

Patent No. 12,167,948

Petitioner's Response to Patent Owner's Brief on Discretionary Denial – Paper 9

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASCENTCARE DENTAL PRODUCTS, INC.

Petitioner

v.

SOLMETEX, LLC

Patent Owner

Patent No. 12,167,948

Issue Date: December 17, 2024

Title: DENTAL MOUTHPIECE

Post Grant Review No. PGR2025-00058

**PETITIONER'S RESPONSE TO PATENT OWNER'S BRIEF ON
DISCRETIONARY DENIAL**

TABLE OF AUTHORITIES

Cases	Page(s)
<i>Advanced Bionics LLC v. MED-EL Elektromedizinische Geräte GmbH</i> , IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020).....	5
<i>Apple Inc. v. Fintiv, Inc.</i> , IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020).....	11
<i>Becton, Dickinson & Co. v. B. Braun Melsungen AG</i> , IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017)	5
<i>Samsung Electronics Co., Ltd. V. Dynamics, Inc.</i> , IPR2020-00502, Paper 34 (PTAB August 12, 2020).....	13
<i>Sotera Wireless, Inc. v. Masimo Corporation (§ II.A)</i> , IPR2020-01019, Paper 12 (December 1, 2020)	13
<i>SAS Inst. Inc. v. Iancu</i> , 138 S. Ct. 1348, 1359–60 (2018)	16
Statutes	
35 U.S.C. § 314(a)	16
35 U.S.C. § 316(a)(11).....	11
35 U.S.C. § 325(d)	5, 6

EXHIBIT INDEX

Ex #	<u>Exhibit</u>
1001	U.S. Patent No. 12,167,948 (“the ’948 Patent”)
1002	Prosecution History of the ’948 Patent (part 1)
1003	Expert Declaration of Dr. Brian P. Black
1004	<i>Curriculum Vitae</i> for Dr. Brian P. Black
1005	U.S. Patent No. 8,911,232 to Nguyen (“Nguyen”)
1006	U.S. Patent No. 9,532,858 (“Hirsch”)
1007	U.S. Patent No. 8,029,280 (“Black”)
1008	Solmetex’s Complaint for Patent Infringement against Ascentcare (ECF No. 1), filed September 16, 2024
1009	Service of Summons and Complaint upon Ascentcare (ECF No. 8), served December 10, 2024.
1010	U.S. Patent No. 11,826,217 (“the ’217 Patent”)
1011	Prosecution History Excerpt of the ’217 Patent
1012	RESERVED
1013	U.S. Patent No. 4,024,642
1014	U.S. Patent Application No. 2003/0134253
1015	Prosecution History of the ’948 Patent (part 2)
1016	RESERVED
1017	Chinese Patent No. 10-4490483
1018	Korean Patent No. 10-0654392
1019	U.S. Patent Publication No. 2017/0156832
1020	U.S. Patent No. 1,731,322
1021	U.S. Patent No. 6,974,321

1022	RESERVED
1023	RESERVED
1024	Rule 16 Scheduling Conference Transcript
1025	Ascentcare's <i>Sotera</i> Stipulation
1026	Order Regarding Motion to Stay

Pursuant to the Interim Processes for PTAB Workload Memorandum (“Memo”) dated March 26, 2025, Petitioner Ascentcare Dental Products, Inc. (“Petitioner”) submits its reply brief to Patent Owner's Solmetex, LLC (“Patent Owner”) discretionary denial brief for Director review.

I. **INTRODUCTION**

For the reasons set forth below, the Board should not discretionarily deny the petition. To start, the Office materially erred in several ways. Additionally, the *Fintiv* factors also favor institution.

II. **35 U.S.C. § 325(d)**

35 U.S.C. § 325(d) allows the Board to discretionarily deny a petition because the same or substantially the same prior art or arguments were previously presented to the Office. The Board uses a two-part framework to determine whether to exercise this discretion. *Advanced Bionics LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (Precedential). The Board has enumerated six factors to consider in exercising discretion pursuant to § 325(d). *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph). In view of this standard, the Board should institute IPR on all challenged claims.

A. ***Advanced Bionics Part 2***

While all the references relied upon in the Petition were either cited in an IDS by Patent Owner or discussed during the prosecution of the parent application (EX1010, “the '217 Patent”), discretionary denial under § 325(d) is inappropriate because the examination involved material errors, discussed below.

Patent Owner is correct that Petition Ground 1 is similar to the Examiner's February 17, 2023 rejection of the '217 Patent using Nguyen and Al-Shawi. However, while the Examiner was on the correct track, the rejection relied upon non-analogous art. The Petition cures this error.

During prosecution of the '217 Patent, Patent Owner presented two arguments why the combination of Nguyen and Al-Shawi failed to render the claims obvious: 1) Al-Shawi was non-analogous art, and 2) the projections 422 are taught as located on inner sides, not along an edge of a wall. EX2021, p. 195-196. It is unclear which of these arguments was persuasive because the Examiner simply found the argument to be “moot” in view of a new reference. EX2021, p. 200, 239. Either way, the Examiner erred.

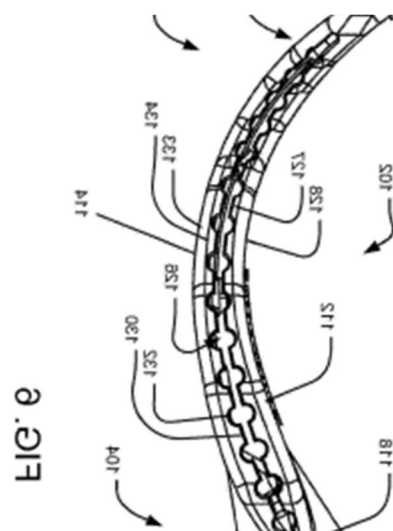
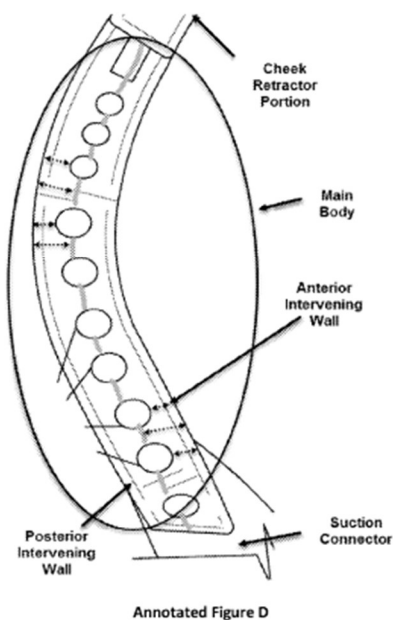
1. Examiner Erred in Failing to Use Known Analogous Art

Patent Owner was correct that Al-Shawi is non-analogous art. EX2021, p. 195-196. Not only is Al-Shawi not directed to a dental or oral apparatus, Al-Shawi uses a *rigid* plastic, which would be inappropriate in an oral cavity for isolation. EX2009, ¶ 95. Indeed, a PHOSITA would know that a soft material is necessary for

dental isolation, as the isolation mouthpiece must be accepted by the patient and bendable for placement. EX1003, ¶¶ 8, 73; EX1010, 3:35-51. Al-Shawi is related to a surgical device that wraps around body parts. EX2009, Abstract, ¶ 95. As such, Al-Shawi is neither directed to the same field nor same problems as a dental isolation mouthpiece, and Patent Owner was correct to argue the inapplicability of Al-Shawi. EX2021, p. 195-196.

That said, the resulting mouthpiece created by modifying Nguyen in view of Al-Shawi (if Al-Shawi was analogous), as found by the Examiner, is the mouthpiece of Nguyen with the sidewalls cut open across the perforations 140, which is exactly the mouthpiece claimed by the '948 Patent. EX2020, p. 269.

heights or sizes (See Annotated Figure D of Fig. 4 of Nguyen where the grey lines indicate the separation between the two intervening wall and the dotted arrows displays how the intervening wall presents varying heights).



In other words, Nguyen provided all the structural teaching necessary to arrive at the claim; Al-Shawi simply provided the motivation to cut open Nguyen's sides.

The Examiner believed that he needed a reference showing similar corresponding projections extending from two walls facing each other to modify Nguyen, as proposed. EX2020, p. 266. However, a secondary reference teaching intervening walls with alternating crests and troughs is *not necessary* to arrive at the modified mouthpiece of Nguyen articulated by the Examiner. EX2020, p. 269. Instead, the Examiner only needed an *analogous* reference providing a motivation to open the sides of Nguyen to generate the modified mouthpiece shown in the Office Action. *Id.* Indeed, a reference that provides a motivation to open the sides of Nguyen necessarily *creates* the recited intervening wall with alternating crests and troughs. *Id.*; EX1003, ¶ 88. Hirsch provides that motivation, Reyes provides that motivation, and Black especially provides that motivation because Black suggests the benefits of open sides, such as increased suction and easier bending. EX1007, 17:45-54.

The Examiner's position was that the prior art could provide the motivation to cut open the sidewalls of Nguyen resulting in the mouthpiece claimed by the '217 Patent and the '948 Patent. EX2020, p. 269. Hirsch or Black provide that motivation (especially Black), but the Examiner overlooked these analogous references because they did not also teach the intervening wall structure claimed. But, as discussed

above, the secondary reference does not need to teach the recited intervening wall structure, and it was error for the Examiner to overlook these analogous references, and how they could modify Nguyen like Al-Shawi.

The Examiner was correct that the obvious difference between Nguyen and the '217 Patent and '948 Patent was open sides. The Examiner was also correct that the prior art could provide a motivation to cut open Nguyen's sides. However, the Examiner erred by not considering relevant, known, analogous prior art (*e.g.*, Black) for this motivation.

2. Examiner Erred in Withdrawing Al-Shawi, if Applicant's Non-analogous Art Arguments were not Persuasive

As stated above, it is unclear whether the Examiner was persuaded by Applicant's non-analogous art arguments or its structural differences argument. EX2021, p. 195-196. Given the Examiner's illustration of Nguyen as modified by Al-Shawi suggesting that the Examiner only used Al-Shawi as a motivation to cut open Nyugen's sides (EX2020, p. 269), the Examiner was likely persuaded by the non-analogous art arguments.

However, if the Examiner disagreed with Applicant's non-analogous art arguments, then the Examiner erred in not maintaining the Nguyen/Al-Shawi rejection. The Examiner noted that the combination of Al-Shawi and Nguyen resulted in a simple cut across the holes of Nguyen's sidewall. *Id.* Thus, Applicant

arguing that the projections of Al-Shawi are not formed at an edge (EX2021, p. 195-196) would be irrelevant because Nguyen's sidewall is formed at an edge of the anterior wall. EX1005, FIG. 1A. In other words, Nguyen as modified by Al-Shawi would teach a mouthpiece having an intervening wall "extending along an edge of the anterior wall." Indeed, if Al-Shawi simply provided motivation to cut open solid sidewalls of Nguyen, then the placement of the projections 422 in Al-Shawi should be of no consequence to Nguyen as modified by Al-Shawi. Nguyen itself would have taught the recited placement of the intervening wall (along an edge of the anterior wall). EX1005, FIG. 1A.

So, if the Examiner was not persuaded that Al-Shawi is non-analogous art, then the Examiner erred in withdrawing Al-Shawi because Nguyen as modified by Al-Shawi still would have taught an anterior intervening wall extending along an edge of the anterior wall.

3. **Examiner Erred in Failing to Combine Hirsch with Nguyen**

The Examiner realized the similarities between the claims and both Nguyen and Hirsch. EX2021, p. 230. Applicant argued that Hirsch failed to teach a wall projecting from an edge of the anterior or posterior wall. EX2021, p. 262-265. The Examiner should have realized that the v-shaped configuration of Hirsch's wall could replace a solid sidewall in Nguyen, resulting in the claimed mouthpiece.

EX1003, ¶ 153. The Examiner had both pieces of prior art but failed to consider them together, which was error.

4. **Examiner Erred in Failing to Reject Claims 20 and 23 under 35 U.S.C. § 112**

The Examiner erred in allowing claims 20 and 23 due to the existence of clear § 112 violations. As explained in the Petition, a PHOSITA would not understand what is meant by an “open-meshed configuration” with reasonable certainty. EX1003, ¶¶ 217-228. Additionally, the omission of an intervening wall in claims 20 and 23 violates the written description requirement because the specification only envisioned intervening walls having a ridged configuration, not the anterior and posterior wall itself. EX1003, ¶¶ 211-216. These oversights are clear error.

5. **Examiner Erred in Failing to Assert Hirsch Against Claims 20 and 23**

The Examiner erred in allowing claims 20 and 23 over Hirsch, which was applied during prosecution of the '217 Patent. Claims 20 and 23 were newly introduced with Patent Owner's amendment filed September 23, 2024. EX1015, pp. 18-20. Notably, claims 20 and 23 omit the “intervening wall” claim language of claim 1, and claims 20 and 23 suggest that the anterior wall or the posterior wall *itself* could have ridged edges (even though this is unsupported by the specification, rendering such a construction incorrect). *Id.* These claims also include the mysterious “open-meshed configuration”, even though this term has no meaning in

the field or clear understanding in view of the specification. Patent Owner's strained infringement contentions suggest that any mouthpiece with channels formed by the anterior or posterior wall meets this limitation.

Now it could be that the Examiner understood that the recited "open-meshed configuration" to require a **combination** of an anterior intervening wall and a posterior intervening wall. EX1001, 6:53-59. If this is the correct understanding, then the Examiner did not err in failing to apply Hirsch alone, and the Board should clarify its construction of the term "open-meshed configuration" if making this finding.

However, if the Examiner did not understand "open-meshed configuration" in this manner, then the Examiner erred by failing apply Hirsch. Hirsch includes a textured posterior wall that forms channels 414 in the posterior wall itself. EX1006, FIGS. 6-10; EX1006, 3:37-4:21.

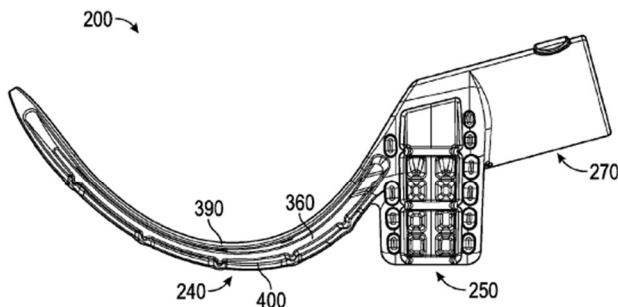


FIG. 6

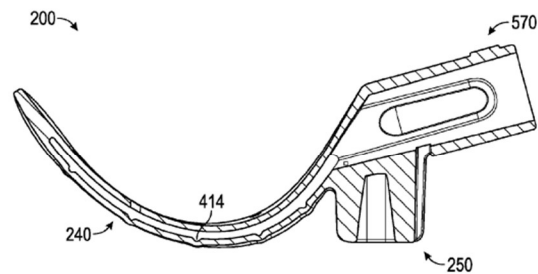


FIG. 10

Under this construction, Hirsch thereby teaches a first wall “configured at the two edges to have a ridged configuration with a plurality of ridges extending different distances partially across the distance between the first wall and the second wall, the two edges of the first wall being unconnected from the first wall, the plurality of ridges forming an open-meshed configuration [i.e., having channels] between the first and second wall to allow for suction of fluids from a patient's mouth into the interior space between the first and second walls.” *See also* EX1006, 4:43-5:8, FIGS. 6-10.

Instead of applying Hirsch, the Examiner allowed new claims 20 and 23 *without a single prior art rejection*. Either patent owner's construction of “open-meshed configuration” (if not indefinite) is flatly wrong and requires the combination of two, ridged, intervening walls or the Examiner erred in failing to apply Hirsch to this claim language.

III. **THE *FINTIV* FACTORS COUNSEL AGAINST EXERCISING DISCRETION TO DENY**

The Board considers six factors to determine whether to deny institution based on one or more parallel proceedings. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5-6 (PTAB Mar. 20, 2020) (Precedential). Weighing the *Fintiv* factors holistically, the Board should decline to exercise its discretion to deny institution.

A. **Factor 1 - Stay**

On September 3, 2025, the District Court denied Petitioner's Motion to Stay filed on July 11, 2025. The Court ruled that a stay could not be granted "at this time" leaving the door open for granting another stay motion should the PTAB institute IPR. EX1026, p. 6. The factor is either neutral or weighs against institution.

B. Factor 2 – Trial Date

This factor weighs heavily against discretionary denial because the District Court has not set a trial date. EX2011. As such, there can be no comparison, other than mere speculation, between the IPR conclusion and the parallel litigation's *trial date*, which Factor 2 specifically notices. Thus, Factor 2 strongly favors institution.

The Board would need to issue its final written decision by January 8, 2027. 35 U.S.C. § 316(a)(11). Patent Owner filed its initial complaint in the Parallel Litigation on September 16, 2024. As Patent Owner points out in its Brief on Discretionary Denial, the median time to trial in the Western District of Michigan in patent cases is 48 months. Paper 6, p. 17. Thus, by Patent Owner's own admission, the Board's final written decision will likely issue well before any trial date.

Patent Owner points to the Schedule set in the Parallel Litigation — specifically, the January 2026 fact discovery cutoff — to show that trial will *likely* occur before the Board's final written decision deadline. However, Judge Jonker stated that the Schedule is "a little ambitious given the scope of the case." EX1024, p. 30:12-16. It is extremely likely that the dates in the Schedule will be pushed back and

that any trial date, even if it occurs sooner than the 4-year median time to trial, will be after the Board's final written decision deadline. Indeed, Petitioner fully expects Patent Owner to adjust the schedule should it successfully obtain discretionary denial. Patent Owner has opposed any schedule changes so far to preserve its § 314 discretion arguments. This factor therefore weighs heavily against discretionary denial.

C. Factor 3 – Investment in Parallel Proceeding

This factor weighs heavily against discretionary denial because the Parallel Litigation is at a very early stage. As of the filing of this brief, the parties have only exchanged proposed claim constructions and have not yet conducted a *Markman* hearing or completed fact discovery. No depositions have occurred.

D. Factor 4 – Overlap of Issues

On August 20, 2025, Petitioner filed a *Sotera* stipulation with the District Court stating that if IPR is instituted, it will not pursue in the District Court Litigation any ground raised or that could have been reasonably raised in an IPR. EX1025. This factor weighs heavily in favor of institution. *See Sotera Wireless, Inc. v. Masimo Corporation* (§ II.A), IPR2020-01019, Paper 12 (December 1, 2020).

E. Factor 5 – Same Parties

Although Petitioner and Patent Owner are the same parties in both proceedings, the Board nevertheless repeatedly declines to exercise its discretion to deny institution despite this factor. *See e.g., VMWare, Inc.*, Paper 13 at 20-21;

Samsung Electronics Co., Ltd. V. Dynamics, Inc., IPR2020-00502, Paper 34 at 13-14 (PTAB August 12, 2020). As such, this factor is neutral.

F. Factor 6 - Merits

This factor heavily favors institution. First, as discussed in the Petition, the merits are exceptionally strong in this case. Moreover, as discussed above, the Petition follows the Examiner correct and sound reasoning and provides an analogous secondary reference that provides motivation to open the solid sidewalls of Nguyen. Section II.A. Further still, this petition offers clear instances of § 112 violations, which alone favors institution. *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); 35 U.S.C. § 314(a).

In summary, when weighing all the factors together, only one factor (the current lack of a stay) weighs against institution. When weighing the factors together, the factors strongly weigh in Petitioner's favor.

IV. ADDITIONAL CONSIDERATIONS

Patent Owner attempts to argue that Dr. Black is not a PHOSITA using an intentional misquotation of Petitioner's proposed PHOSITA definition. Patent Owner is aware of Dr. Black's definition of PHOSITA, which is "a person having at least a degree in mechanical engineering or **dentistry**, with at least 2 years' experience designing dental isolation mouthpieces." EX1003, ¶ 41. His full definition was included in his declaration and is known to Patent Owner. Moreover,

it is a strange argument to suggest that Dr. Black, one of the few and foremost inventors in this narrow field, is not a PHOSITA. Clearly, his contributions to the field more than make up for any lack of a mechanical engineering degree. The Board should disregard this baseless argument entirely.

V. **CONCLUSION**

The Board should reject Patent Owner's request for discretionary denial and institute an *inter partes* review of the '948 Patent for all of the above reasons.

Respectfully submitted,

Dated: October 6, 2025

By: /Nathan P. Sportel/
Nathan P. Sportel, Reg. No: 67,980
Brandon Griffith, Reg. No: 74,934
Jacob Cowdrey, Reg. No: 81,803
MILLER JOHNSON
45 Ottawa Ave SW, Suite 1100
Grand Rapids, MI 49503
(616) 831-1793 Telephone
(616) 831-1505 Facsimile
sporteln@millerjohnson.com
griffithb@millerjohnson.com
Attorneys for Petitioner
Ascentcare Dental Products, Inc.

Patent No. 12,167,948

Petitioner's Response to Patent Owner's Brief on Discretionary Denial – Paper 9

CERTIFICATE OF SERVICE

I hereby certify that on this the October 6, 2025, the foregoing Response to Patent Owner's Brief on Discretionary Denial and all exhibits and other documents filed together with the Petition were served via email to the attorneys of record for the '948 Patent at the following address:

Angelo Christopher, achristopher@nixonpeabody.com

Daniel Burnham, dburnham@nixonpeabody.com

NIXON PEABODY

70 West Madison St., Suite 5200, Chicago, IL 60602

Respectfully submitted,

By: /Nathan P. Sportel/

Nathan P. Sportel

Reg No. 67,980

Lead Counsel for Petitioner