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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EUNSUNG GLOBAL CORP.,

Petitioner,

v.

HYDRAFACIAL LLC,

Patent Owner.

Case No. IPR2025-00453
U.S. Patent No. 11,446,477

**BRIEF IN SUPPORT OF PATENT OWNER'S REQUEST FOR
DISCRETIONARY DENIAL**

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I. INTRODUCTION

Pursuant to the Acting Director’s Memorandum *Interim Processes for PTAB Workload Management* (“Memorandum”) issued on March 26, 2025, Patent Owner HydraFacial LLC (“HydraFacial” or “Patent Owner”) sets forth the bases on which the Director should exercise discretion to deny institution of this IPR. This filing is timely, submitted within one month of the Notice Extending Deadline for Discretion Briefing, dated April 24, 2025. Paper 7. The following independent bases support denying institution, and together they weigh strongly in favor of exercising discretion to deny institution.

First, denial is warranted under 35 U.S.C. § 325(d) because the Petition merely rehashes the same or substantially similar prior art or arguments that were previously considered by the Patent Office. The Examiner already considered Karasiuk—Eunsung’s primary reference for Grounds 1A-1D—and Greenberg—Eunsung’s primary reference for Grounds 2A-2B—during prosecution of the ’477 Patent. Eunsung also relies on secondary references that are not materially different from what was previously considered by the Patent Office.

Rather than providing a substantive explanation of how the Examiner allegedly erred, the Petition mischaracterizes the Examiner’s analysis. The Director should reject the Petition because Eunsung cannot identify an error in the Examiner’s analysis.

Second, the merits of the Petition are weak, a fact that weighs heavily in favor of discretionary denial. Although HydraFacial will fully address the merits in its Patent Owner’s Preliminary Response (POPR) and demonstrate that Eunsung has not met its burden for institution, the Director should consider the weak merits in discretionarily denying the Petition. Eunsung fails to identify any combination of prior art that discloses or suggests the “manifold system” recited in all claims. The Petition’s reliance on Palmer in Grounds 1A-1D and Greenberg in Ground 2A-2B falls short of meeting this limitation, and its backup theories are based on hindsight and speculation, mischaracterize the prior art, and ignore critical differences in structure and functionality. These deficiencies undermine any reasonable likelihood that the Petition would prevail on its unpatentability grounds, thus warranting discretionary denial.

For these reasons, and as detailed further below, the Director should exercise her discretion to deny institution.

II. BASES FOR DISCRETIONARY DENIAL

A. The Director Should Deny the Petition Under Section 325(d)

Section 325(d) authorizes the Director to reject the Petition when “the same or substantially the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d). In *Advanced Bionics*, the Board explained its two-part framework for deciding whether to deny institution under Section 325(d):

Thus, under § 325(d), 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 [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. If a condition in the first part of the framework is satisfied and the petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute *inter partes* review. If reasonable minds can disagree regarding the purported treatment of art or arguments, it cannot be said that the Office erred in a manner material to patentability. At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.

Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH, IPR2019-01469, Paper 6 at 8-9 (PTAB Feb. 13, 2020) (precedential).

The Board further explained that *Becton, Dickinson* factors (a), (b), and (d) provide insight into whether the same or substantially the same art or arguments was previously presented to the Office, and *Becton, Dickinson* factors (c), (e), and (f) provide insight into whether the petitioner has shown the Office materially erred. *Id.* at 10-11; *see Becton, Dickinson and Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17 (PTAB Dec. 15, 2017) (precedential).

Here, applying the *Becton, Dickinson* factors under the *Advanced Bionics* framework supports denial of the Petition under Section 325(d). Eunsung’s Petition relies on the exact same prior art—Karasiuk and Greenberg—previously presented to the Patent Office. Furthermore, Eunsung cannot show there was any material error in the Patent Office’s prior evaluation of the evidence. Thus, the Director should defer to the Patent Office’s prior evaluation and deny institution of the IPR. *Advanced Bionics*, Paper 6, at 9 (“At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.”).

1. *Advanced Bionics*, Part 1 – The same or substantially same prior art was previously presented to the Patent Office

The Acting Director held in a precedential decision that “[c]hallenging the claims using the same prior art that was previously presented on an IDS is sufficient to satisfy the first part of the *Advanced Bionics* framework.” *Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 4 (PTAB May 19, 2025) (precedential). Here, *Advanced Bionics*, Part 1 is readily satisfied because (1) Eunsung’s primary references, Karasiuk and Greenberg, were presented on an IDS and considered by the Examiner, and (2) Eunsung’s secondary references are substantially the same as prior art previously considered by the Examiner.

Primary Reference: Karasiuk

In Grounds 1A-1D, the Petition relies on Karasiuk (Publ. No. 2003/0212415) (Ex. 1004) as the primary reference. Pet., 1. Karasiuk was listed on an IDS, and the Examiner certified that he considered it, as well as its patent grant (U.S. Pat. No. 7,658,742), its continuation child application publication and patent grant (Publ. No. 2007/0088371 and U.S. Pat. No. 7,951,156), and its continuation grandchild application publication (Publ. No. 2012/0136374). *See* Ex. 1002, 266-267, 269-270, 272. Moreover, Karasiuk itself (Ex. 1004) was specifically identified in numerous search queries conducted by the Examiner. *See, e.g., id.*, 43, 49, 60, 63, 424, 431, 436 (showing searches for “20030212415,” referring to Publ. No. 2003/0212415). Thus, because Karasiuk was previously presented on an IDS, the first part of the *Advanced Bionics* framework is met. *Ecto World*, Paper 13, at 4. Further, as explained below under *Advanced Bionics*, Part 2, the Examiner, Mr. Christian Knauss, was well aware of Karasiuk’s disclosure and thoroughly evaluated it during prosecution of a family member of the ’477 Patent.

Primary Reference: Greenberg

In Grounds 2A-2B, the Petition relies on Greenberg (Publ. No. 2003/0093089) (Ex. 1006) as the primary reference. Pet., 1. Greenberg was also listed on an IDS, and the Examiner certified that he considered it. *See* Ex. 1002, 269. Thus, the first part of the *Advanced Bionics* framework is met with respect to Greenberg. *Ecto*

World, Paper 13, at 4. Further, as explained below under *Advanced Bionics*, Part 2, the Examiner extensively evaluated Greenberg during examination of the '477 Patent to reject the pending claims. *See* Ex. 1002, 124-125, 243-244.

Secondary References: Palmer, Trueba, and Wunsch

Eunsung contends that the Examiner did not consider secondary references Palmer, Trueba, and Wunsch. Pet., 97. However, there are no material differences between the relied-on teachings of Palmer, Trueba, and Wunsch and the prior art the Examiner already considered. And to the extent Eunsung relies on any teachings of Palmer, Trueba, or Wunsch that go beyond Karasiuk and Greenberg, such teachings are not as relevant as the prior art the Examiner already considered.

Eunsung cannot plausibly allege that Palmer discloses multiple skin-treatment containers as claimed because Palmer discloses dental-irrigant containers. *See e.g.*, Ex. 1005, claim 1 (reciting a “[p]eriodontal irrigating system for delivering one of a plurality of liquid irrigating solutions to a treatment site in an oral cavity.”). Eunsung relies on Palmer more generally, as allegedly disclosing multiple treatment containers and container-selection structure. But that alleged disclosure is no more relevant than the disclosure of Coleman (Publ. No. 2001/0049511), which the Examiner applied during prosecution. *See* Ex. 1002, 123-127, 238-246, 399-402. In fact, the Examiner described Coleman as follows:

Coleman discloses (Figures 4A-6) a skin treatment system comprising: a manifold system (62A-62D) in communication with a first container (60A) and at least a second container (60B), wherein each of the first container and the at least second container is configured to contain a treatment material (paragraph 0058), the manifold system being positioned in or on a console (Figure 6); a supply conduit (51A) placing the manifold system in fluid communication with a handpiece assembly (50); wherein the handpiece assembly comprises a working end (distal end) having a skin contact surface (53); a vacuum source (65A; paragraph 0061); a waste conduit (51 B) in fluid communication with the handpiece assembly and the vacuum source to move waste away from the working end of the handpiece assembly during a skin treatment procedure (paragraph 0061); and at least one control (67) to permit control of a flow of treatment material from the first container and the at least second container through the supply conduit to the handpiece assembly (paragraphs 0059, 0062, 0063); wherein the vacuum source is capable of creating a suction force within the waste conduit and along the working end of the handpiece assembly to help remove waste from the handpiece assembly via the waste conduit (paragraphs 0055 and 0061).

Ex. 1002, 238-239.

Moreover, Coleman's system is more closely related to Karasiuk's system than Palmer's. Coleman is at least in the field of dermatological treatment (Ex. 1018, Abstract) rather than the field of dental irrigation. Coleman's system, like Karasiuk's, incorporates a vacuum source. Ex. 1018, [0020], [0050]. This vacuum

pressure in Coleman draws waste from the skin to a container. *Id.* In contrast, Palmer's system merely uses a pump to push dental-irrigant from its containers. Ex. 1005, 5:10-22. But Coleman's system also includes a pump for dispensing treatment liquid from containers. Ex. 1018, [0059].

Thus, if it would have been obvious to combine Karasiuk with the disclosure of multiple treatment containers and container-selection structure to yield the claimed invention, the Examiner would have rejected the claims in view of Karasiuk and Coleman. The Examiner's finding that the claims are patentable over Karasiuk and Coleman shows that the claims are likewise patentable over Karasiuk and Palmer.

Eunsung also cannot rely on Trueba and Wunsch to overcome Section 325(d). These references add nothing of consequence to the grounds. Specifically, Eunsung relies on Trueba as allegedly disclosing a computer control and display (Pet., 42-48, 93-96), and Wunsch as allegedly disclosing a manifold selector and sequencer-timer (Pet., 51). However, the Examiner previously asserted that Coleman, Greenberg, and/or Duchon (Publ. No. 2003/0018252) allegedly disclosed these features, and ultimately allowed the claims. Ex. 1002, 30, 242, 243, 247. Eunsung does not rely on Trueba and Wunsch as allegedly disclosing anything the Examiner had not already addressed by the prior art applied during examination. Therefore, neither Trueba nor Wunsch calls into question the Examiner's patentability findings.

Accordingly, Eunsung’s reliance on the same or substantially the same art that was previously presented to the Office, as demonstrated above, is sufficient to satisfy the first step of the *Advanced Bionics* framework.

2. *Advanced Bionics*, Part 2 – Eunsung cannot show the Patent Office erred in a manner material to the patentability of the claims

Because Eunsung’s Petition satisfies the first step of *Advanced Bionics*, Eunsung is required to proceed to the second step and show that the Office erred in a manner material to the patentability of challenged claims. Eunsung “must explain, “with reference to *Becton Dickinson* factors (c), (e), and (f), how the Examiner erred in overlooking the prior art.” *Ecto World*, Paper 13, at 6 (citing *Advanced Bionics*, Paper 6, at 10).

Eunsung’s burden is to show that no reasonable examiner could have agreed with Mr. Knauss’s evaluation of the pending claims during prosecution in view of the cited prior art. *Id.* (“[A] petitioner must demonstrate that, for example, the previously presented art teaches the limitations of the challenged claims, and that no reasonable examiner could have found otherwise.”); *see also Advanced Bionics*, Paper 6, at 9 (“If reasonable minds can disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability.”). Eunsung cannot show that the Patent Office made any such material error.

Becton Dickinson factor (c) addresses “the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection.” *Becton Dickinson*, Paper 8, at 17.

Examiner Knauss extensively evaluated Greenberg during examination of the ’477 Patent and relied on it in rejecting the pending claims. For example, Examiner Knauss relied on Greenberg in combination with Coleman in rejecting pending claims 6 and 8 as obvious. Ex. 1002, 243-244. Examiner Knauss also relied on Greenberg in combination with U.S. Patent No. 9,550,052 (“’052 Patent”)—a patent in the same family and assigned to HydraFacial—to reject claim 8 on the basis of obviousness-type double patenting. *Id.*, 124-125. Furthermore, the Examiner also previously evaluated Greenberg during prosecution of the ’052 Patent, relying on it in combination with Coleman to reject the pending independent claims and various dependent claims. *See* Ex. 1032, 102, 106-110.

Examiner Knauss also extensively evaluated Karasiuk during prosecution of the ’052 Patent. In an Office Action dated August 5, 2015, the Examiner expressly acknowledged that Karasiuk’s parent—which has nearly the same disclosure as Karasiuk—is “considered pertinent to applicant’s disclosure,” but ultimately declined to rely on it in rejecting the claims.

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Conclusion

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

Ex. 1032, 163 (annotation added).¹ Moreover, Examiner Knauss specifically identified Karasiuk itself in four separate search queries, including Search 44, where it was queried among just a few other references. *Id.*, 57 (“20030212415,” referring to Publ. No. 2003/0212415); *id.*, 50, 53, 60.

With respect to ***Becton Dickinson factor (e)***—“whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art” (*Becton Dickinson*, Paper 8, at 18)—Eunsung asserts that “[t]he Examiner erred

¹ U.S. Patent No. 6,695,853 to Karasiuk is the parent to the Karasiuk reference relied on in the Petition as Ex. 1004. *See* Ex. 1004 at 1. The child application (Ex. 1004) was filed as a continuation-in-part and includes additional disclosure, but the Fig. 6 embodiment relied on by Eunsung in this IPR is the substantively the same between these references. The Examiner’s reference to “Figure 5” in the Office Action is likely a typographical error and should have been “Figure 6.”

in not issuing a rejection based on Greenberg alone or in combination with Trueba,” Pet., 4, 5, 98, and that “[i]f Karasiuk and Greenberg were previously considered, the Examiner erred in overlooking the teachings cited in this Petition.” Pet., 98. These conclusory assertions are pure speculation, supported by no evidence. Nothing in the prosecution history even suggests the Examiner overlooked, ignored, or misapplied the teachings of Karasiuk, Greenberg, or the other prior art of record.

Specific to Greenberg, Eunsung alleges that “[t]he Examiner erred in not issuing a rejection based on Greenberg alone or in view of Trueba, *presumably* because Greenberg discloses applying treatment materials in the form of particles and does not expressly describe ‘fluid communication.’” Pet., 4 (emphasis added). However, as Eunsung concedes, its contention rests on a presumption of the Examiner’s mindset about Greenberg’s disclosure rather than any evidence in the ’477 Patent’s prosecution history. Furthermore, as discussed in the merits section herein, Eunsung’s presumption is incorrect because Greenberg’s dry abrasive particles cannot satisfy the “treatment material” recited in the claims. *See* Section B.2, *infra*.

Moreover, even if a reasonable mind could interpret the prosecution history as suggesting the Examiner may have overlooked any prior-art teachings, a reasonable mind could also interpret the prosecution history as showing that the Examiner considered Karasiuk and Greenberg, along with the other prior art of

record, and determined that the claims would not have been obvious over any combination of that art. In that case, where “reasonable minds can disagree regarding the purported treatment of art or arguments, it cannot be said that the Office erred in a manner material to patentability.” *Advanced Bionics*, IPR2019-01469, Paper 6, at 9.

***Becton Dickinson* factor (f)** address “the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.” *Becton Dickinson*, Paper 8, at 18. In the Petition, Eunsung merely argues the “Examiner also did not have the benefit of considering” Karasiuk and Greenberg “in combination with Palmer, Trueba, or Wunsch.” Pet., 98. However, as explained above, the Palmer teaching Eunsung relies on—multiple containers for dental irrigation—is at best cumulative, and indeed, less relevant, than Coleman’s teaching of multiple containers for dermatological treatment. And the Trueba and Wunsch teachings Eunsung relies on—a computer control and display (Pet., 42-48, 93-96) and a manifold selector and sequencer-timer (Pet., 51)—are not only unrelated to the reasons the claims were allowed during examination, but also cumulative of the Coleman, Greenberg, and Duchon references the Examiner applied against the claims.

Accordingly, Eunsung has not shown—and cannot show—the Examiner materially erred in allowing the claims over Karasiuk and the other prior art of

record. Therefore, the Board should defer to the Examiner's patentability finding by denying the Petition. *Advanced Bionics*, IPR2019-01469, Paper 6, at 9.

B. The Director Should Deny the Petition Due to the Weak Merits Underlying Eunsung's Unpatentability Challenge

The Director should decline to institute the IPR based on the weakness of Eunsung's unpatentability challenge.

1. The Prior Art Does Not Meet the "Manifold System" Limitation

The combination of Karasiuk and Palmer in Grounds 1A-1D and Greenberg in Grounds 2A-2B fail to disclose a limitation required by all claims—namely, a “manifold system.” The Petition's attempt to satisfy this limitation is technically unsupported and analytically flawed. Under Eunsung's own definition of “manifold system” in the Petition, the cited prior art fails to teach this limitation.

Each independent claim of the '477 Patent recites a manifold system. For example, independent claim 1 requires “a manifold system in communication with a first container and at least a second container.” Similarly, independent claims 9 and 15 recite “a manifold system in communication with at least two containers.”

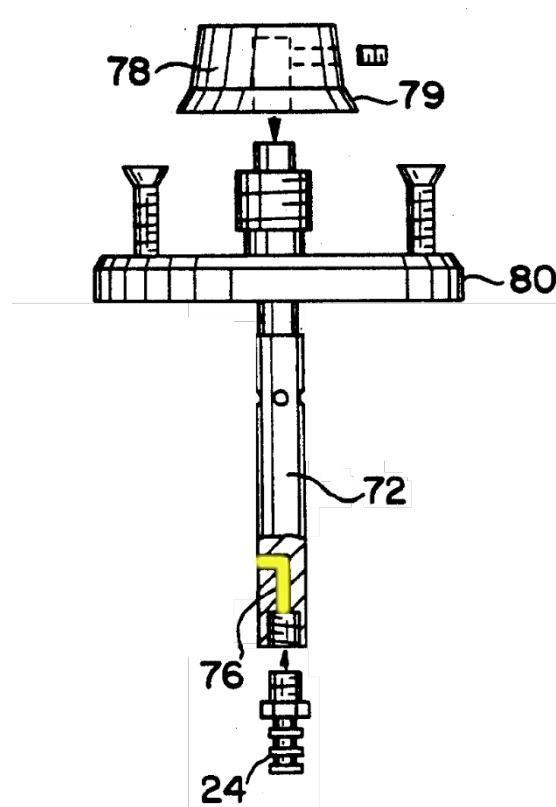
In Grounds 1A-1D, the Petition and its accompanying expert declaration point to Palmer's selector valve means 20 and argue it constitutes a “manifold.” Pet., 15-22; Ex. 1003, ¶¶107-112. But this argument fails under the Petition's own adopted definition of manifold, which defines “manifold” as “a chamber or pipe with many openings.” Pet., 15, n.4 (citing Ex. 1029, 5); *see also* Ex. 1003, ¶107 n.2 (Ex. 1029,

5). Palmer's selector valve means 20 is neither a chamber nor a pipe with **many** openings. Instead, Palmer describes the device as "means for coupling a selected **one** of the inputs 22 to **the** output 24." Ex. 1005, 5:1-9 (emphasis added).

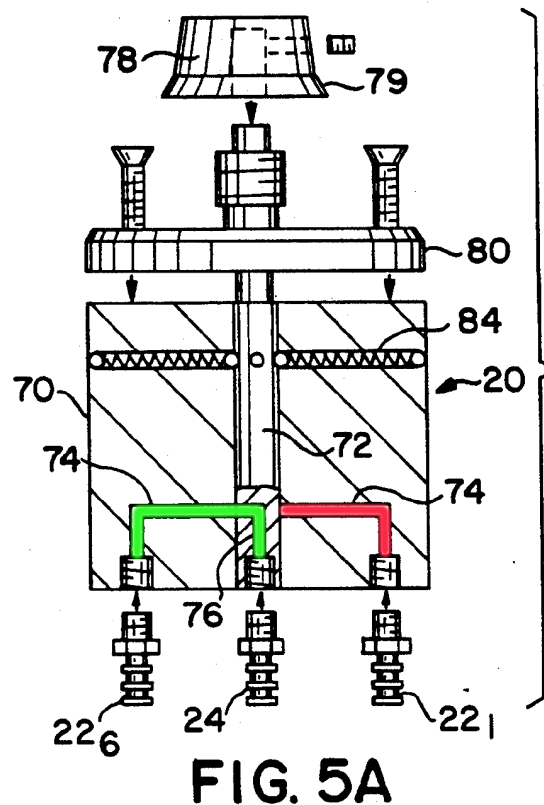
Palmer elaborates on the configuration and operation of its one-to-one connection. The selector valve means 20 includes a main body 70 and a rotatable central cylinder core or stem 72 mounted within the main body 70. *Id.*, 8:6-8. The rotatable core 72 has a "liquid outlet passage 76," which consists of a single inlet and a single outlet: "A liquid outlet passage 76 is formed in the rotatable core 72 having **one end opening** into the selector valve output port 24 **and another end opening** onto the cylindrical core surface in the plane of the inner ends of passages 74." *Id.*, 8:13-18 (emphasis added).

When a user rotates the knob 78 on the front of the selector valve means 20, the rotatable core 72 is "rotated until the end of the outlet passage 76 communicates with the particular inlet passage 74 corresponding to the inlet coupled to the desired irrigating solution." *Id.*, 8:45-48. "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." *Id.*, 8:48-53.

The outlet passage 76's single-input-to-single-output connection within the rotatable core 72 is shown in yellow in the excerpt from Figure 5A below:



Id., Fig. 5A excerpt (annotated). As illustrated in full Figure 5A, the selector valve means 20 connects the inlet port 22₆ to the outlet passage 76 (the connected path shown in green), while the inlet port 22₁ is disconnected and physically blocked from the outlet passage 76 (the disconnected path shown in red):



Ex. 1005, Fig. 5 (annotated). The annotated figure also illustrates that the remaining inlet ports—22₂, 22₃, 22₄, 22₅—are also disconnected and effectively isolated from the outlet passage 76. Thus, Palmer’s selector valve means 20 provides a single, isolated pathway through the rotatable core 72.

This design is fundamentally distinct from a manifold, which, according to Eunsung’s cited definition, requires “a chamber or pipe with many openings.” As such, Palmer’s selector valve means 20 does not meet the manifold limitation in independent claims 1, 9, and 15, and the Petition fails to establish otherwise.

Recognizing this deficiency, the Petition proposes two modifications to the Karasiuk-Palmer combination, but both are flawed and rely on hindsight rather than objective reasoning based on the prior art.

First, as a modification in Grounds 1A and 1D, the Petition argues that “a POSITA would have found it obvious to use a manifold system to implement Palmer’s functionality of switching treatment fluids,” (Pet., 20-21) and that “a POSITA would have found it obvious to use a manifold system to implement Greenberg’s functionality of switching treatment materials.” Pet., 74. With respect to Ground 1A, the Petition asserts that manifolds were “well-known,” “within a POSITA’s general knowledge,” one of “a finite number of identified, predictable solutions,” and “an obvious design choice.” *Id.*, 20-22. But these conclusory assertions do not establish that a POSITA **would have been motivated** to make such a substitution—only that a POSITA **could have**. See *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.”).

Critically, the Petition and expert declaration identify no shortcoming in Palmer’s selector valve means 20 that would justify replacing it. Pet., 20-22; Ex. 1003, ¶¶113-116. At most, the Petition contends a POSITA would have selected a manifold because “it eliminates the need of manual connecting/disconnecting and

allows for a simpler handpiece design with one input.” Pet., 22. However, Palmer’s selector valve means 20 already eliminates manual connections, and the Petition and expert declaration fail to explain how a manifold could possibly simplify Karasiuk’s handpiece design.

The Petition also argues that incorporating a manifold in the Karasiuk-Palmer combination “would have merely involved a simple substitution of one well-known element for another to obtain predictable results.” Pet., 22. But this is inconsistent with the Petition’s own cited definition of a “manifold system.” And a device that selectively connects one input to one output like Palmer’s selector valve means 20 is not equivalent to “a chamber or pipe with many openings.” Replacing one with the other would require significant unaddressed structural and functional changes to accommodate the manifold’s many openings. This is not a simple substitution.

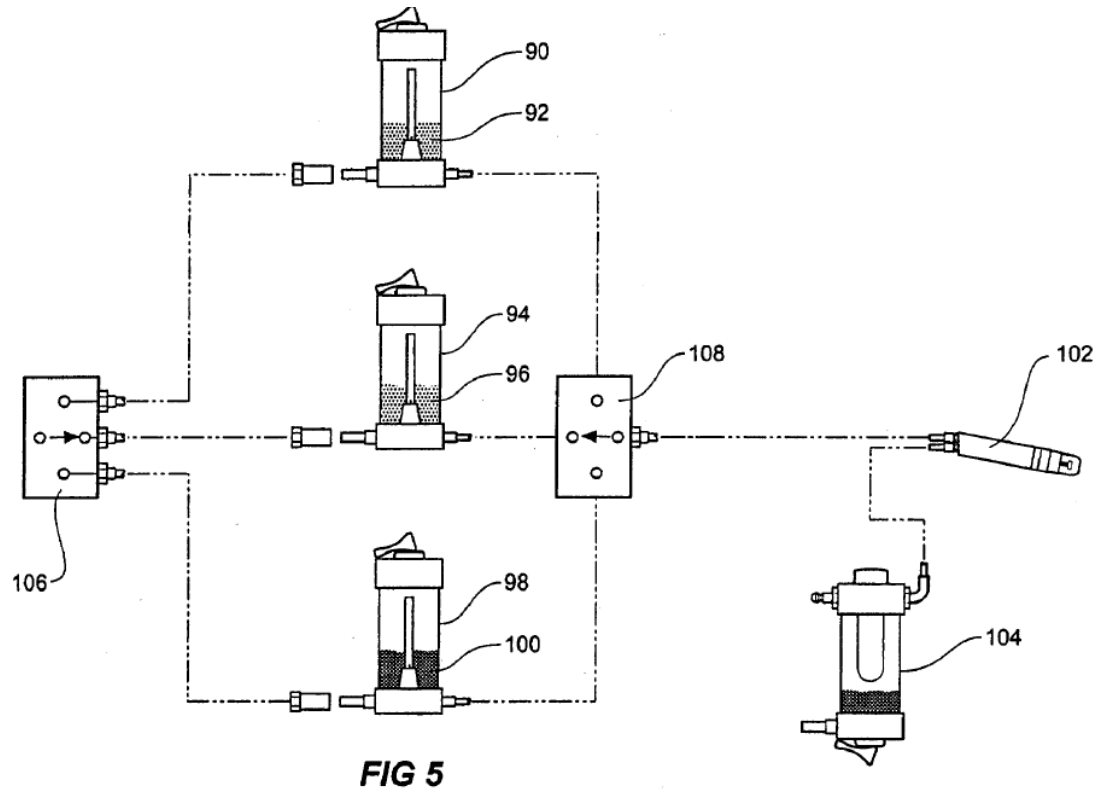
Second, the Petition presents Ground 1C, which combines Wunsch with Karasiuk and Palmer, asserting that a POSITA would have replaced Palmer’s liquid solution coupling and selector means 16 with Wunsch’s manifold selector and sequencer-timer. Pet., 1, 51. But this proposed modification is illogical and clearly hindsight driven. The Petition touts the benefits of Wunsch’s sequencer-timer—namely, its ability to automatically control and dispense fluid—but fails to recognize that its proposed combination lacks any mechanism for measuring the quantity of

solution dispensed. *Id.*, 53-55. Without this, the alleged automatic control has no feedback loop and cannot function as intended.

Wunsch makes clear that “[t]he quantity of solution dispensed is metered by a volumetric infusion pump.” Ex. 1020, Abstract; *see also id.*, 7:57-65 (“[F]luid volume through the dispensing tube 18 is controlled by the volumetric infusion pump 20.”). Yet the Petition never incorporates Wunsch’s infusion pump, and thus provides no means of regulating Wunsch’s manifold selector through the sequencer-timer. Pet., 53-55.

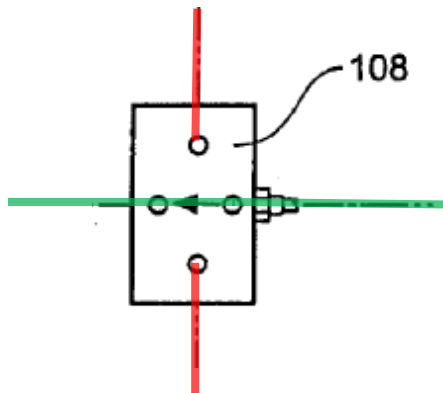
For Ground 2A-2B, Eunsung relies on Greenberg as allegedly disclosing the claimed “manifold system.” Pet., 72-74. Specifically, Eunsung points to Greenberg’s valve 108 in Greenberg’s Fig. 5 embodiment. *Id.* Here too, Eunsung’s argument fails under the Petition’s own adopted definition of manifold, which defines “manifold” as “a chamber or pipe with many openings.” Pet., 15, n.4. Greenberg’s valve 108 in the Fig. 5 embodiment is just that, a valve, similar to Palmer’s rotary valve, consisting of a single inlet and only a single outlet.

Fig. 5 is shown below, with valve 108 positioned downstream of the supply containers 90, 94, and 98 and upstream of the handle 102.



Ex. 1006, Fig. 5.

The Fig. 5 schematic shows that valve 108 includes only a single outlet line on the downstream side of the valve and includes a selector for the upstream side represented by the arrow on the valve. As shown in the excerpt below, this selector arrow signifies that the user selects a single inlet line entering the valve with a single outlet, and at the same time the other inlet lines are blocked by the valve.



Ex. 1006, Fig. 5 (excerpted and annotated).

Similar to Grounds 1A-1D, Eunsung employs backup theories in Grounds 2A-2B for Greenberg’s lack of the claimed manifold system. Pet., 74-75. For the reasons discussed above, these backup theories fail with respect to Greenberg also. For example, Eunsung alleges that manifolds were “well-known,” “within a POSITA’s general knowledge,” and one of “a finite number of options to achieve the functionality described by Greenberg.” *Id.*, 74. But these conclusory assertions do not establish that a POSITA *would have been motivated* to make such a substitution—only that a POSITA *could have*. See *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.”).

In sum, the Petition’s unpatentability challenge rests on deficient combinations, improper hindsight, and inconsistent reasoning. It fails to identify a

manifold as required by each claim, and its fallback arguments either mischaracterize the prior art or ignore key structural and functional differences. Because the Petition does not present a reasonable likelihood of prevailing on unpatentability, the Director should decline to institute the IPR.

2. Greenberg’s Dry Solid Particles Are Not “Treatment Material”

Eunsung has taken the position that Greenberg’s solid abrasive particles satisfy the “treatment material” limitations. *See* Pet., 60 (characterizing Greenberg’s dry abrasive particles as within the scope of “treatment material”).

However, Eunsung’s implicit interpretation of “treatment material” is inconsistent with the patent specification. Contrary to Eunsung’s contention, the ’607 patent expressly distinguishes prior-art microdermabrasion technology that uses dry abrasive particles. The specification explains that with microdermabrasion, “the surface of the skin is removed due to mechanical rubbing by a handpiece emitting a stream of sand or grit” to wear away “cell layers of the skin.” Ex. 1001, 2:1-8. It further explains that the “momentum of the grit tends to wear away two to three cell layers of the skin with each pass of the handpiece.” *Id.*, 2:6-8. Microdermabrasion can be a painful experience and due to its harsh nature, can often leave patients with redness. *Id.*, 1:54-58 (describing dermabrasion as painful and leaving the skin “red and raw-looking”).

In contrast to microdermabrasion's stream of sand or grit, the '607 patent discloses a system for treating skin that "deliver[s] **fluid** from at least one of the **plurality of fluid sources** to the handpiece assembly." *Id.*, 2:35-38 (emphasis added). The systems claimed by the '607 patent wholly eliminate resurfacing the skin with sandpaper-like blasts of abrasive particles.

The specification distinguishes between "wet" and "dry" modes on the basis that the "wet" mode applies treatment materials to the skin and the "dry" mode does not:

During some skin treatment procedures, *treatment materials from multiple containers 26 are sequentially or simultaneously applied to the patient's skin during a "wet" mode of operation.* ... In some embodiments, the console 12 can be *used for a "dry" mode of operation.* That is, the console 12 can be used to exfoliate skin, for example, without [sic: while] delivering *little or substantially no treatment fluid.*

Ex. 1001, 6:28-36 (emphasis added).

Further demonstrating that the treatment materials are not dry solid particles, the specification explains "the handpiece assemblies can be used **without treatment material**, i.e., the handpiece can be used **in a dry procedure.**" Ex. 1001, 13:28-31 (emphasis added). That the inventors described the procedure without treatment

material as a “dry procedure” demonstrates that the treatment materials are not dry solid particles.

The specification also correlates the “effectiveness of the fluid” on the skin with the amount of time the “active ingredients of the treatment material” are retained on the skin:

Fluid traveling down the longer pathway is in contact with the person’s skin 80 for a longer period of time. Thus, tighter spirals lead to increased contact time between the fluid and the skin 80. These longer contact times can increase the *effectiveness of the fluid* because the skin can absorb an adequate amount of *active ingredients of the treatment material*. Fluid retention time on the patient’s skin can be increased to *increase hydration, serum retention, and the like*.

Ex. 1001, 10:9-17 (emphases added). Thus, the identified functions of longer fluid contact times—absorption of ingredients, hydration, and serum retention—are not functions performed by solids. And, the specification lists numerous examples of fluids—including serums, hydration agents and additives, acids, extracts, and other substances—that are undoubtedly liquids, not solids. *Id.*, 15:61-16:33.

Thus, Eunsung’s attempt to broaden “treatment material” to encompass the dry solid particles disclosed in Greenberg is contrary to the intrinsic record. Eunsung does not dispute that Greenberg discloses only dry particles and Eunsung never proposes any modification of Greenberg’s microdermabrasion system to use

anything other than dry particles. *See* Pet., 60 (citing Greenberg for its disclosure of different types of abrasive particles). Because the claims exclude dry abrasive particles, Greenberg does not meet the “treatment material” limitations.

III. CONCLUSION

For the foregoing reasons, HydraFacial respectfully requests that the Director discretionarily deny institution of the Petition.

Respectfully submitted,

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CERTIFICATE OF TYPE-VOLUME LIMITATIONS
UNDER 37 C.F.R. § 42.24

The undersigned certifies that the foregoing **BRIEF IN SUPPORT OF PATENT OWNER’S REQUEST FOR DISCRETIONARY DENIAL** contains 5,026 words, exclusive of the parts exempted as provided in 37 C.F.R. § 42.24(a), and therefore complies with the type-volume limitations of 37 C.F.R. § 42.24(a).

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of **BRIEF IN SUPPORT OF PATENT OWNER’S REQUEST FOR DISCRETIONARY DENIAL** is being served on May 27, 2025, via email pursuant to 37 C.F.R. § 42.6(e), to counsel for Petitioner as addressed below:

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