

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FRAMELESS HARDWARE COMPANY LLC,
Petitioner,

v.

C.R. LAURENCE CO., INC.,
Patent Owner.

IPR2022-00620
Patent 9,074,413 B1

Before FRANCES L. IPPOLITO, ERIC C. JESCHKE, and
PAUL J. KORNICZKY, *Administrative Patent Judges*.

IPPOLITO, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

Petitioner Frameless Hardware Company LLC has filed two petitions challenging claims of U.S. Patent No. 9,074,413 B1 (Ex. 1001, “the ’413 patent”). The first petition, filed on December 22, 2021 in IPR2022-00356, challenges claims 1, 4, 5, 7, and 8 of the ’413 patent. IPR2022-00356, Paper 2. In IPR2022-00356, Petitioner requested review of claim 8 of the ’413 patent on two grounds of obviousness: (1) based on Sprague ’905¹ and (2) based on Girardy² with Applicant’s Admitted Prior Art (“AAPA”). IPR2022-00356, Paper 2, 5. After filing the Petition in IPR2022-00356, Petitioner withdrew its challenge of claim 8 based on Girardy and AAPA on April 8, 2022 based on the Federal Circuit’s decision in *Qualcomm Inc. v. Apple Inc.*, 24 F.4th 1367 (Fed. Cir. 2022). IPR2022-00356, Paper 8 (“Petitioner’s Notice of Withdrawal of Ground 6”). However, Petitioner maintained its challenge of claim 8 based on Sprague ’905. IPR2022-00356, Paper 2, 5. On July 8, 2022, we instituted an *inter partes* review of claims 1, 4, 5, 7, and 8 of the ’413 patent in IPR2022-00356. IPR2022-00356, Papers 11–12.

On February 18, 2022, Petitioner filed a second petition requesting *inter partes* review of claim 8 the ’413 patent. Paper 2 (“Pet.”). This second petition is at issue in this proceeding. Patent Owner C.R. Laurence Co., Inc. filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition and any response thereto shows “there is a reasonable likelihood that the petitioner would prevail with

¹ This is the same reference as listed in Section I.D. below.

² This is the same reference as listed in Section I.D. below.

respect to at least 1 of the claims challenged in the petition.” Considering the arguments presented in the parties’ briefs, we conclude that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging claim 8 of the ’413 patent as unpatentable under the grounds presented in the Petition. Pursuant to § 314, we hereby institute an *inter partes* review.

A. Related Matters

The parties indicate that the ’413 patent has been asserted in *C.R. Laurence Co., Inc. v. Frameless Hardware Company LLC, et al.*, No. 2:21-cv-01334-JWH-RAO (C.D. Cal.) filed February 12, 2021 (“District Court Litigation”). Pet. 3; Paper 3, 1.

B. The ’413 Patent

The ’413 patent “relates to vertical and horizontal framing members for framing glass doors, wall partitions and like structures, and in particular to framing insulated glass panels comprised of two panes of glass separated by spacers.” Ex. 1001, 1:8–11. The ’413 patent discloses that glass panels for such doors or wall partitions typically have bottom and top edges that are secured within horizontal rails and framing members are typically provided with decorative finishes or covers to create a pleasing ornamental appearance. *Id.* at 1:14–22. However, glass panel framing systems are limited due to the difficulty and cost of installation or the inconvenience of repairing a damaged or marred glass framing member after initial installation. *Id.* at 1:23–27. The ’413 patent indicates that to address some of these disadvantages, “designs that clamp onto the glass panels have been developed” in which a clamping force is applied to retain a glass panel within a channel that forms part of the framing member and a “clamping action is typically produced either by screws bearing directly against

clamping strips which bear against the glass panes or by wedging action whereby wedge blocks are pulled downwardly or pushed upwardly against mating angled walls to force the blocks inwardly against the glass panels to create clamping pressure.” *Id.* at 1:42–56. According to the ’413 patent, a drawback in these clamping systems is the inability to precisely control the degree of clamping force applied to the panes, which is relevant due to having two glass panes that are separated by a spacer and the panes being thin and therefore more subject to cracking. *Id.* at 1:57–2:2. The ’413 patent purports to solve these problems by providing a rail assembly having a “geometry that utilizes wedging action to convert an axial force into a perpendicular clamping force against the faces of the panel to be secured.” *Id.* at 2:3–7, 2:22–25.

Figure 2, reproduced below, shows such a rail assembly.

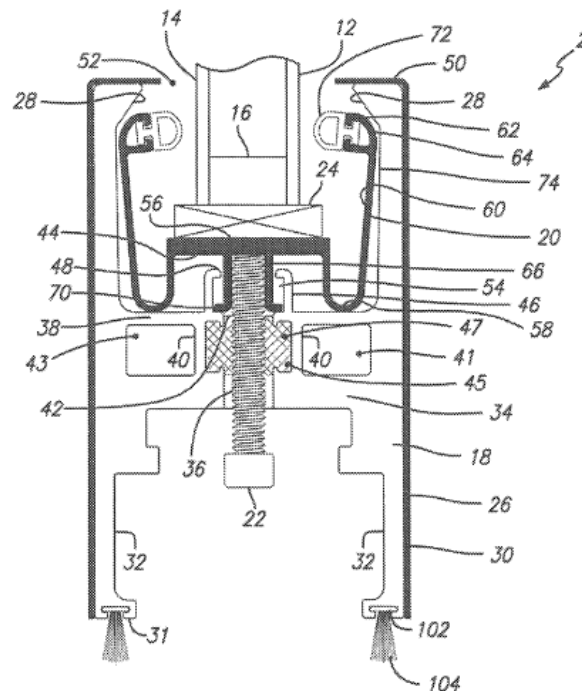


FIG. 2

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Figure 2 above is an exemplary end view of a horizontal rail assembly, in an unclamped position, of the '413 patent. *Id.* at 3:19–21. Rail assembly 2 is designed to clamp and secure glass panel 12, which can comprise two panes 14 separated by spacer 16. *Id.* at 4:6–14. Rail assembly 2 includes rail body 18, spring action clamping member 20 and clamp screws 22. *Id.* at 4:21–23. Rail body 18 has angled upper surfaces 28, which are angled inwardly with respect to the vertical direction of the panes 14, and glass receiving space 52 for housing spring action clamping member 20, glass panel support spacer 24, and glass panel 12. *Id.* at 4:25–27, 4:36–38. Rail body 18 further includes lower compression member 34, which has threaded holes 36 located at intervals to accommodate clamp screws 22 such that the ends of clamp screws 22 abut abutment surface 44 located on spring action clamping member 20. *Id.* at 4:44–51. In regard to clamping screws 22, the '413 patent discloses that, “[a]s is common in clamping applications, threaded fasteners are the preferred method of actuating the rail assembly components to generate clamping forces.” *Id.* at 6:56–60. Spring action clamping member 20 includes glass panel support base 56 connected to mutually opposed U-shaped sections 58, which are connected to spring walls 60. *Id.* at 4:58–61. Outwardly directed spring force is created by U-shaped sections 58 towards spring walls 60 and the degree of outwardly directed spring force may be varied by varying the bend radius of U-shaped sections 58. *Id.* at 5:44–49. Upper ends 62 of spring walls 60 include sliding surfaces 64 that slideably engage with top portions or angled upper surfaces 28 of rail body 18. Surrounding rail body 18 is decorative cladding member 26. *Id.* at 4:24–25, 6:45–47.

C. Challenged Claim

Petitioner challenges claim 8. Claim 8 depends from independent claim 1. Claims 1 and 8 are reproduced below:

1. A rail assembly for releasably securing a panel, the rail assembly comprising:

a rail body having mutually opposed inclined surfaces, angled inwardly towards the panel to be secured;

a spring action clamping member, having mutually opposed walls, the walls having mutually opposed upper ends, the upper ends configured to slide against the inwardly inclined surfaces of the rail body;

wherein the spring action clamping member is movable between an open position wherein the panel to be secured may be freely removed from the rail body and a closed position wherein the panel to be secured is clamped within the rail body;

a screw engaged with the rail body having an end in contact with the spring action clamping member; and

wherein actuation of the screw from the open position causes the clamping member to move upwardly causing the upper ends of the mutually opposed walls of the clamping member to slide upwardly against the mutually opposed inclined surfaces of the rail body, said upward motion causing the upper ends to translate inwardly, applying clamping pressure to each side of the panel to be secured.

Ex. 1001, 10:34–56.

8. The rail assembly for releasably securing a panel of claim 1, wherein the rail body is surrounded by decorative cladding.

Id. at 11:25–27.

D. Alleged Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
8	103	Sprague '905, ³ Trainor ⁴
8	103	Sprague '905, Sprague '780 ⁵
8	103	Girardy, ⁶ Trainor
8	103	Girardy, Sprague '780
8	103	Girardy, Sprague '905

Pet. 6. In addition to the references listed above, Petitioner relies on the Declaration of Steven M. Tipton, Ph.D. (Ex. 1007). *Id.* at 7.

II. ANALYSIS

A. Assignor Estoppel

Patent Owner contends that “[t]he inventions claimed in the ’413 Patent were invented by Gary Sprague while he was employed by [Patent Owner] CRL.” Prelim. Resp. 20 (citing Ex. 1001; Ex. 2004, 14 (Tr. 111:13–15)). Patent Owner adds that on June 23, 2014, Mr. Sprague signed both a declaration that he was the original inventor of the inventions claimed in the patent application that would mature into the ’413 Patent, and an assignment

³ U.S. Patent No. 6,434,905 B1, issued Aug. 20, 2002 (“Sprague ’905,” Ex. 1003).

⁴ U.S. Patent No. 5,069,010, issued Dec. 3, 1991 (“Trainor,” Ex. 1012).

⁵ U.S. Patent No. 7,302,780 B2, issued Dec. 4, 2007 (“Sprague ’780,” Ex. 1013).

⁶ French Patent Appln. Publ. No. 2367178 A1, published May 5, 1978 (“Girardy,” Ex. 1004). Petitioner provides a certified English-language translation of Girardy (Ex. 1005). Any reference to Girardy hereinafter will be to this English-language translation.

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of “his entire right, title, and interest in and to said Inventions, and said Patent Application for said Inventions” to Patent Owner. *Id.* (citing Ex. 1002, 132; Ex. 2003, 3–6). The assignment was recorded on July 10, 2014. Ex. 2003, 1–2. Patent Owner asserts that the pending claims of the ’413 patent were not amended during the prosecution. Prelim. Resp. 20 (citing Ex. 1002).

Patent Owner further contends that at the time Mr. Sprague executed his declaration and assignment, he had knowledge of the two primary references used in all of Petitioner’s asserted grounds. Prelim. Resp. 20–21 (citing Ex. 1003 (sole inventor); Ex. 2004, 20–24 (Tr. 143:19–147:21)). Patent Owner adds that “[Mr.] Sprague now works for [Petitioner] FHC and was the principal designer of the accused HERC-DOOR™ product in the pending lawsuit between CRL and FHC.” *Id.* at 18 (citing Ex. 2004, 11 (Tr. 22:7–10)); *id.* at 12 (Tr. 33:2–7); Ex. 2005 ¶¶ 113–143 (Count III, Patent Infringement); Ex. 1011. In the District Court Litigation, Patent Owner contends “Sprague testified under oath that he believed that the ’413 Patent was patentable over the prior art until **January 2022**, when he claims to have abruptly changed his mind after seeing the first Petition for *Inter Partes* Review (IPR2022-00356) prepared by his new employer, FHC.” Prelim. Resp. 19 (emphasis in original) (citing Ex. 2004, 13 (Tr. 41:7–21); *id.* at 15–18 (Tr. 126:22–129:10); *id.* at 19 (Tr. 135:14–19)). Based on these alleged facts, Patent Owner urges us to reconsider the “blanket ban on assignor estoppel” in view of the decision in *Minerva Surgical, Inc. v. Hologic, Inc.*, 141 S. Ct. 2298 (2021). Prelim. Resp. 21–25.

With respect to a petition for an *inter partes* review, our reviewing court has determined that the doctrine of assignor estoppel does not bar an assignor from filing a petition. *Arista Networks, Inc. v. Cisco Sys., Inc.*, 908

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F.3d 792, 804 (Fed. Cir. 2018)). This holding in *Arista* is binding upon the Board. The holding was based on 35 U.S.C. § 311(a), which provides “a person who is not the owner of a patent may file with the Office a petition to institute an inter partes review of the patent” (emphasis added), which the Federal Circuit concluded “unambiguously leaves no room for assignor estoppel in the IPR context.” *Arista*, 908 F.3d at 801–04.

The Board has followed this precedent and issued its own precedential decision holding:

Under the AIA, “a person *who is not the owner of a patent* may file with the Office a petition to institute an *inter partes* review of the patent.” 35 U.S.C. § 311(a) (emphasis added). Consequently, under the statute, an assignor of a patent, who is no longer an owner of the patent at the time of filing, may file a petition requesting *inter partes* review. This statute presents a clear expression of Congress’s broad grant of the ability to challenge the patentability of patents through *inter partes* review. *Athena Automation Ltd. v. Husky Injection Molding Sys. Ltd.*, IPR2013-00290, Paper 18 at 12–13 (PTAB Oct. 25, 2013) (precedential).

We have, additionally, reviewed the Supreme Court decision in *Minerva Surgical, Inc. v. Hologic, Inc.*, 141 S. Ct. 2298 (2021). There, the Supreme Court “clarif[ied] that [assignor estoppel] reaches only so far as the equitable principle long understood to lie at its core”; that is, the assignor is estopped from raising patent invalidity as a defense “when, but only when, the assignor’s claim of invalidity contradicts explicit or implicit representations he made in assigning the patent.” *Id.* at 2302. Moreover, the Court determined that “[a]ssignor estoppel applies when an invalidity defense in an *infringement suit* conflicts with an explicit or implicit representation made in assigning patent rights. But absent that kind of

inconsistency, an invalidity defense raises no concern of fair dealing—so assignor estoppel has no place.” *Id.* at 2311 (emphasis added).

We note that *Minerva* involved a district court infringement suit; not an *inter partes* review. Further, we discern nothing in the Supreme Court decision that clearly overrules the holding in *Arista* identified above. For example, the Supreme Court did not address the language of 35 U.S.C. § 311(a). Therefore, based on the present record, Patent Owner has not presented persuasive arguments that we should decline to follow binding, precedential decisions. Accordingly, on this record and for this preliminary decision, we decline to apply assignor estoppel to deny this Petition.

B. Level of Ordinary Skill in the Art

In determining the level of skill in the art, we consider the type of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus. Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986); *Orthopedic Equip. Co. v. United States*, 702 F.2d 1005, 1011 (Fed. Cir. 1983).

Petitioner contends that a POSITA at the time of the invention of the ’413 patent “would have had a bachelor’s degree in mechanical engineering or an equivalent field, plus at least two years of experience working in the field of mechanical design and product testing.” Pet. 8 (citing Ex. 1007 ¶¶ 34–36). Patent Owner does not dispute this level of skill. *See generally* Prelim. Resp. For purposes of this Decision, we adopt Petitioner’s proposal as reasonable and consistent with the prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art may reflect an appropriate level of skill in the art).

C. Principles of Law

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under § 103 that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) “secondary considerations” of non-obviousness such as “commercial success, long-felt but unsolved needs, failure of others, etc.” *Id.* at 17–18. “While the sequence of these questions might be reordered in any particular case,” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the Federal Circuit has “repeatedly emphasized that an obviousness inquiry requires examination of all four *Graham* factors and that an obviousness determination can be made only after consideration of each factor.” *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1335 (Fed. Cir. 2016).

We note that, with respect to the fourth *Graham* factor, the current record in this proceeding does not include any argument or evidence directed to secondary considerations of nonobviousness. The analysis below addresses the first three *Graham* factors.

D. Claim Construction

For petitions filed on or after November 13, 2018, the “broadest reasonable interpretation” standard has been replaced with the federal court claim construction standard that is used to construe a claim in a civil action under 35 U.S.C. § 282(b). This is the same claim construction standard articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and its progeny.

“In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language

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itself, the written description, and the prosecution history, if in evidence.”

DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317 (citations omitted).

Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

We construe only those claim terms that require analysis to determine whether to institute *inter partes* review. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (holding that “only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”).

Petitioner proposes construction for the following claim terms: (1) “a rail body having mutually opposed inclined surfaces, angled inwardly towards the panel to be secured” recited in claim 1; (2) “a spring action clamping member, having mutually opposed walls, the walls having mutually opposed upper ends, the upper ends configured to slide against the inwardly inclined surfaces of the rail body” recited in claim 1; (3) “a screw engaged with the rail body having an end in contact with the spring action clamping member” recited in claim 1; and (4) “decorative cladding” recited in claim 8. *See Pet.* 13–17.

Patent Owner disputes Petitioner’s construction for claim term (2) above. *See Prelim. Resp.* 3–17.

For the purposes of this Decision, we address the parties’ proposed construction for “a spring action clamping member, having mutually

opposed walls, the walls having mutually opposed upper ends, the upper ends configured to slide against the inwardly inclined surfaces of the rail body” recited in claim 1. Ex. 1001, 10:38–41.

Petitioner proposes that this claim term requires “a clamping member having mutually opposed walls, the mutually opposed upper ends of which are bent inwardly when slid against the inwardly inclined surfaces of the rail body *to create an outwardly directed spring force.*” Pet. 15 (emphasis added).

Patent Owner contends that Petitioner’s proposed construction is incorrect because the outwardly directed spring force is present in both the open/unclamped and closed/clamped positions. Prelim. Resp. 7–8. According to Patent Owner, the spring action clamping member “requires an ‘outwardly directed spring force’ to be a property of the clamping member itself, present in both its open and closed positions.” *Id.* at 7. Patent Owner urges that we construe this claim term to mean “a clamping member having mutually opposed walls, *the mutually opposed upper ends of which have an outwardly directed spring force in both open and closed positions* and are bent inwardly when slid against the inwardly inclined surfaces of the rail body.” *Id.*

Initially, we observe that the parties’ dispute centers on language that is not expressly recited in the claim. Petitioner contends that the sliding of the mutually opposed walls of the clamping member creates an “outwardly directed spring force.” Pet. 15. Patent Owner then adds upon Petitioner’s language to propose that the “outwardly directed spring force” is present in open and closed positions. Prelim. Resp. 7. Nevertheless, claim 1 does not recite an “outwardly directed spring force” in regards to either the open or

closed positions. Ex. 1001, 10:34–56. Nor does the term “outwardly directed spring force” appear in the other limitations of claim 1.

When force is described expressly in a later limitation, claim 1 recites that force as a clamping pressure applied by the spring action force clamping member:

wherein actuation of the screw from the open position causes *the clamping member to move upwardly causing the upper ends of the mutually opposed walls of the clamping member to slide upwardly against the mutually opposed inclined surfaces of the rail body, said upward motion causing the upper ends to translate inwardly, applying clamping pressure to each side of the panel to be secured.*

Ex. 1001, 10:49–56 (emphases added). Here, the upward motion causes the upper ends to move inwardly and apply a clamping pressure. Nowhere in this language does claim 1 expressly require that an “outwardly directed spring force” is created by the inward movement of the upper ends as Petitioner proposes.

Our reading of claim 1 is consistent with the ’413 patent’s Specification, which describes the operation of a spring action force clamping member. With reference to Figures 2 and 3, the ’413 teaches that screws 22 are tightened to apply an axial and upwardly directed driving force to spring action clamping member 20 at abutment surface 44. Ex. 1001, 5:53–56. The “applied force from the clamp screws 22 causes the spring action clamping member 20 to move upwardly within the glass panel receiving channel 52” and that upward movement causes a “*horizontal and inwardly directed clamping force* to be generated as the upper ends 62 of the spring action clamping member 20 are driven upwardly against the inwardly angled upper surfaces 28 of the rail body 18.” *Id.* at 5:56–62 (emphasis added). The ’413 patent further teaches that “upon the continued upward

movement and consequent inward translation of the upper ends 62 of the spring action clamping member, clamping force is generated against the glass panes 14 of the glass panel to be secured 12.” *Id.* at 6:4–8. In this way, the ’413 patent teaches that the bending of mutually opposed upper ends of the spring action clamping member generates an “inwardly directed clamping force,” not the “outwardly directed spring force” proposed by Petitioner. In other words, the force is inward, not outward.

Indeed, the passages of the ’413 patent relied upon by Petitioner do not indicate otherwise. Column 5, lines 44 through 47 of the ’413 patent (cited by Petitioner) disclose that an outwardly directed spring force is created by U-shaped sections 58 of the spring action clamping member. Ex. 1001, 5:44–47. The ’413 patent further discloses that “[t]he degree of outwardly directed spring force may be varied by varying the bend radius of the U-shaped sections 58.” Ex. 1001, 5:47–49. As such, the outwardly directed force is disclosed in these sections as being generated by *U-shaped sections* rather than the sliding of mutually opposed upper ends of the spring action clamping member.

In fact, we observe that the ’413 patent refers to Figure 2 as depicting the rail assembly in an unclamped position. Ex. 1001, 3:19–21. In this position, “[t]he upper ends 62 of the spring action clamping member 20 rest in contact with interior walls 74 of the glass channel receiving space 52.” *Id.* at 5:42–44. With reference to Figures 2 and 3, the ’413 patent further teaches that the “[o]utwardly directed spring force is created by the U-shaped sections 58 of spring action clamping member *which interconnect the walls 60 with the glass panel support base 56.*” *Id.* at 5:44–47 (emphases added). In other words, as disclosed, the spring force is the result

of the clamping member interconnecting with walls 60, which occurs in the open, unclamped state shown in Figure 2.

Turning to Patent Owner’s proposed construction, we observe that Patent Owner seeks to address the “outwardly directed spring force” that Petitioner has added to claim 1. However, again, the limitation at issue does not recite any particular force and, instead, focuses on structural limitations—a spring action clamping member having mutually opposed walls with opposed upper ends configured to slide against the inwardly inclined surfaces of the rail body. Moreover, while we agree that the spring action clamping member is recited as providing “spring action,” we are, however, not persuaded at this juncture that these limitations require a specific type of spring action force (i.e., “outwardly directed force”) that must be generated a particular way in various positions (i.e., open or closed and via U-shaped sections or sliding upper ends). The claim language does not require more than spring action, which the parties appear to agree means a spring action force. Additionally, we note that our reading of claim 1 is consistent with the testimony of Patent Owner’s declarant, Dr. Michael McCarthy, who testifies that this claim language “does not contain the phrase ‘outwardly directed forces,’ and instead refers to the clamping member as having ‘spring action’ independent of the open or closed positions.” Ex. 2002 ¶ 25.

That being the case, we conclude it is unnecessary for the purposes of this Decision to construe this limitation beyond its plain and ordinary meaning other than to note that the spring action clamping member provides a spring action force. After institution, the parties are invited to further address and develop the record on this claim construction issue.

For purposes of this decision, we do not expressly construe any other terms. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017), cert. denied, 138 S. Ct. 1695 (April 30, 2018) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’”) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

E. Overview of the Prior Art

1. Summary of Sprague ’905 (Ex. 1003)

Sprague ’905 is a reference entitled “Door Rail System.” Ex. 1003, code (54). The rail system is “for holding a plate glass pane in a doorway and/or wall partition.” *Id.* at 1:3–6. Sprague ’905 discloses that when a rail is permanently attached to a pane, that makes it difficult or impossible to remove the rail from the pane, which is disadvantageous “at least from the perspective of glaziers and installers.” *Id.* at 1:17–28. Sprague ’905 provides a solution to this problem, including providing a rail system that is easier to assemble and disassemble. *Id.* at 1:42–2:50.

Figure 12, reproduced below, shows such a rail system.

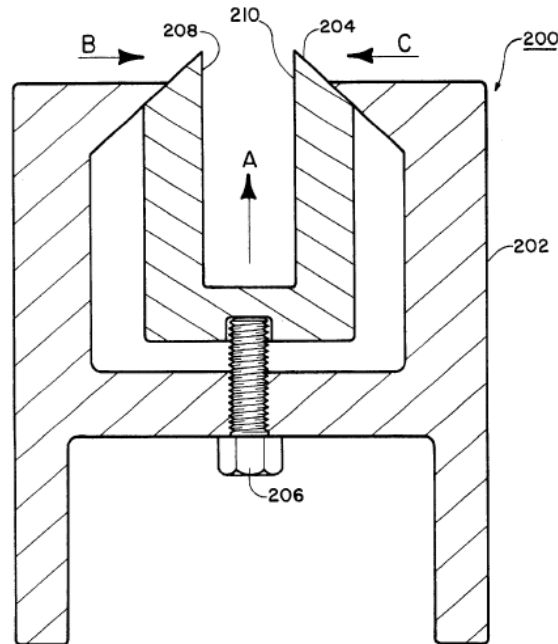


FIG. 12

Figure 12 above is a transverse cross-sectional view of an embodiment of Sprague '905's rail system. *Id.* at 3:57–59. Rail system 200 includes housing 202, clamp member 204, and screw 206, in which clamp member 204 has arms 208, 210. *Id.* at 6:47–54. Screw 206 is a threaded member. *Id.* at 4:13–15. Sprague '905 discloses that “[a]s screw 206 is tightened, it forces clamp member 204 to move generally in the driven direction of arrow A” and “[b]ecause housing 202 and clamp member 204 are in contact at surfaces inclined with respect to the screw-tightening direction A, this causes the arms 208, 210 of clamp member 204 to move toward each other (in the clamping directions respectively shown by arrows B and C) to provide clamping force on a pane (not shown).” *Id.* at 6:49–57. Clamp member 204 flexes to provide a clamping force that is driven direction oriented towards the pane. *Id.* at 6:58–60. In another embodiment, Sprague '905 discloses that pads 110 (shown in Figure 2) are “interposed” between a clamp member and a pane and “serve to accommodate warping and uneven

surfaces” of the pane and clamp members and to “more evenly distribute force along” the pane. *Id.* at 6:5–13.

Sprague ’905 further discloses that because the housing of its rail system has side surfaces that are usually exposed, “it is preferable to use an attractive finish.” *Id.* at 4:45–48. However, according to Sprague ’905, “[a]lternatively, conventional cladding, such as brass plates, may be placed over the exposed surfaces of [the housing] by conventional means, such as an adhesive.” *Id.* at 4:49–52.

2. *Summary of Trainor (Ex. 1012)*

Trainor is a reference entitled “Glass Door or Partition Support Rail.” Ex. 1012, code (54). Trainor “relates to support rails which attach to the top and the bottom of a glass panel to enable the glass panel to be mounted within a door frame or the like.” *Id.* at 1:7–10.

Figure 2, reproduced below, shows an exploded isometric view of the end portion of Trainor’s support rail. *Id.* at 3:50–51.

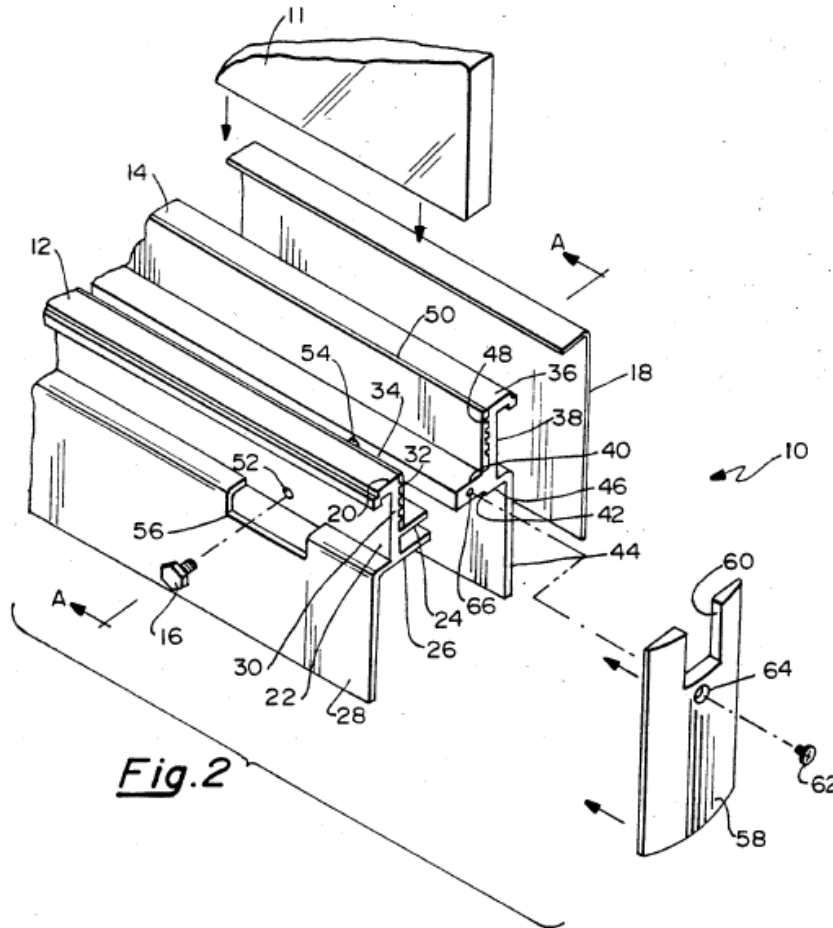


Figure 2 above shows elongated rail 10 for mounting the bottom edge of a pane of glass 11. *Id.* at 3:57–59. Support rail 10 includes longitudinally extending female rail section 12, longitudinally extending male rail section 14, screws or adjustable fastening or clamping means 16 transverse to rail sections 12 and 14, and a pair of longitudinally extending side cladding members or rail cover members 18 (only one is shown in Figure 2 whereas both are shown in Figure 3). *Id.* at 4:1–8. Female rail section 12 has upper mounting section 20 and vertical mounting section 28, and similarly, male rail section 14 has upper mounting section 26 and vertical mounting section 44 for mounting clad members 18 via “an adhesive or any suitable means.”

Figure 3, reproduced below, shows a clamping column of Sprague '780.

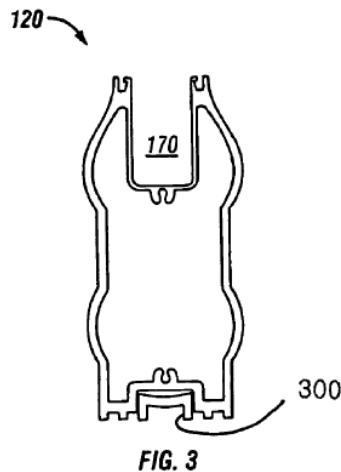


Figure 3 above shows a cross-sectional view of a clamping column used in Sprague '780's rail system shown in Figure 1. *Id.* at 2:12–13. Clamping column 120 (and similarly, clamping column 130) includes recess 170 that is structured to secure to bottom edge 180 of panel 110 (shown in Figure 1). *Id.* at 2:42–44. Sprague '790 discloses that first and second columns 120, 130 are formed of aluminum but that “it is preferable to use an attractive finish.” *Id.* at 3:6–10. According to Sprague '790, “[a]lternatively, conventional cladding, such as brass plates, may be placed over the exposed surfaces” by conventional means, such as an adhesive. *Id.* at 3:11–13.

4. Summary of Girardy (Ex. 1005)

Girardy is a reference titled “Metal frame for doors and walls made of tempered glass and similar.” Ex. 1005, code (54). Girardy “relates to a metal fitting for doors and walls made from tempered glass plates (safety glass)” in which such “fittings may in particular comprise plinths, hinges, hinge pins, gusset plates, handles, angle hinges, etc.” *Id.* at 1:1–4. Girardy purports to provide fittings that are less costly and easier to assemble. *Id.* at 1:21–22.

Figure 1, reproduced below, shows a fitting according to an exemplary embodiment.

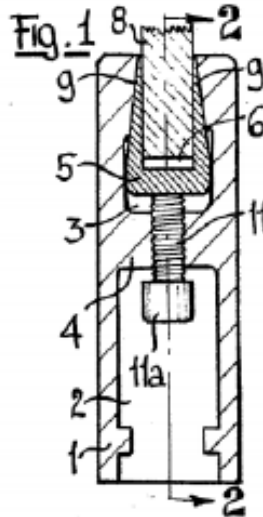


Figure 1 above is a cross-section “of a first embodiment forming a plinth.” *Id.* at 1:32–33. The plinth includes body 1 that has an H-shaped straight section with lower longitudinal grooves 2 and upper longitudinal grooves 3 separated from each other by central branch 4. *Id.* at 2:10–14. Upper longitudinal groove 3 “has side walls sloping in opposite directions converging on the mouth of the groove” and houses clamping element 5 “with a U-shaped straight section,” which comprises central slot 6 that accommodates an edge of tempered glass plate 8. *Id.* at 2:15–18. Clamping element 5 has flanges 9 with “outer surfaces sloping in opposite directions, converging on the mouth” of central slot 6 and which “rest against the converging sloping walls of groove 3.” *Id.* at 2:19–22. The plinth also has screws 11, with heads 11a, which can be accessed from the lower bracket of the profile of the plinth and “which are screwed into threaded through-bore holes” in central branch 4 of body 1. *Id.* at 2:23–26. This configuration makes it possible to move clamping element 5 “upwards to tighten its two flanges 9 due to the wedge effect created by the sloping surfaces, in order to

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clamp the glass plate” in slot 6 “so as to fasten the plinth to the tempered glass plate.” *Id.* at 2:26–29.

F. Obviousness based Sprague '905 and Trainor – Claim 8

Petitioner asserts that claim 8 would have been obvious based on the teachings of Sprague '905 and Trainor. Pet. 28–44. Patent Owner opposes. Prelim. Resp. 3–17. Having considered the arguments and evidence before us, we find that the record establishes a reasonable likelihood that Petitioner would prevail on this asserted ground of obviousness based on Sprague '905 and Trainor for claim 8.

1. Claim 1

Below, we first discuss the limitations recited in independent claim 1, which are required by dependent claim 8.

Claim 1 is directed to a rail assembly for releasably securing a panel. The recited rail assembly includes “a rail body having mutually opposed inclined surfaces, angled inwardly towards the panel to be secured.” Ex. 1001, 10:34–37.

For these limitations, Petitioner refers to an embodiment disclosed in Sprague '905's Figure 12. Pet. 28. Sprague '905's Figure 12 is reproduced below:

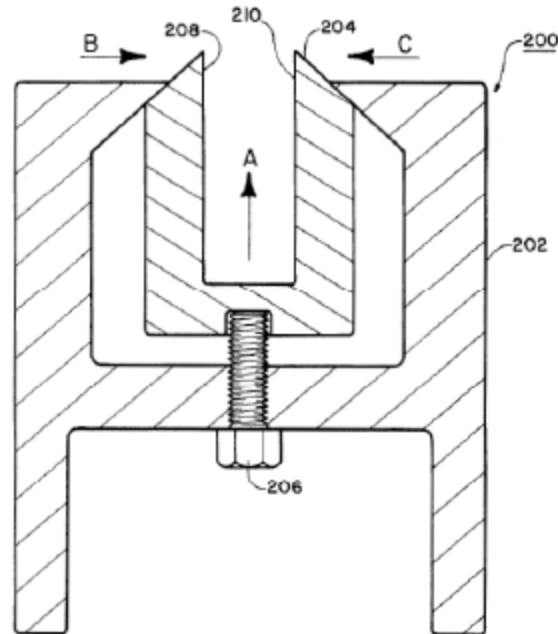


FIG. 12

Figure 12 provides a cross-sectional view of rail system 200 with housing 202, clamp member 204, and screw 206. Ex. 1003, 6:47–48. With reference to Figure 12, Petitioner contends that Sprague '905 teaches rail system 200 (i.e., rail assembly) designed to releasably clamp a pane. Pet. 28 (citing Ex. 1003, 2:49–50, 2:66–3:2, 6:47–48, Fig. 12). Petitioner adds that housing 202 has mutually opposed inclined surfaces at the opposed upper ends of the housing 202. *Id.* at 30.

Patent Owner does not present any arguments specific to these limitations.

Based on the present record, we agree with Petitioner. Sprague '905 discloses that

[t]he elongated housing includes a first inclined surface and a second inclined surface. The first inclined surface of the elongated housing is oriented to be generally inclined with respect to the vertical direction. The second inclined surface of the elongated housing is oriented to be generally inclined with respect to the vertical direction.

Ex. 1003, 3:3–8. This disclosure is consistent with housing 202 shown in Figure 12, which also depicts inclined upper ends. *Id.* at Fig. 12.

Claim 1 further recites

a spring action clamping member, having mutually opposed walls, the walls having mutually opposed upper ends, the upper ends configured to slide against the inwardly inclined surfaces of the rail body;

Ex. 1001, 10:38–41.

For these limitations, Petitioner argues, among other things, that Sprague '905's clamp member has mutually opposed arms 208 and 210 and that arms 208 and 210 have mutually opposed upper ends configured to slide against the inwardly inclined surfaces of the housing 202. Pet. 32–33 (citing Ex. 1003, Fig. 12, 6:49–57; Ex. 1007 ¶ 83). Petitioner adds that “[b]ecause housing 202 and clamp member 204 are in contact at surfaces inclined with respect to the screw-tightening direction A, this causes the arms 208, 210 of clamp member 204 to move toward each other (in the clamping directions respectively shown by arrows B and C) to provide clamping force on a pane.” *Id.* at 33 (citing Ex. 1007 ¶ 84).

Petitioner further asserts that a spring action force is present when arms 208 and 210 are slid against the inwardly inclined surfaces of housing 202. Pet. 33. Relying on the testimony of Dr. Tipton, Petitioner also argues that “a POSITA would have understood that a U-shaped extruded aluminum clamp would necessarily produce an outwardly directed spring force when the ends of the clamp are driven toward each other as shown in Figure 12.” *Id.* (citing Ex. 1007 ¶ 85).

In response, Patent Owner contends that the Petition has not established that upper ends of arms 208 and 210 of clamp member 204 have

an outwardly directed spring force when the clamp member 204 is in its open position. Prelim. Resp. 14. Patent Owner adds that Figure 12 of Sprague '905 “suggests that loosening the screw 206 would lower clamp member 204 (in the opposite direction of arrow A), disengaging the arms 208, 210 of clamp member 204 from the interior surfaces of the housing 202.” Prelim. Resp. 15 (citing Ex. 1003, Fig. 12, 6:47–61). Patent Owner argues that this open position has no outwardly directed spring force. *Id.* (citing Ex. 1007 ¶¶ 71, 72, 75, 76).

Patent Owner’s position is based on its proposed claim construction of “spring action clamping member,” which requires an outwardly directed spring force in both open and closed positions. We have not adopted Patent Owner’s proposed construction. *See supra* Sect. II.D. Instead, based on the preliminary record, we have construed claim 1’s “spring action clamping member” limitation according to its plain and ordinary meaning, which does not, as the parties propose, require a specific type of spring force provided in a particular way. *Id.* Nonetheless, we agree that the term “spring action clamping member” means the clamping member provides a spring action force.

With this construction in mind, we observe preliminarily that Sprague '905 discloses the tightening of screw 206 *forces* clamp member 204 to move in the driven direction of arrow A as shown in Figure 12 above. Ex. 1003, 6:50–51. Sprague '905 teaches this forced movement brings clamp member 204 into contact with housing 202 at inclined surfaces that cause arms 208, 210 to move toward each other and “provide clamping force.” *Id.* at 6:51–57. Sprague '905 further discloses that clamp member 204 is “unitary” and “*flexes* to provide the clamping force.” *Id.* at 6:57–59 (emphasis added).

In this way, we determine, for the purposes of this Decision, that Petitioner has explained sufficiently how Sprague discloses this limitation. There does not appear to be a dispute between the parties that Sprague '905's "unitary clamp member 204" flexes and provides a spring action force in the clamped/closed position, but returns to an open position with the loosening of screw 206. *See generally* Prelim. Resp. 14–15 ("Figure 12 of Sprague '905 . . . suggests that loosening the screw 206 would lower clamp member 204 (in the opposite direction of arrow A), disengaging the arms 208, 210 of clamp member 204 from the interior surfaces of the housing 202.") (citing Ex. 1003, Fig. 12, 6:47–61). This is sufficient at this stage for institution. However, the parties may address this issue after institution.

Claim 1 further recites:

wherein the spring action clamping member is movable between an open position wherein the panel to be secured may be freely removed from the rail body and a closed position wherein the panel to be secured is clamped within the rail body.

Ex. 1001, 10:42–46.

Petitioner argues that Sprague '905's clamp member 204 is movable between an open position (the clamp member 204 is lowered) and a closed position (the clamp member 204 is raised in the direction of arrow A shown in Figure 12) with the panel clamped into housing 202. Pet. 35–36 (citing Ex. 1003, 2:49–50, 6:49–57, Fig. 12; Ex. 1007 ¶ 90).

Patent Owner does not present any arguments specific to these limitations separate from those we have considered above. Based on present record, these arguments are not persuasive for the reasons discussed.

Claim 1 further recites:

a screw engaged with the rail body having an end in contact with the spring action clamping member; and

wherein actuation of the screw from the open position causes the clamping member to move upwardly causing the upper ends of the mutually opposed walls of the clamping member to slide upwardly against the mutually opposed inclined surfaces of the rail body, said upward motion causing the upper ends to translate inwardly, applying clamping pressure to each side of the panel to be secured.

Ex. 1001, 10:47–56.

Petitioner asserts that Sprague '905's screw 206 is a threaded fastener with an upper end that abuts clamping member 204. Pet. 37. According to Petitioner, tightening screw 206 moves clamping member 204 to move in drive direction of arrow A. *Id.* at 38. The upward movement causes the upper ends of the arms 208 and 210 of the clamping member 204 to slide upwardly against the mutually opposed inclined surfaces of the housing 202. *Id.* at 39 (citing Ex. 1003, Fig. 12, 6:51–57; Ex. 1007 ¶ 96). And, this upward motion in the direction of arrow A causes the upper ends of the arms 208 and 210 to translate inwardly in the directions of arrows B and C, applying clamping pressure to each side of the panel to be secured. *Id.*

Patent Owner does not present any arguments specific to these limitations, separate from those we have considered above. Based on present record, these arguments are not persuasive for the reasons discussed.

2. *Claim 8*

Claim 8 depends from claim 1 and further recites “wherein the rail body is surrounded by decorative cladding.” Ex. 1001, 11:25–27.

Petitioner argues that Sprague '905 discloses “a rail body that is surrounded by a decorative cladding or cover, but not explicitly with the embodiment of Figure 12 of Sprague '905.” Pet. 40 (citing Ex. 1003, 4:49–

52 (“[C]onventional cladding, such as brass plates, may be placed over the exposed surfaces of housing 102 by conventional means, such as an adhesive.”)).

Petitioner further argues that “[i]t also would have been obvious for a POSITA to have used the pair of longitudinally extending side cladding members or rail cover members 18 taught in Trainor with the embodiment of Figure 12 of Sprague ’905.” Pet. 41 (citing Ex. 1007, 104). Petitioner adds that Trainor teaches elongated support rail 10 is surrounded by decorative cladding/cover members 18. *Id.* (citing Ex. 1012, 6:33–36 and Figures 2–3; Ex. 1007 ¶ 104). In addition, Petitioner reasons that

[a] POSITA would have been motivated to combine the decorative cladding taught in Trainor with the embodiment of Figure 12 of Sprague ’905 in order to enhance the aesthetics of the Figure 12 embodiment. Ex. 1007 ¶ 106. Although the cladding adds some expense and an additional assembly step, these considerations are no different than those involved with the embodiments of Trainor. Ex. 1007 ¶ 106. Trainor teaches that the cladding members 18 “provide support rail 10 with a clean, finished appearance” Ex. 1012, 6:33-36, and a POSITA looking to enhance the aesthetics of the Figure 12 embodiment of Sprague ’905 or simply change the look of the Figure 12 embodiment would have been motivated to surround the housing 202 with the cladding members 18 taught in Trainor. Ex. 1007 ¶ 106.

Pet. 42–43.

Patent Owner does not present any arguments specific to the limitations recited in claim 8.

For the foregoing reasons, and based on the present record, we conclude Petitioner has provided sufficient argument and evidence in relation to challenging claims 8 as obvious over Sprague ’905 and Trainor to

demonstrate a reasonable likelihood that Petitioner would prevail with respect to this challenge at trial.

G. Obviousness based on Sprague '905 and Sprague '780; based on Girardy and Trainor; based on Girardy and Sprague '780; and based on Girardy and Sprague '905 – Claim 8

Petitioner also asserts claim 8 would have been obvious based on the teachings of Sprague '905 and Sprague '780. Pet. 44–47. Petitioner also asserts claim 8 would have been obvious based on the teachings of Girardy and Trainor. Pet. 48–61. Petitioner also asserts claim 8 would have been obvious based on the teachings of Girardy and Sprague '780. Pet. 61–63. Petitioner also asserts claim 8 would have been obvious based on the teachings of Girardy and Sprague '905. Pet. 64–66. For these grounds, Patent Owner relies on similar arguments, which are discussed in the decision on institution in IPR2022-00356. IPR2022-00356, Paper 10, 33-35; *see* Prelim. Resp. 16 (“Once again, however, the Second Petition never asserts that the mutually opposed upper ends of the [Girardy’s] flanges 9 of the clamping element 5 have an outwardly directed spring force when the clamping element 5 is in its open position.”).

Pursuant to USPTO policy implementing *SAS Institute, Inc. v. Iancu*, 138 S.Ct. 1348 (2018), we must “either (1) institute as to all claims challenged in the petition and on all grounds in the petition, or (2) institute on no claims and deny institution.” PTAB Consolidated Trial Practice Guide (Nov. 2019) 3, 5–6, 64. We “will not institute on fewer than all claims or all challenges in a petition.” *Id.* at 5, 64; *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1359–60 (Fed. Cir. 2018) (stating a decision to institute is “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”); 37 C.F.R.

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§ 42.108(a). Thus, because we have decided to grant institution on Petitioner’s Ground 1 against claim 8, we must do the same for Grounds 2–5.

III. INSTITUTING REVIEW OF ALL CLAIMS

After considering the evidence and arguments presented in the Petition, we determine that Petitioner has demonstrated a reasonable likelihood of success in proving that at least one claim of the ’413 patent is unpatentable. Accordingly, an *inter partes* review of claim 8 and all of the grounds presented in the Petition is hereby instituted. *See also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (indicating that a decision whether to institute an *inter partes* review “requires a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim or any underlying factual or legal issues.

IV. CONSOLIDATION

During an August 24, 2022 call with the Board and parties in IPR2022-00356, Petitioner proposed consolidation of this proceeding with IPR2022-00356. IPR2022-00356, Paper 17, 3. IPR2022-00356 involves the same parties and patent. Patent Owner opposed Petitioner’s request as premature prior to institution in this proceeding. *Id.* The panel agreed with Patent Owner. *Id.* Now that we have instituted review in the instant proceeding, we authorize Petitioner to file a motion to consolidate IPR2022-00356 and IPR2022-00620. The motion is limited to five (5) pages and must be filed by September 22, 2022. Petitioner is further instructed to file Proposed Schedules for the dates and deadlines in both IPR2022-00620 and

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IPR2022-00356 that takes consolidation into consideration. The Proposed Schedules may include adjustments to the current dates/deadlines in IPR2022-00356 to align the two proceedings. Patent Owner may file an opposition to Petitioner's motion, also limited to five (5) pages by September 29, 2022. Patent Owner may also submit separate Proposed Schedules that include its proposed adjustments to dates/deadlines in the two proceedings.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claim 8 of the '413 patent is instituted with respect to all grounds set forth in the Petition;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '413 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial;

FURTHER ORDERED that Petitioner may submit a Motion to Consolidate IPR2022-00620 and IPR2022-00356, limited to five (5) pages, by September 22, 2022;

FURTHER ORDERED that Petitioner may submit Proposed Schedules for IPR2022-00356 and IPR2022-00620 by [DATE];

FURTHER ORDERED that Patent Owner may file an Opposition, limited to five (5) pages, to the Petitioner's Motion to Consolidate by September 29, 2022; and

FURTHER ORDERED that Patent Owner may file its own Proposed Schedules for IPR2022-00356 and IPR2022-00620.

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