teeth using a computer-controlled injection system. *Quintessence Int* 29 (1998): 297-

303 (“Friedman 1998”)

- EUNSUNG-1016 Lee, Woan-Ruoh, et al., Lasers and microdermabrasion enhance and control topical delivery of vitamin C, Journal of investigative dermatology 121.5 (2003): 1118-1125 (“Lee”)
- EUNSUNG-1017 U.S. Patent No. 6,511,486 (“Mercier”)
- EUNSUNG-1018 U.S. Patent Publication No. 2001/0049511 (“Coleman”)
- EUNSUNG-1019 U.S. Patent No. 6,428,518 (“Brengele”)
- EUNSUNG-1020 U.S. Patent No. 4,559,036 (“Wunsch”)
- EUNSUNG-1021 U.S. Patent No. 6,099,511 (“Devos”)
- EUNSUNG-1022 U.S. Patent No. 5,163,902 (“Lynn”)
- EUNSUNG-1023 U.S. Patent No. 5,190,525 (“Oswald”)
- EUNSUNG-1024 U.S. Patent No. 6,673,082 (“Mallett”)
- EUNSUNG-1025 Rajan, Poonam, et al., Skin barrier changes induced by aluminum oxide and sodium chloride microdermabrasion, Dermatologic surgery 28.5 (2002): 390-393 (“Rajan”)
- EUNSUNG-1026 Karimipour, Darius J., et al., Molecular analysis of aggressive microdermabrasion in photoaged skin, Archives of dermatology 145.10 (2009): 1114-1122 (“Karimipour”)
- EUNSUNG-1027 U.S. Patent No. 6,241,739 (“Waldron”)
- EUNSUNG-1028 U.S. Patent No. 3,865,352 (“Nelson”)
- EUNSUNG-1029 Nayler, Gordon. Dictionary of mechanical engineering. SAE International, 1996 (“Nayler”)
- EUNSUNG-1030 Email Exchange with Board dated May 14, 2025 in IPR2025-

00445

- EUNSUNG-1031 Email Exchange between Parties dated May 14, 2025 in IPR2025-00445 (truncated and redacted to avoid disclosure of confidential information)
- EUNSUNG-1032 FAQs for Interim Processes for PTAB Workload Management, retrieved from <https://www.uspto.gov/patents/ptab/faqs/interim-processes-workload-management> on June 8, 2025
- EUNSUNG-1033 Excerpts from the Prosecution History of Karasiuk (“the Prosecution History of Karasiuk”)
- EUNSUNG-1034 *Sinclair Pharma Limited et al v. HydraFacial LLC f/k/a Edge Systems LLC* PTAB-IPR2025-00145, Paper 12 (“Sinclair Institution Decision”).

Pursuant to the Director's guidance on "Interim Processes for PTAB Workload Management" ("March 26 Memo"), Petitioner, Eunsung Global Corp. ("Eunsung"), submits this opposition to the request for discretionary denial submitted by Patent Owner HydraFacial LLC ("HF").

I. INTRODUCTION

HF requested discretionary denial because (A) Eunsung allegedly refused to produce evidence relevant to a time bar under § 315(b); (B) Karasiuk was allegedly substantively considered during prosecution and Palmer, Trueba, and Wunsch are allegedly cumulative over prior art considered during prosecution; (C) Palmer allegedly does not disclose a "manifold" and there was no motivation to use Wunsch's manifold; and (D) the Petition allegedly included a "modified" version of Karasiuk's FIG. 6.

None of these reasons justify discretionary denial. First, contrary to what HF alleges, Eunsung has agreed to produce and, in fact, has produced evidence requested by HF regarding the time bar under § 315(b).

Second, institution should not be denied under §325(d) because the references and prior art combinations have not been previously considered by the Office. Palmer, Trueba, and Wunsch were never presented to the examiner during prosecution, and are not cumulative over any prosecution references (e.g., Coleman). The examiner did not substantively address Karasiuk during prosecution, and erred by

not applying Karasiuk to the Challenged Claims, particularly in combination with Palmer, Trueba, and Wunsch.

Third, the Petition establishes a compelling case of obviousness. Palmer discloses a “manifold” at least because Palmer’s selector valve means 20 comprises a chamber (e.g., main body 70) with many openings (e.g., output port 24 and valve inputs 22₁-22₆), and selectively connects to different fluid containers similarly to the ’052 patent’s manifold. Further, a POSITA would have been motivated to use Wunsch’s manifold for various reasons discussed in the petition and below. In addition, the merits of the Karasiuk-Palmer and Karasiuk-Palmer-Trueba grounds have been endorsed by the Board in a recent institution decision in a copycat IPR filed against HF’s related ’287 patent. Thus, the merits are strong.

Fourth, the allegedly “modified” FIG. 6 of Karasiuk came directly from a replacement figure submitted by Karasiuk on December 9, 2005, before the earliest priority date of the ’052 patent. No modifications have been made and, even if they were, the alleged modifications include only four different annotations that do not change any of the substantive arguments.

For these reasons, Petitioner respectfully requests that the Director deny HF’s Request for discretionary denial.

II. ARGUMENT

A. HydraFacial's Discovery-Based § 315(b) Argument is Procedurally Improper and Substantively Meritless Because No Discovery Dispute Exists

Although HF acknowledges that the “one-year bar under 35 U.S.C. § 315(b) has traditionally been treated as a non-discretionary statutory requirement,” Paper 8 at 4, HF nonetheless attempts to raise a time bar argument under the guise of a discovery dispute. First, recent PTAB guidance provided by FAQs indicate that arguments based on 35 U.S.C. § 315(b) are non-discretionary arguments that should be addressed by a merits panel. *See* EUNSUNG-1032, 4 (“***non-discretionary*** considerations include those relevant to, for example, 35 U.S.C. §§ 311, 312, **315(a), (b)**, and (e), 322, and 325(a) and (e)”). HF cites no authority to suggest that a 35 U.S.C. § 315(b)-based discovery dispute is a proper basis for discretionary denial. For these reasons, HF’s 35 U.S.C. § 315(b) argument is procedurally improper and should be rejected as a basis for discretionary denial.

Second, HF’s arguments are meritless because no discovery dispute exists. Contrary to what HF alleges, HF first raised specific requests for discovery on the evening of Thursday, May 8, 2025, mere days before HF filed its Brief on Discretion. EUNSUNG-1030. And Eunsung produced relevant documents on May 14, 2025, less than a week after HF’s specific discovery requests. EUNSUNG-1031. Tellingly,

HF waited nearly a month to attempt to submit the produced evidence in this proceeding or raise merits-based § 315(b) arguments before the Board. Indeed, Eunsung did not control, direct, or participate in any meaningful way in the 2020 litigation between HF and Cartessa Aesthetics, LLC (“Cartessa”). And the present petition filed in 2025 was initiated independently by Eunsung without any involvement of Cartessa, following a separate patent infringement lawsuit filed by HF against Eunsung in 2024. Eunsung’s IPR is thus a self-directed response in defense of its own interests and should not be discretionarily denied based on HF’s meritless § 315(b) argument or its non-existent discovery dispute.

B. 325(d) Favors Institution

In determining whether discretionary denial under § 325(d) is appropriate, “the Board uses the following two-part framework: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims.” *Advanced Bionics, LLC et al v. MED-EL Elektromedizinische Geraete GmbH* PTAB-IPR2019-01469, Paper 6 at page 8.

Under Part I of the *Advanced Bionics* framework (same or substantially the same art/arguments), the Board considers *Becton* factors (a), (b), and (d):

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art.

HF's § 325(d) arguments fail at Part I of the *Advanced Bionics* framework because the grounds set forth in the present petition have not been considered by the Office.

1. Advanced Bionics Part I – The Office Did Not Consider the Prior Art Combinations Advanced in the Present Petition

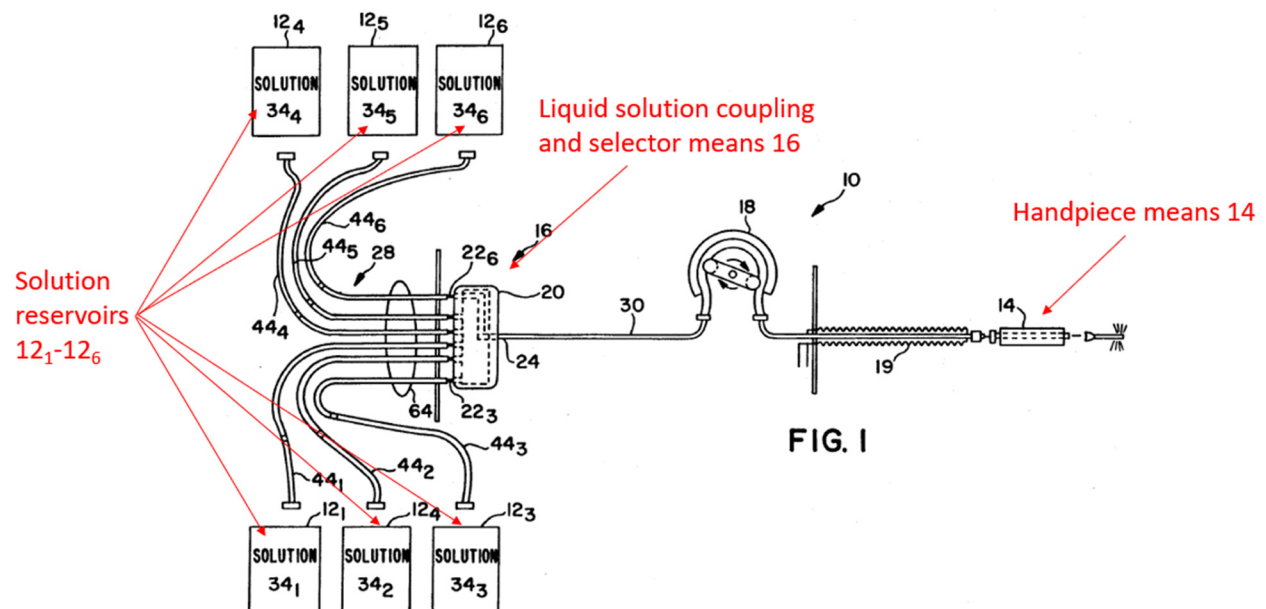
The petition challenges the independent claims based on combinations of (1) Karasiuk and Palmer, (2) Karasiuk, Palmer, and Trueba, (3) Karasiuk, Palmer, and Wunsch, and (4) Karasiuk, Palmer, Wunsch, and Trueba. None of Palmer, Trueba, or Wunsch was considered during examination. Because all of the prior art grounds involve combinations with at least one of Palmer, Trueba, or Wunsch, the same prior art was not previously considered by the Office.

Recognizing that Palmer, Trueba, and Wunsch have not been considered by the Office, HF attempts to argue that Palmer, Trueba, and Wunsch are cumulative to other prior art considered during examination. Palmer, Trueba, and Wunsch, however, include disclosure relevant to the Challenged Claims that is different from and more pertinent than the other prior art considered during examination.

a. *Palmer is not cumulative*

HF argues that Palmer is cumulative of Coleman because both references allegedly disclose multiple containers. Paper 8 at 11-13. Palmer, however, describes a significantly different design than Coleman and offers unique motivations for using its liquid delivery technology, including “easy selection” and minimizing refilling downtime. Pet., 10-11; EUNSUNG-1005, 1:30-53, 6:46-51.

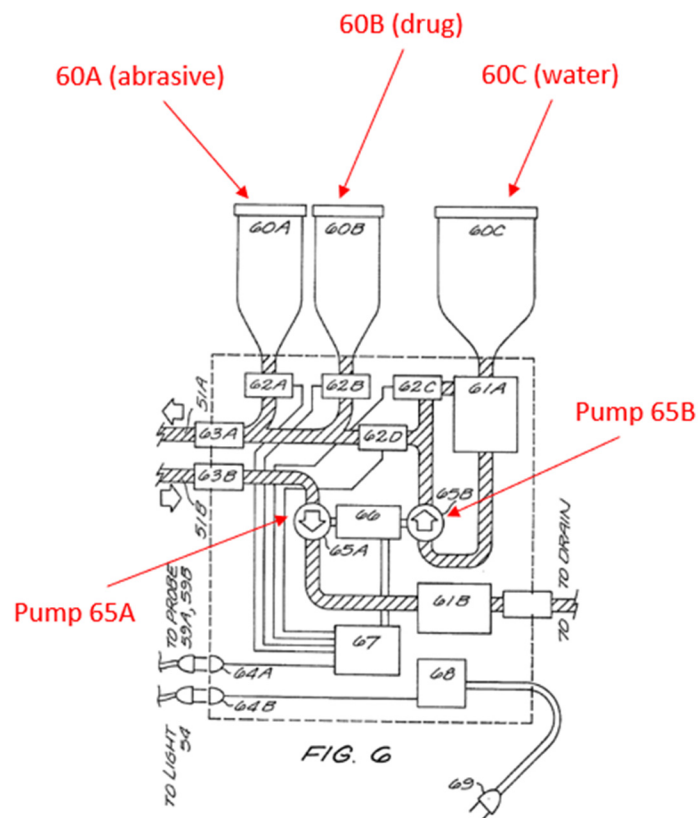
Specifically, Palmer discloses a medical device system for delivering a selected fluid treatment solution to an application site through a handpiece. EUNSUNG-1005, Abstract, 4:50-68, FIG. 1. Palmer’s system comprises handpiece means 14 in fluid communication with six solution reservoirs 12 and selector means 16 for selecting the fluid container. EUNSUNG-1005, Abstract, 4:50-68.



Palmer, FIG. 1 (annotated)

By contrast, Coleman discloses a system for the removal of epidermal and

dermal skin through the use of a “pressurized stream of water” (from container 60C), where abrasives (from container 60A) and medications (from container 60B) can be added to the water. EUNSUNG-1018, Abstract, FIG. 6, [0014]-[0018], [0058], [0061]. In operation, pump 65B draws water from container 60C and provides pressurized water, which is mixed with the abrasives in container 60A and medications in container 60B to form a “composite stream of water/abrasive/medicine” to be applied. EUNSUNG-1018, [0058]-[0061]. Pump 65A is used to suction spent water and debris from the surgical site. *Id.*



Coleman, FIG. 6 (annotated)

Thus, Palmer and Coleman operate in fundamentally different ways—while

Palmer uses selector means 16 for selecting a treatment fluid to be applied (from solution reservoirs 12₁-12₆), Coleman can only apply one type of treatment fluid (“a composite stream of water/abrasive/medicine”).

During prosecution, in an Applicant-initiated interview dated July 30, 2015, Coleman was discussed, and the examiner “suggested that focusing on the ability to **individually select a treatment material of the multiple fluid containers** would overcome the Coleman reference.” EUNSUNG-1002, 134, 149. Thus, the examiner explicitly identified selecting a treatment material from multiple containers as a limitation that is missing from Coleman. On August 15, 2015, the examiner rejected the then pending claims as, among other things, anticipated by Coleman. EUNSUNG-1002, 155-164. In response, HF amended the claims to recite, among other things, “a first fluid container and at least a second fluid container,” where “the system is configured to **permit a user to select the treatment material from the first fluid container or the at least second fluid container.**” EUNSUNG-1002, 131-133.

As discussed above, while Palmer uses selector means 16 for selecting a treatment fluid to be applied (from solution reservoirs 12₁-12₆), Coleman can only apply one type of treatment fluid (“a composite stream of water/abrasive/medicine”). Thus, Palmer is not cumulative of Coleman at least because it includes disclosure relevant to the claim limitation cited as missing from Coleman and justifying allowance—the ability to select treatment material from multiple containers. EUNSUNG-1002,

134, 149.

In the reasons for allowance, the examiner stated:

Claim 2 was amended to recite that the treatment material comprises a liquid and that when the vacuum source is activated and the tip contacts the skin surface, a suction force is created within the waste conduit and along the tip, **thereby removing waste from the skin surface via the waste conduit while drawing treatment material from the first fluid container or the second fluid container to the tip via the supply conduit. ...**

Specifically, the previously cited Coleman reference fails to disclose or teach that when the vacuum source is activated and the tip contacts the skin surface, **a suction force is created within the waste conduit and along the tip, thereby removing waste from the skin surface via the waste conduit while drawing treatment material from the first fluid container or the second fluid container to the tip via the supply conduit.** Instead, Coleman teaches that motor 66 activates valves 62A-62D to draw treatment material from the first fluid container or the second fluid container. Coleman does not disclose or teach that the vacuum source draws treatment material from the fluid containers.

Claim 14 was amended to require a system ... **configured to permit a user to select the fluid container from which treatment material is delivered to the supply conduit.** These limitations, in combination with the other limitations in the claim, are not disclosed or made obvious in the prior art of record. Claims 16-21 are all dependent on claim 14, and thus are also allowable over the prior art of record.

EUNSUNG-1002, 39-40.

As the record confirms, the examiner allowed the claims at least in part because the claims were amended to recite two limitations that were missing from the cited prior art references (e.g., Coleman): (1) a vacuum source that both removes debris and draws treatment materials from the fluid containers; and (2) the system is configured to permit a user to select the treatment material from the first fluid container or the at least second fluid container.

As discussed above, Palmer is not cumulative over Coleman, at least because Palmer discloses that the system is configured to permit a user to select the treatment material from a first fluid container or at least one second fluid container, a limitation that the examiner identified as missing from Coleman. EUNSUNG-1002, 39-40, 134, 149.

Further, Palmer offers unique motivations for using its liquid delivery technology, including “easy selection” and minimizing refilling downtime. Pet., 10-16; EUNSUNG-1005, 1:30-53, 6:46-51. These disclosures provide strong motivations to combine Palmer with the primary reference Karasiuk, which discloses the other missing limitation identified by the examiner (a vacuum source that both removes debris and draws treatment materials). EUNSUNG-1002, 39-40. While Coleman also discloses a vacuum pump (EUNSUNG-1018, [0020], [0050]), Coleman’s vacuum pump is used solely to remove debris, and is not used to draw treatment materials from the fluid containers. EUNSUNG-1002, 39-40. By contrast, placing

Karasiuk's handpiece against the skin tissue establishes a closed loop vacuum flow path, allowing Karasiuk's vacuum pump to both pump treatment solutions from fluid containers and collect waste/debris. EUNSUNG-1004, [0020], [0056], [0064]-[0066]. As such, the Karasiuk-Palmer combination supplies both limitations that were identified as missing from Coleman. EUNSUNG-1002, 39-40.

In view of the fundamental differences in operation and Palmer's unique motivations for using its liquid delivery technology, Palmer is not cumulative over Coleman. For these reasons, Palmer is not cumulative to any prior art considered during examination and has new technological teachings that should be evaluated on their merit.

b. *Trueba and Wunsch are not cumulative*

HF also alleges that Trueba and Wunsch add nothing of consequence because Eunsung allegedly does not rely on Trueba and Wunsch for anything the examiner had not already found to be taught by the prior art applied during examination. Paper 8 at 13-14.

Trueba and Wunsch are not cumulative at least because they disclose that the system is configured to **permit a user to select the treatment material from the first fluid container or the at least second fluid container**, a limitation that the examiner identified as missing from the prosecution references (e.g., Coleman). EUNSUNG-1002, 39-40, 134, 149. Although the Petition uses Trueba for additional

features (e.g., computer control, display, manifold selector, sequencer-timer), Trueba's disclosure of container selection is impactful because it reinforces the compatibility of Karasiuk with Palmer and provides additional motivation to combine them.

Although HF points to prosecution references including Coleman, Greenberg, and Duchon (Paper 8 at 13-14), Trueba and Wunsch are not cumulative because Trueba and Wunsch offer unique disclosure related to permitting **a user to select a fluid from a first fluid container or at least one second fluid container**, a limitation identified by the examiner as missing from the prosecution references. EUNSUNG-1002, 39-40, 134, 149. As discussed above, Coleman can only apply one type of treatment fluid ("a composite stream of water/abrasive/medicine"). Similarly, Duchon's device only contains a saline bag 50 and a waste bag 52, and does not permit a user to select the treatment material from the first fluid container or the at least second fluid container. EUNSUNG-1010, Abstract, FIG. 1. And Greenberg does not disclose "treatment materials" comprising "a liquid." EUNSUNG-1006, Abstract. For these reasons, Trueba and Wunsch are not cumulative and warrant reconsideration by the Office.

c. *The obviousness arguments/combinations are new*

The Petition's arguments and obviousness combinations are materially different from the obviousness arguments/combinations considered during prosecution.

The Petition argued that it was obvious **to use multiple containers to improve Karasiuk because Karasiuk recognizes desirability of using multiple types of skin treatment solutions during microdermabrasion**. Pet., 9-22. Nothing in the prosecution history indicates that the examiner considered this argument, much less Karasiuk in combination with Palmer. Further, the Petition argued that it was obvious to **modify the combined system of Karasiuk and Palmer by including Trueba's computer control** for several benefits, such as added precision, automation, and clarity. Pet., 54-57. Nothing in the prosecution history indicates that the examiner considered this argument, much less Karasiuk in combination with Palmer and Trueba. *See Amphenol Corporation v. PPC Broadband, Inc.* PTAB-IPR2022-00721, page 11 at pages 19-23 (granting institution because despite the primary reference being considered “pertinent,” the obviousness combinations were new); *St. Jude Med., LLC, v. Snyders Heart Valve LLC*, IPR2018-00105 Paper 15 at 12 (“evidence of record does not demonstrate that the examiner considered the references in the combinations relied upon by Petitioner.”).

HF argues that the same or substantially the same arguments were presented to the Office because “Eunsung’s reliance on its asserted prior art overlaps significantly with arguments **implicitly made** in the examiner’s finding that the claims are patentable over the prior art of record.” Paper 8 at 14-15. Specifically, HF argues that the examiner’s findings **necessarily imply** that the examiner considered and

rejected the argument that it would have been obvious to modify a single-container device to include multiple selectable containers to yield the claimed invention. Paper 8 at 15.

HF is wrong. As discussed below, mere acknowledgement that a reference is “**pertinent**” to an applicant’s disclosure “**without any evident substantive analysis or reliance upon**” by the examiner does not support discretionary denial. *Apple Inc. v. Uniloc USA, Inc.*, IPR2017-00221, Paper 9 at 10. More importantly, as discussed above, Palmer is not cumulative over Coleman (or any other prosecution references), at least because Palmer uses selector means 16 for selecting a treatment fluid to be applied (from solution reservoirs 12₁-12₆), whereas Coleman can only apply one type of treatment fluid (“a composite stream of water/abrasive/medicine”). Since Palmer was never presented to the examiner, the examiner could not have “considered and rejected the argument” that it would have been obvious to modify Karasiuk’s single-container device to include Palmer’s multiple container-selection structure to yield the claimed invention.

2. *Advanced Bionics Part II – The Office Did Not Substantively Address Karasiuk and the Examiner Erred By Failing to Apply the Combinations Advanced in the Present Petition*

Under Part II of the *Advanced Bionics* framework (whether examiner erred), the Board considers *Becton* factors (c), (e), and (f):

- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (e) whether petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.

Advanced Bionics, LLC et al v. MED-EL Elektromedizinische Geraete GmbH
PTAB-IPR2019-01469, Paper 6 at pages 9-10. Here, the examiner erred by not applying Karasiuk to the Challenged Claims despite the reference being disclosed in an IDS, and being identified as “pertinent.” Also, the examiner erred by not applying the secondary references Palmer, Trueba, and Wunsch in combination with Karasiuk.

a. *The examiner did not substantively address Karasiuk*

HF argues that the examiner already substantively considered Karasiuk during prosecution, noting that the examiner mentioned a parent of Karasiuk in the first non-final rejection dated August 5, 2015. Paper 8 at 7-11.

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Art Unit: 3734	
<i>Conclusion</i>	
11. The prior art made of record and not relied upon is <u>considered pertinent to applicant's disclosure</u> : Muldner (US 6,277,128 B1) (Figures 7 and 10), Rosso (US 6,432,114 B1) (Figures 1-3), <u>Karasiuk (US 6,695,853 B2) (Figure 5)</u> , Chang (US 7,232,444 B2) (Figures 1-5), Goble et al. (US 2006/0116674 A1) (Figures 1-3).	

Paper 8 at 7. Contrary to what HF alleges, mere acknowledgement that a reference is “**pertinent**” to an applicant’s disclosure “**without any evident substantive analysis or reliance upon**” by the examiner does not support discretionary denial under §325(d). *Apple Inc. v. Uniloc USA, Inc.*, IPR2017-00221, Paper 9 at 10.

Here, the examiner stated only that the “**prior art made of record and not relied upon is considered pertinent to the applicant’s disclosure.**” Paper 8 at 7. This is exactly the type of generic statement that the Board has found not to support discretionary denial. *Navistar, Inc. v. Fatigue Fracture Technology LLC* PTAB-IPR2018-00853, Paper 13 at 17; *Apple Inc. v. Uniloc USA, Inc.*, IPR2017-00221, Paper 9 at 10 (granting institution where reference was “not relied upon” but was “considered pertinent”); *Sanofi-Aventis U.S. LLC v. Immunex Corp.*, IPR2017-01879, Paper 19 at 8-9 (declining to exercise discretionary denial when reference was “considered pertinent to applicant’s disclosure” but not “relied upon”); *Amphenol Corporation v. PPC Broadband, Inc.* PTAB-IPR2022-00721, page 11 at pages 19-23 (granting institution despite the primary reference being considered “pertinent”). The Board in the *Apple* case explained:

Based on our review of the prosecution history, we find that the application was cited twice in a Notice of References Cited and mentioned once in an Office Action in which the Examiner stated that the reference was “**not relied upon**” but was “**considered pertinent to the applicant’s disclosure.**” Ex. 1002, 47, 195, 197. Having con-

sidered these citations to—**without any evident substantive analysis or reliance upon**—the continuation application of Malik during prosecution, we determine that rejection of the Petition under 35 U.S.C. § 325(d) is not warranted.

Apple Inc. v. Uniloc USA, Inc., IPR2017-00221, Paper 9 at 10.

HF also argued that the prosecution history need not include detailed evidence that the prior art was “considered” or involved in any “negotiation.” Paper 8 at 8. However, HF ignores that Becton factor (c) explicitly requires the Board to consider “(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection.” *Advanced Bionics, LLC et al v. MED-EL Elektromedizinische Geraete GmbH* PTAB-IPR2019-01469, Paper 6 at pages 9-10. Here, Karasiuk was not used as a basis for rejection, which favors institution.

b. *The examiner erred*

The examiner erred by not applying Karasiuk to the Challenged Claims despite the reference being disclosed in an IDS, and its parent being identified as “pertinent.” Paper 8 at 7. The examiner also erred by not considering the secondary references Palmer, Trueba, and Wunsch in combination with Karasiuk.

First, under Becton factor (c), the examiner erred in not applying Karasiuk in a rejection. Other than listing Karasiuk’s FIG. 5 among several other references, the examiner did not provide any substantive analysis—in fact, the examiner explicitly stated that Karasiuk was “not relied upon.” *See SolarEdge Techs. Ltd. v. SMA Solar*

Tech. AG, IPR2020-00021, Paper 8 at 12 (“Because the Examiner **did not rely** on AAPA or Frezzolini to reject a claim, Becton Factor (c) weighs strongly against exercising our discretion to deny institution.”); *Code200, UAB et al v. Bright Data Ltd.* PTAB-IPR2022-00353, Paper 8 at 10 (“the fact that Crowds **was not the basis of rejection** in the prosecution of the ’344 patent nor was identified by the parties as the basis of rejection in any of the related patents weighs strongly against exercising our discretion to deny institution under 35 U.S.C. § 325(d).”). The examiner also mistakenly listed FIG. 5 as Karasiuk’s most relevant figure when even HF agrees that FIG. 6 of Karasiuk is most relevant. This error demonstrates that the examiner did not appreciate the most relevant aspect of Karasiuk’s disclosure.

Second, the examiner erred by not considering the secondary references Palmer, Trueba, and Wunsch. As discussed above, these references are not cumulative over any prior art references considered during prosecution (e.g., Coleman).

In the reasons for allowance, the examiner noted:

Claim 2 was amended to recite that the treatment material comprises a liquid and that when the vacuum source is activated and the tip contacts the skin surface, a suction force is created within the waste conduit and along the tip, thereby removing waste from the skin surface via the waste conduit while drawing treatment material from the first fluid container or the second fluid container to the tip via the supply conduit. ...

Specifically, the previously cited Coleman reference fails to disclose or teach that when the vacuum source is activated and the tip contacts the skin surface, **a suction force is created within the waste conduit and along the tip, thereby removing waste from the skin surface via the waste conduit while drawing treatment material from the first fluid container or the second fluid container to the tip via the supply conduit.** Instead, Coleman teaches that motor 66 activates valves 62A-62D to draw treatment material from the first fluid container or the second fluid container. Coleman does not disclose or teach that the vacuum source draws treatment material from the fluid containers.

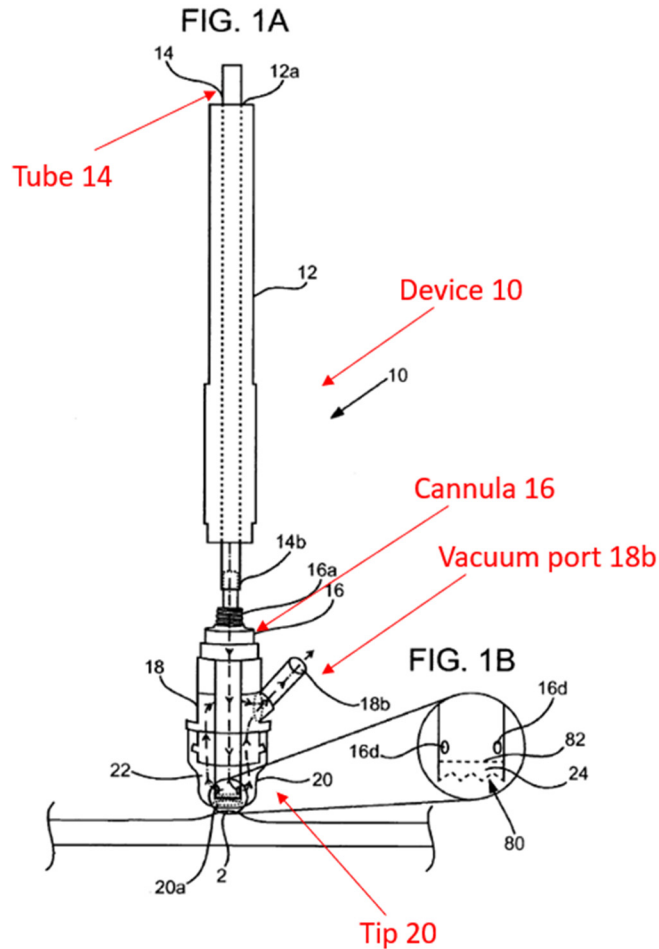
Claim 14 was amended to require a system ... configured to permit a user to select the fluid container from which treatment material is delivered to the supply conduit. These limitations, in combination with the other limitations in the claim, are not disclosed or made obvious in the prior art of record. Claims 16-21 are all dependent on claim 14, and thus are also allowable over the prior art of record.

EUNSUNG-1002, 39-40.

Thus, the examiner allowed the claims at least in part because the claims were amended to recite two limitations that were missing from the cited prior art references (e.g., Coleman): (1) a vacuum source that both removes debris and draws treatment materials from the fluid containers; and (2) that the system is configured to permit a user to select the treatment material from the first fluid container or the at least second fluid container. EUNSUNG-1002, 39-40, 134, 149.

These findings were clear error because the examiner overlooked teachings of Karasiuk regarding a vacuum source that both removes debris and draws treatment

materials from the fluid containers. EUNSUNG-1003, [139]-[141]. Specifically, Karasiuk discloses: “When vacuum is applied through opening 18b, an opening 20a is sealed off, for example **by placing it up against the skin tissue**, a closed loop vacuum flow path is established between the vacuum source and connecting line, vacuum opening 18b, annulus 22, opening(s) 16d, passageway 16c and tube 14.” EUNSUNG-1004, [0054], FIGS. 1A and 6. Upon forming a vacuum loop, the fluid contents in the fluid reservoir are “drawn through tube 14 and into device 10...and are applied to the skin.” EUNSUNG-1004, [0064]. “As the flow of fluids continues out of the vacuum head base and into vacuum line 42, **it carries with it the exfoliated skin particles and any other waste that is removed through the microdermabrasion process.**” EUNSUNG-1004, [0066].



Karasiuk, FIG. 1A.

Also, these findings were clear error because the examiner overlooked teachings of Palmer, Trueba, and Wunsch regarding the limitation that the system is configured to permit a user to select the treatment material from the first fluid container or the at least second fluid container, which was identified by the examiner to be missing from the prosecution references. EUNSUNG-1002, 39-40, 134, 149; Pet., 37-38, 52-57, 72-79, and 84.

C. The Petition Establishes a Compelling Case of Obviousness

Institution should be granted because the Petition establishes a strong case of

obviousness based on prior art combinations that have already been endorsed by the Board. As discussed above, the examiner allowed the '052 patent in part because the claims were amended to recite: (1) a vacuum source that both removes debris and draws treatment materials from the fluid containers; and (2) that the system is configured to permit a user to select the treatment material from the first fluid container or the at least one second fluid container. EUNSUNG-1002, 39-40.

The Petition explains in detail why a POSITA would have been motivated with a reasonable expectation of success to combine Palmer's device, which permits a user to select the liquid container from which treatment material is delivered, with Karasiuk's microdermabrasion device, which has a vacuum source that both removes debris and draws treatment material from a fluid container. As explained in the Petition, a POSITA would have recognized the desirability of using multiple types of treatment solutions during microdermabrasion, and would have been motivated to modify Karasiuk based on Palmer's multiple containers and selector means (1) to allow easy selection among multiple treatment solutions; (2) to enable sequential delivery of different treatment solutions; and (3) to minimize refilling downtime when a particular container runs out mid-operation. Pet., 12-14.

Further, a POSITA would have had a reasonable expectation of success in such a combination, because both Karasiuk and Palmer are directed to medical de-

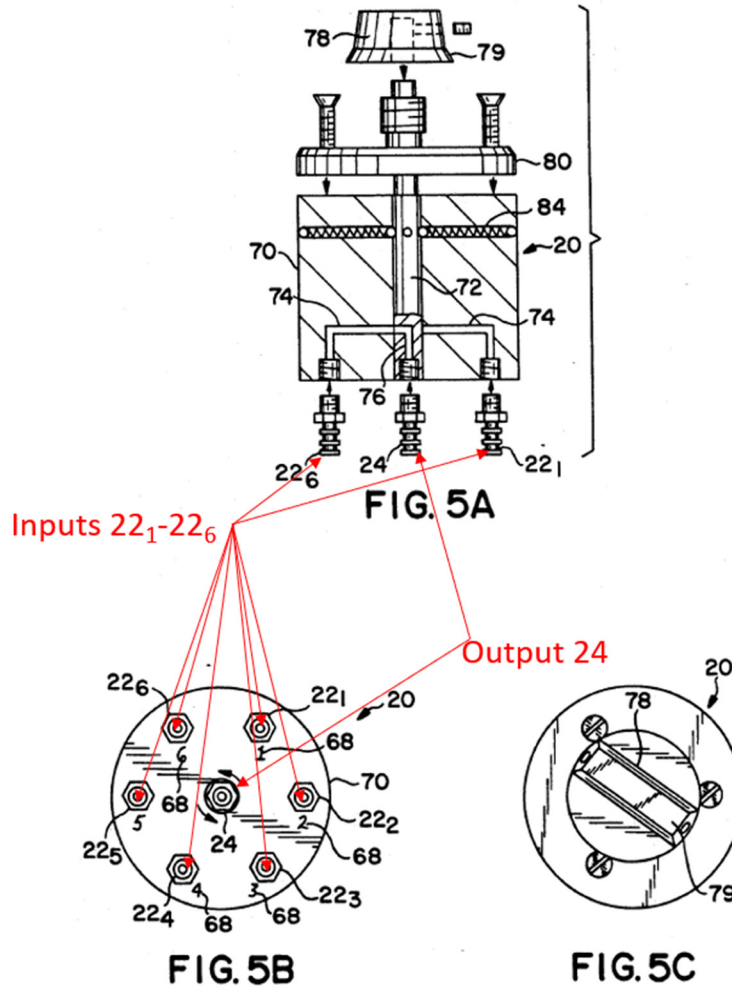
vices that deliver treatment solutions to treatment sites via a handpiece, and replacement of Karasiuk's reservoir 70 with Palmer's multiple containers and selector means reflects a simple substitution of a known element for another to obtain predictable results—allowing selection of different treatment solutions. Pet., 15-16.

HF's brief raises only raised two challenges to the Petition's obviousness combinations: (1) Palmer allegedly does not disclose a "manifold"; and (2) there was allegedly no motivation to use Wunsch's manifold. Paper 8 at 18-24. As discussed below, HF's arguments are meritless.

1. Palmer discloses a "manifold"

HF argues that the petition fails to identify any combination of prior art that discloses or suggests the "manifold" recited in all claims. Specifically, HF argues that Palmer's selector valve means 20 is not a "manifold" which is defined in the dictionary as "a chamber or pipe with many openings." Paper 8 at 18-21.

HF is wrong. Palmer's selector valve means 20 comprises "a chamber or pipe with **many openings**," including one "selector valve output port 24," and a plurality of "valve inputs 22₁-22₆." Pet., 18-26; EUNSUNG-1005, FIGS 5A-5C.



Palmer, FIGS. 5A-5C

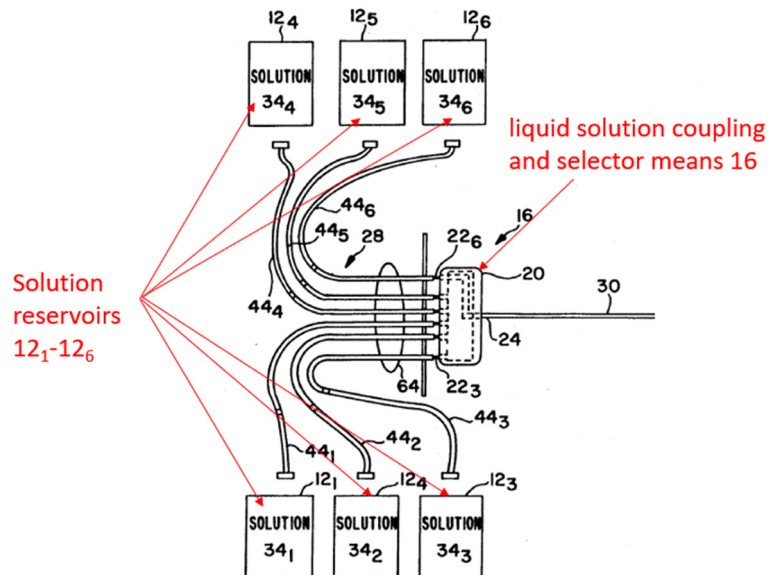
In operation, by turning knob 78, the user can select from multiple containers 12₁-12₆, each of which is connected to one of “valve inputs 22₁-22₆.” Pet., 18-26; EUNSUNG-1005, 8:22-53 (“For example, when the knob is rotated so that the pointer 78 indicates the indicia designated ‘6,’ the outlet passage 76 communicates with the inlet passage 74 which opens into the inlet port 22₆ which is coupled to the solution 34₆ contained in the reservoir 12₆.”). Thus, Palmer’s selector valve means 20 comprises a chamber (e.g., main body 70) with many openings (e.g., output 24

and valve inputs 22₁-22₆), to allow the rotatable central cylinder core or stem 72 to rotate and to selectively connect to different fluid containers.

HF argues that Palmer's selector valve means 20 only has one input connected to one output at any given time. Paper 8 at 21 ("it provides a single, isolated pathway through the rotatable core 72"). But the dictionary definition of "a chamber or pipe with many openings" does not require otherwise. In fact, the definition "a chamber or pipe with many openings" does not require how many of these openings are closed/open at any given time, and Palmer's selector valve means 20 meets this limitation. In fact, when a first solution from the first container is selected to be dispensed, the "manifold" in the '052 patent also provides a single, isolated pathway from the first container to the handpiece. Pet., 22-23; EUNSUNG-1001, FIGS. 15A-15E.

Further, as the Petition explained, a POSITA would have understood and found obvious that (1) Palmer's selector valve 20, (2) Palmer's liquid solution coupling and selector means 16 (including the valve 20), or (3) Palmer's control unit enclosure 35 (housing the coupling and selector means 16) correspond to, and perform the operations of, the *manifold*, located within the "mobile cart 170" (*console*). Pet., 22-23. To the extent HF argues Palmer's selector valve 20 does not constitute a manifold, Palmer's liquid solution coupling and selector means 16 and/or Palmer's control unit enclosure 35 would constitute a manifold ("a chamber or pipe with many

openings”). For example, as shown in FIG. 1, Palmer’s liquid solution coupling and selector means 16 constitutes a chamber or pipe with many openings that are connected to tubes 44₁-44₆. EUNSUNG-1005, FIG. 1.



Palmer, FIG. 1 (partial)

Further, as the Petition explained, alternatively or in addition, a POSITA would have found it obvious to use a manifold to implement Palmer’s functionality of switching treatment fluids. Pet., 23-26. Indeed, manifolds were well-known devices for selecting between different fluids and would have been within a POSITA’s general knowledge. *Id.* First, based on Karasiuk and Palmer, a POSITA would have recognized a need to selectively dispense different treatment fluids. Second, a POSITA would have understood that there were a finite number of identified, predictable solutions to selectively dispense treatment solutions from multiple contain-

ers, including (1) manually connecting/disconnecting the handpiece to different containers via one tube, (2) connecting the handpiece to each container via a separate valve-controlled tube, and (3) connecting the handpiece to multiple containers via a manifold (e.g., classic block style, a T-junction or a Y-junction). Further, the Petition explained that, alternatively or in addition, using a manifold to implement Palmer's functionality of switching treatment fluids would have been an obvious design choice without any unexpected results. Pet., 25.

HF alleges that the Petition and expert declaration "identify no shortcoming in Palmer's selective valve means 20 that would justify replacing it." Paper 8 at 22. However, a shortcoming in Palmer is not needed to show the obviousness of using a manifold among a finite number of identified, predictable solutions to selectively dispense treatment solutions from multiple containers. *Geo M. Martin Co. v. Alliance Machine Systems Intern. LLC*, 618 F.3d 1294, 1302 (Fed. Cir. 2010) ("Bottom versus top is exactly the type of 'finite number of identified, predictable solutions' that justifies a legal conclusion that the result, when expected, is 'the product not of innovation but of ordinary skill and common sense.'"); *Recor Med., Inc. v. Medtronic Ireland Mfg. Unlimited Co.*, No. 2023-2251, 2025 WL 944511, at *4 (Fed. Cir. Mar. 27, 2025) ("This is a sufficiently finite universe of options to support an obvious-to-try theory.").

2. *A POSITA would have been motivated to use Wunsch's manifold*

HF argues that there was no motivation to combine Karasiuk-Palmer with Wunsch because “the proposed combination lacks any mechanism for measuring the quantity of solution dispensed.” Paper 8 at 23-24.

As explained in the Petition, a POSITA also would have been motivated to employ Wunsch's manifold selector and sequencer-timer because (1) Wunsch's manifold selector can be automatically controlled by the sequencer-timer to allow automatic dispensing of different treatment fluids; (2) Wunsch's manifold selector allows flushing of the manifold using the Keep Open Base Solution (TKO) between different treatment fluids to avoid cross-contamination between two treatment fluids; and (3) Wunsch's manifold selector allows easy replacement of the disposable manifold between patients, avoiding cross-contamination between patients and avoiding the need to clean and sterilize the manifold between uses. Pet., 75-78.

HF only appears to challenge the first motivation to combine—the ability to automatically control and dispense fluid. Paper 8 at 23-24. As such, it is undisputed that a POSITA would have been motivated to use Wunsch's manifold selector for the second and third motivations (flushing between treatment fluids and easy replacement of the disposable manifold between patients).

Regarding the first motivation to combine, HF alleges that the Petition never incorporates Wunsch's infusion pump, and thus provides no means of regulating

Wunsch's manifold selector through the sequencer-timer. Paper 8 at 24. However, there is no need to measure the quantity of solution that is dispensed. All that is needed is that the first solution (e.g., vitamin) is dispensed for a first duration and the second solution (e.g., lotion) is dispensed for a second duration. EUNSUNG-1020, 4:47-60 ("The **tracks have a length corresponding to a preselected time cycle** with preselected data applied to each track"); 9:42-61 ("The full length of the timing tracks 69 corresponds to the duration of a machine cycle, which in the illustrative embodiment has **a duration of eight hours**. Such cycle can be adjusted as predetermined. The cycle duration is controlled by a quartz-crystal 60 time base."); 10:1-63 ("As indicated previously, **On-Off timing sequence is generated by darkening the timing tracks 69 upon the card 14 with a soft pencil**. In the illustrative embodiment, **the cycle duration is for eight hours** and the timer 13 provides in the illustrative embodiment 96 time intervals corresponding to **five minutes per division**, for illustration."). Thus, the sequence-timer need only control the duration, not the volume of the solution dispensed.

In fact, for microdermabrasion, a POSITA would have understood that the specific amount/volume of solution dispensed may not be as impactful because most of the treatment fluid will be rinsed away during the microdermabrasion. What is important is the convenience of automatic switching, and avoiding mistakes in selecting treatment fluids. Pet., 75-79 ("manual selection is both cumbersome and

prone to error, and would have been motivated to adopt Wunsch's automatic control to provide added convenience and help avoid mis-selection by the user").

3. *The Copycat Petition Instituted Against HF's '287 Patent Supports Institution Here*

The Petition's compelling case of obviousness is confirmed by the institution decision in the copycat petition filed against HF's related '287 Patent IPR. EUN-SUNG-1034, 32.

In the *Sinclair* case, *Sinclair* copied the same Karasiuk-Palmer and Karasiuk-Palmer-Trueba combinations developed by Eunsung against a closely related patent, U.S. Patent No. 11,865,287 B2 ("the '287 patent"). EUNSUNG-1034, 2-7. The '287 patent is a child of the '052 patent, and shares the same specification as the '052 patent. The claims of the '287 patent and the claims of the '052 patent are highly similar. EUNSUNG-1034, 6-7. In the *Sinclair* Institution Decision, the Board stated:

For purposes of deciding whether to institute trial, we find that the present record sufficiently shows that the combination of Karasiuk and Palmer discloses or suggests the limitations of the challenged claims. We also credit the unrebutted testimony of Mr. Simon that **a person having ordinary skill in the art would have been motivated to combine the multiple containers, selector means, and modular structure as taught by Palmer, with the handheld device, collection reservoir, vacuum source, and other relevant components taught by Karasiuk for the reasons discussed herein and of record.** On the current record, we further credit the unrebutted testimony of Mr. Simon that a person of ordinary skill in the art would have had a reasonable expectation of success in such a

combination. Accordingly, on the present record, we conclude there is a reasonable likelihood that Petitioner will succeed in demonstrating that claims 1–3, 8–12, 14–16, 22, 23, 26, 28, 29, 34–37, 39, 40, and 45 of the '287 patent are rendered obvious by the combined disclosures of Karasiuk and Palmer.

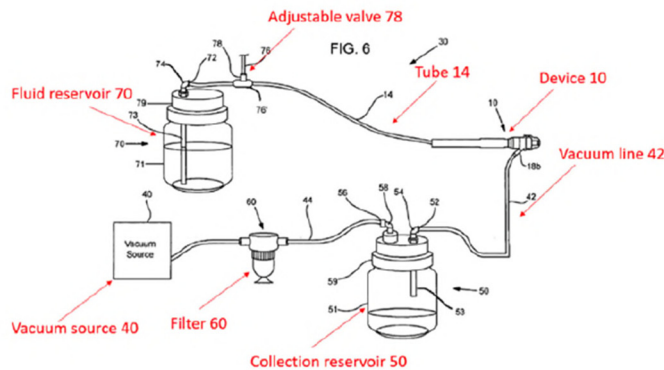
...

For purposes of deciding whether to institute trial, we find that the present record sufficiently shows that the combination of Karasiuk, Palmer, and Trueba discloses or suggests the limitations of the challenged claims. We also credit the unrebutted testimony of Mr. Simon that **a person having ordinary skill in the art would have been motivated to modify the combined system of Karasiuk and Palmer by including Trueba's computer control for the reasons discussed herein and of record.** On the current record, we further credit the unrebutted testimony of Mr. Simon that a person having ordinary skill in the art would have had a reasonable expectation of success in implementing such a combination. Accordingly, on the present record, we conclude there is a reasonable likelihood that Petitioner will succeed in demonstrating that claims 1–10, 12, 17–20, 22–26, 28–36, and 40–44 of the '287 patent are rendered obvious by the disclosures of Karasiuk, Palmer, and Trueba.

EUNSUNG-1034, 17-18, 21-22. With these findings, the institution decision in the *Sinclair* case confirms the strength of the Karasiuk-Palmer and Karasiuk-Palmer-Trueba combinations. Because the Board has already endorsed the combination of prior art applied in this petition and endorsed how that same combination renders obvious similar claims, the merits are strong and Board resources are well-spent resolving the obviousness grounds that are presented here and that are already being considered by the Board.

D. Karasiuk's FIG. 6

HF argues that the Petition improperly relies on a modified version of FIG. 6 of Karasiuk, which includes black line annotations as shown in the green circles below. Paper 8 at 24-27.



**Eunsung's Modified Fig. 6
(Pet., 5; Ex. 1003, ¶52)**

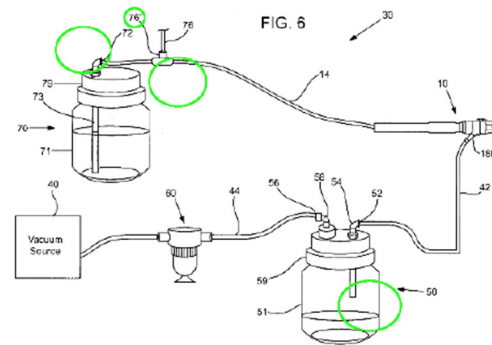
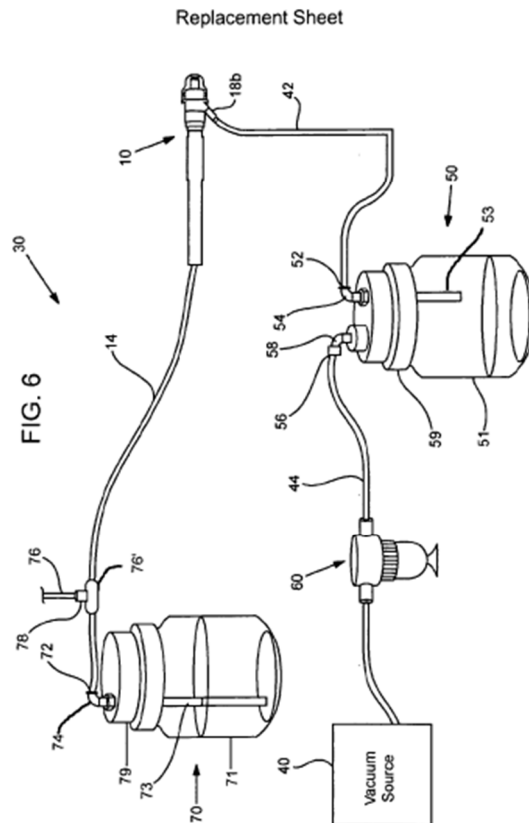


**Fig. 6 from Ex. 1004
(green circles indicate
Eunsung's modifications)**

Paper 8 at 25

Contrary to what HF argues, Petitioner did not add these blackline annotations. Instead, these blackline annotations were added by the applicant itself in a “Replacement Sheet” submitted on December 9, 2005 to correct minor issues with the published figure, and this “modified” version of FIG. 6 of Karasiuk came directly from the prosecution history of Karasiuk. EUNSUNG-1033, 332. Thus, the allegedly “modified” version of FIG. 6 of Karasiuk is not an improper alteration of the figure used in Karasiuk. In fact, because the replacement sheet for FIG. 6 was submitted before the earliest priority date of the '052 patent (December 30, 2005), it is

prior art against the '052 patent.



EUNSUNG-1033, 322.

Further, the “modified” version of FIG. 6 only includes four different annotations and these four annotations do not change any of the substantive arguments—the substantive arguments will be exactly the same with or without these annotations.

III. CONCLUSION

For the foregoing reasons, none of the arguments raised by HF favor discretionary denial. Petitioner therefore respectfully requests that this case proceed to an

institution determination on the merits.

Respectfully submitted,

Dated June 12, 2025

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CERTIFICATION UNDER 37 CFR §42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petitioner's Opposition to Patent Owner's Discretionary Denial Brief totals 6,629 words, which is less than the 14,000 words allowed under 37 CFR § 42.24.

Respectfully submitted,

Dated June 12, 2025

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(4) and 42.205(b), the undersigned certifies that on June 12, 2025, a complete and entire copy of this Petitioner's Opposition to Patent Owner's Request for Discretionary Denial of Institution and Accompanying Exhibits were provided by email to the Patent Owner by serving the correspondence email address of record as follows:

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