

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VISION INDUSTRIES GROUP, INC.,
Petitioner,

v.

MIGHTON PRODUCTS LIMITED,
Patent Owner.

Case IPR2016-00792
Patent 8,881,461 B2

Before JOSIAH C. COCKS, HYUN J. JUNG, and
ROBERT L. KINDER, *Administrative Patent Judges*.

KINDER, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a); 37 C.F.R. § 42.73

ORDER DENYING MOTION TO AMEND
37 C.F.R. § 42.121

Vision Industries Group, Inc. (“Petitioner”) filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1–50 (all claims) of U.S. Patent No. 8,881,461 B2, issued on November 11, 2014 (Ex. 1001, “the ’461 patent”). Paper 1 (“Pet.”). Mighton Products Limited (“Patent Owner”) filed a Preliminary Response. Paper 12 (“Prelim. Resp.”). Applying the standard set forth in 35 U.S.C. § 314(a), we instituted an *inter partes* review of all challenged claims. Paper 14 (“Dec. on Inst.”).

During the trial, Patent Owner filed a Patent Owner Response (Paper 17, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 19, “Pet. Reply”). Patent Owner’s fully briefed Motion to Amend is pending. Paper 18 (“Mot. to Amend”); Paper 20 (“Opp. to Mot. to Amend”); Paper 22 (“Reply to Mot. to Amend”). An oral hearing was held on June 13, 2017, and a copy of the transcript has been made part of the record. Paper 29 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the claims on which we instituted trial. Based on the record before us, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–50 of the ’461 patent are unpatentable under 35 U.S.C. §§ 102(b) and 103(a). We also *deny* Patent Owner’s Motion to Amend.

I. BACKGROUND

A. *The ’461 Patent (Ex. 1001)*

The ’461 patent describes a device, referred to as a sash window restrictor, for limiting or restricting the extent of opening of a sliding sash window. Ex. 1001, 1:5–7. The ’461 patent discloses that the sash window

restrictor may mount into a vertical frame of one sash of a window above the lower sash when the windows are closed. *Id.* at 2:21–30; Figs. 1, 11. In certain embodiments, the '461 patent describes a pivotally mounted tab that retracts into or extends from a housing. *Id.* at Abstract. A mechanism acting between the tab and the housing allows the tab to be pressed into and held in the housing. *Id.* The mechanism may incorporate a spring and energy is stored in the spring when the tab is pushed into the housing. *Id.* at 2:64–66. The '461 patent describes the tab being extended such that the lower sash can be lifted until it reaches the tab but no further. *Id.* at Abstract. When the tab is extended, it projects from the frame member far enough to prevent the lower sash from passing. *Id.* at 2:24–28.

Certain embodiments of the '461 patent describe the tab automatically extending out of the housing after a leading edge of the lower sash has moved past a point. *Id.* at 2:66–3:2, 5:47–56. “Thus,” according to the '461 patent, “once the leading edge of the lower sash **12** has passed the device, the tab will extend, either gradually or quickly” *Id.* at 5:47–53 (referring to Fig. 1). Once “the lower sash is returned to its closed position, the tab will spring fully out to prevent reopening of the window without the tab being pushed in again.” *Id.* at 3:2–7.

In one embodiment (Figure 11), lower (first) arm 110 of the tab restricts movement of sashes 130, 138 relative to each other as depicted below:

FIG. 11

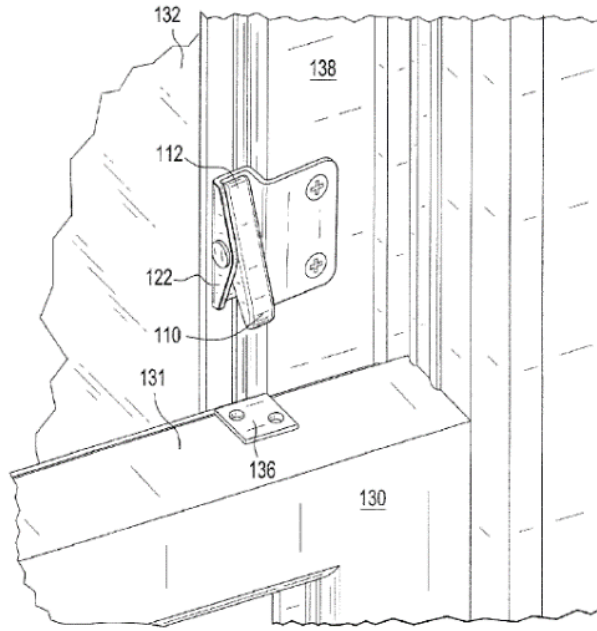


Figure 11 of the '461 patent depicts a sash window restrictor mounted to a sash window assembly. Ex. 1001, 7:48–64.

As illustrated, lower arm 110 is pressed into housing 122 where it is held with a magnet (not shown). *Id.* at 7:55–57. The tab, in other embodiments, may be held in place by a latching mechanism. *See id.* at 1:22–32 (“the mechanism comprising latching means to latch the tab in a retracted position”), 8:1–3. If the window is raised, contact between lower sash 130 and upper (second) arm 112 breaks the magnetic force thereby releasing the latch. *Id.* at 7:57–61. When the sash is lowered, a torsion spring (not shown) causes the restrictor to reset such that lower arm 110 again protrudes and restricts movement of sashes 130, 138 relative to each other. *Id.* at 7:61–64.

B. Illustrative Claim

The '461 patent has 50 claims, and Petitioner challenges each claim. Claims 1, 15, 26, 39, 43, and 50 are independent. Claim 1 is illustrative and is reproduced below:

1. A restrictor, comprising:

a housing;

a tab pivotally mounted on the housing;

a pushing element; and

a restraining element,

the tab comprising a first arm and a second arm,

the tab being pivotally movable relative to the housing between:

at least a first pivot position, in which the restraining element is in a disengaged arrangement and at least a portion of the first arm is on a first side of a first plane and an entirety of the second arm is on a second side of the first plane, and

a second pivot position, in which:

the restraining element is engaged, and the restraining element prevents the tab from pivoting,

an entirety of the first arm is on the second side of the first plane,

at least a portion of the second arm is on the first side of the first plane, and

at least a portion of the second arm protrudes from the housing,

the pushing element biasing the tab to pivot toward the first pivot position,

with the restraining element engaged, the restraining element can be disengaged by pressing the second arm, such that the pushing element causes the tab to pivot toward the first pivot position.

Ex. 1001, 12:26–54.

C. Related Proceedings

The parties indicate that there are no related proceedings involving the '461 patent. Pet. 4; Paper 8, 1.

D. References

Petitioner relies on the following references:

U.S. Patent No. 719,981, issued Feb. 10, 1903 (Ex. 1003, “Adams”);

U.S. Patent No. 2,503,370, issued Apr. 11, 1950 (Ex. 1004, “Zanona”);

UK Patent Application No. GB 2 286 627, filed Dec. 28, 1994, published Aug. 23, 1995 (Ex. 1005, “Kimura”);

U.S. Patent No. 7,296,831 B2, issued Nov. 20, 2007 (Ex. 1006, “Generowicz”); and

U.S. Patent No. 764,493, issued July 5, 1904 (Ex. 1013, “Noseworthy”).

E. The Asserted Grounds

The instant *inter partes* review involves the following grounds of unpatentability under 35 U.S.C. §§ 102 and 103¹ as summarized below:

Reference[s]	Basis	Challenged Claims
Adams	§ 102(b)	1–10, 13–20, 23–36, 38–50
Adams and (Kimura or Generowicz or Common Knowledge)	§ 103(a)	11, 12, 21, 22, 37
Adams and (Noseworthy or Zanona or Common Knowledge)	§ 103(a)	13, 23, 38
Adams and Zanona	§ 103(a)	26–37

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. §§ 102 and 103. Because the '461 patent has an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA versions of 35 U.S.C. §§ 102 and 103.

Adams, Zanona, and (Kimura or Generowicz)	§ 103(a)	38
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II. ANALYSIS

Petitioner bears the burden of proving unpatentability of the challenged claims, and that burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must establish the facts supporting its challenge by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). Petitioner relies on the Declaration of Paul Carlson (Ex. 1007) and the Reply Declaration of Mr. Carlson (Ex. 1015). Patent Owner relies on the Declaration of Michael John Hawker (Ex. 2001). Below, we discuss whether Petitioner has met its burden with respect to claims 1–50.

A. Principles of Law

A claim is unpatentable under 35 U.S.C. § 102 if “each and every limitation is found either expressly or inherently in a single prior art reference.” *Sanofi–Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1375 (Fed. Cir. 2006) (internal quotation marks omitted). Furthermore, to anticipate, a prior art reference must disclose more than “multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008); see also *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972) (“[T]he [prior art] reference must clearly and unequivocally disclose the claimed [invention] or direct those skilled in the art to the [invention] without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference.”). Although the elements must

be arranged or combined in the same way as in the claim, “the reference need not satisfy an *ipsissimis verbis* test,” i.e., identity of terminology is not required. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). Obviousness is resolved based on underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness,² i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Skill in the Art

Citing its declarant, Mr. Carlson, Petitioner contends that a person having ordinary skill in the art at the time of the invention “would have been a mechanical technician having the equivalent of 4 years of undergraduate education in mechanical technology, or two years of education and two years of practical experience in industrial design.” Pet. 18–19 (citing Ex. 1007 ¶¶ 18–22). Patent Owner’s declarant, Mr. Hawker, advocates for a slightly different level of education and experience level for the person having ordinary skill in the art. *See* Ex. 2001 ¶ 12. Specifically, “one of

² In this proceeding, the parties have not identified any objective evidence of nonobviousness that allegedly bears on the patentability of the challenged claims.

ordinary skill in the art would have at least a Bachelor's of Science degree in a discipline such as Industrial Design Engineering or Mechanical Engineering, and/or at least three years of actual work experience as an industrial designer and/or in product development.” *Id.* In his Reply Declaration, Mr. Carlson states that even “[a]pplying Mr. Hawker’s opinion as to the level of skill in the art would not have altered my opinions because it subsumes the skill level I applied.” Ex. 1015 ¶ 10.

The levels of ordinary skill proposed by the parties do not differ significantly, as suggested by Mr. Carlson’s testimony that his opinions would be the same under either party’s proposal. *See id.* Both parties’ proposed descriptions require the equivalent of an undergraduate (four year) degree in mechanical technology, and both require at least two years of industry experience (although Patent Owner proposes three years). For purposes of this Decision, we adopt Petitioner’s proposed definition as more representative, but note that our analysis would be the same under either definition.

C. Claim Interpretation

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Only terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011). We must be careful not to read a particular embodiment appearing in the written description into the claim if

the claim language is broader than the embodiment. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

Petitioner proposes that we construe three means-plus-function terms (in claims 39 and 43) as well as five other terms. Pet. 14–17. Patent Owner contests the claim construction of the “pivotally movable” limitation and also proposes an interpretation that would require certain elements be defined as distinct components. PO Resp. 1–7. In our Decision on Institution, we determined it necessary to construe the three means-plus-function terms (claims 39 and 43) and four of the other claim terms. Dec. on Inst. 6–13. In this Decision, we examine those seven terms plus the Patent Owner’s contention that certain elements of the claims “must be distinct components.” PO Resp. 7.

1. Means for selectively preventing movement of a first member

A petition for an *inter partes* review must identify how each challenged claim is to be construed. 37 C.F.R. § 42.104(b)(3). For a means-plus-function limitation, as part of that requirement, a petitioner must “identify the specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function” of any means- or step-plus-function limitation. *Id.*

When the specification describes two or more distinct embodiments that perform the same recited function, one need not attempt to craft a single claim interpretation that is consonant with all structures in the specification corresponding to the claimed function. *Ishida Co. v. Taylor*, 221 F.3d 1310, 1316 (Fed. Cir. 2000). Further, though such “means plus function” limitations embrace all of the disclosed embodiments that correspond to the claimed function, the claims are not limited to any particular one of the

disclosed embodiments. *See Micro Chem. Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1259 (Fed. Cir. 1999).

Claim 39 recites, in pertinent part:

means for selectively preventing movement of a first member that has a first surface substantially aligned in a first plane, relative to a second member that has a second surface substantially aligned in a second plane, the second plane being substantially parallel to the first plane.

Ex. 1001, 15:44–57. The function, according to Petitioner, is “selectively preventing movement of a first member that has a first surface substantially aligned in a first plane, relative to a second member that has a second surface substantially aligned in a second plane.” Pet. 15 (quoting claim 39). Petitioner contends that Figures 1 and 2 of the ’461 patent identify “a pivoting tab” as the structure performing the claimed function of preventing movement of the upper sash relative to the lower sash. *Id.*; Ex. 1007 ¶ 37.

In our Decision on Institution, we agreed with Petitioner’s contention that “a pivoting tab” performs the claimed function. Dec. on Inst. 7–8. In its Response, Patent Owner has not challenged our determination. We do not perceive any reason or evidence that compels any deviation from our original interpretation. Accordingly, we adopt our previous analysis and conclusion as to the “means for selectively preventing movement of a first member.”

2. *Means for biasing the tab to pivot from the second pivot position toward the first pivot position*

Claim 43 recites “means for biasing the tab to pivot from the second pivot position toward the first pivot position.” Ex. 1001, 16:6–7. Petitioner contends the claimed function is “biasing the tab to pivot from the second

pivot position toward the first pivot position.” Pet. 15. Petitioner relies on embodiments of the ’461 patent that disclose a spring for pushing the tab from a second pivot position to a first pivot position. *Id.* (citing Ex. 1001, 6:50, Figs. 4, 5 (spring 139), 7:12, Fig. 6 (spring 116)). Thus, according to Petitioner, the corresponding structure is a spring. *Id.* at 15–16.

In our Decision on Institution, we agreed with Petitioner’s contention that “the corresponding structure for biasing the tab to pivot from the second pivot position toward the first pivot position is a spring.” Dec. on Inst. 9. In its Response, Patent Owner has not challenged our determination. We do not perceive any reason or evidence that compels any deviation from our original interpretation. Accordingly, we adopt our previous analysis and conclusion as to the “means for biasing the tab to pivot from the second pivot position toward the first pivot position.”

3. Means for selectively preventing the tab from pivoting from the second pivot position toward the first pivot position.

Claim 43 also requires “means for selectively preventing the tab from pivoting from the second pivot position toward the first pivot position.” Ex. 1001, 16:8–10. Petitioner identifies “selectively preventing the tab from pivoting from the second pivot position toward the first pivot position” as the claimed function and asserts that “[a] latch performs the function.” Pet. 16 (citing Ex. 1001, 1:26). Petitioner also argues “that any suitable latching mechanism may be used.” *Id.* (citing Ex. 1001, 8:1–3 (“the latching mechanism may be provided by any suitable releasable latching means”)).

In our Decision on Institution, we agreed with Petitioner’s contentions that the ’461 patent identifies a “mechanism” such as a “latching means” as performing the claimed function. Dec. on Inst. 9–10; (citing Ex. 1001, 1:22–

32). Specifically, “a mechanism acting between the tab and the housing which allows the tab to be pressed into the housing and which holds the tab in the housing, the mechanism comprising latching means to latch the tab in a retracted position.” Ex. 1001, 1:22–32; *see also id.* at 2:6–10, 3:31–34. The ’461 patent states: “the latching mechanism may be provided by any suitable releasable latching means.” *Id.* at 8:1–3. A person of ordinary skill in the art would understand that a latching mechanism or latching means is a discrete class of mechanisms that would include a latch. *See* Ex. 1007 ¶¶ 39, 64.

In its Response, Patent Owner has not challenged our initial determination. We do not perceive any reason or evidence that compels any deviation from our original interpretation. Accordingly, we adopt our previous analysis and conclusion that a latch may perform the function of selectively preventing the tab from pivoting.

4. Restraining element

Petitioner proposes the term “restraining element” used in independent claims 1, 15, 26, and 39 should mean either “an element that exerts a restraining force against a biasing force” or, alternatively, “a latching mechanism.” Pet. 17. Patent Owner does not offer a proposed construction for this term. The term “restraining element” is not used in the ’461 patent, apart from the claims. The surrounding context of the claim language suggests the term is meant to be used interchangeably with the “latching mechanism” identified in the Specification. *See* Ex. 1001, 1:22–32, 8:1–3. *Compare id.* at 1:32 (“The latching means may comprise magnetic means.”), *with id.* at 13:34–35 (“wherein the restraining element comprises a magnet”). Therefore, we construe “restraining element” to

mean a latching mechanism, which “may be provided by any suitable releasable latching means.” *Id.* at 8:1–3.

5. *Pivot position*

Petitioner proposes the term “pivot position” used in independent claims 1, 15, 26, 43, and 50 should be given its plain and ordinary meaning, or the term should be construed to mean “the position of the tab in relation to the housing.” Pet. 17.

In our Decision on Institution, we determined that the common meaning of “position,” as used with respect to the claimed tab, is “the place where something is in relation to other things.”³ Dec. on Inst. 11. We considered that the claims require three distinct positions of the tab at various points in time, and thus we construed “pivot position” to mean the place where the tab is in relation to the housing at a point in time.

In its Response, Patent Owner has not challenged our initial determination. We do not perceive any reason or evidence that compels any deviation from our original interpretation. Accordingly, we adopt our previous analysis and conclusion for the term “pivot position.”

6. *Pivotally movable relative to the housing between at least a first pivot position and a second pivot position*

Patent Owner proposes the phrase “pivotally movable relative to the housing between at least a first pivot position . . . and a second pivot position” (hereafter “pivotally movable limitation”) used in independent claims 1, 15, 26, and 50 “means that the first structure must be capable of

³ See, e.g., Merriam-Webster Online, <http://www.merriam-webster.com/dictionary/position> (“position: the place where someone or something is in relation to other people or things”), last visited Sept. 22, 2016.

being moved from the first pivot position to the second pivot position (and vice-versa) by *only* pivoting the first structure relative to the second structure.” PO Resp. 10. According to Patent Owner, the pivotally movable limitation “can only be interpreted to mean that the tab is moved from the first pivot position to the second pivot position (and vice-versa) by pivoting the tab relative to the housing, without any other movement.” *Id.* (emphasis omitted).

Patent Owner relies on the testimony of Mr. Hawker, “that if any movement other than (i.e., in addition to) pivoting a tab relative to a housing is required to move the tab between a first pivot position and a second pivot position,” the arrangement would not meet the pivotally movable limitation. *Id.* at 3 (citing Ex. 2001 ¶ 21). According to Mr. Hawker, for one structure to be pivotally movable relative to a second structure between a first pivot position and a second pivot position, the movement must occur “only pivoting the first structure relative to the second structure.” *Id.* (citing Ex. 2001 ¶ 23).

Petitioner responds that “[n]othing in the intrinsic evidence--the claim recitations, patent specification or file history--supports the exclusionary limitation Patent Owner seeks.” Pet. Reply 6. Petitioner contends that Mr. Hawker’s opinion related to the interpretation of the pivotally movable limitation should be given no weight because the intrinsic evidence sufficiently defines pivotally moveable, and because Mr. Hawker’s testimony is conclusory. *Id.* at 7. Petitioner also notes that the pivotally moveable limitation adopts open language, which would permit other types of movement, such as translational movement, to occur and have no bearing as to whether the structures are also pivotally movable. *Id.*

In our Decision on Institution, we determined that the additional unrecited movement limitation proposed by Patent Owner (“without any other movement”) was not warranted, and it would not be inferred as part of the claim scope of the pivotally movable limitation. Dec. on Inst. 12. We determined that the claim language does not exclude additional elements, or in this case additional movement because each independent claim is an apparatus claim “comprising” certain claim elements. *Id.* Use of the term “comprising” in patent claim drafting “is inclusive or open-ended and does not exclude additional, unrecited elements or method steps.” MPEP § 2111.03; *see, e.g., Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997).

Based on the complete record before us, we are still not persuaded that the additional unrecited movement limitation proposed by Patent Owner (“without any other movement”) is warranted as the broadest reasonable interpretation. The claim language requires only a tab pivotally movable (capable of rotation) relative to the housing between two distinct positions. *See* Ex. 1001, 12:28, 12:32–40. For example, nothing in the Specification suggests that the pivotally movable tab cannot also rotate, or translate, between additional positions. Further, we find persuasive Mr. Carlson’s testimony that a person of ordinary skill in the art would understand that an object can be pivotally movable in relation to another object while at the same time also moving in a different manner. *See* Ex. 1015 ¶ 13 (“A POSA understands that structures can be pivotally moveable with respect to each other without necessarily restricting other movement.”); Tr. 13:1–19 (“Channel lock pliers can pivot and slide translationally at the same time.”).

7. *“First arm” and “second arm”*

Petitioner proposes the claimed “first arm” and “second arm” mean a first and second portion of the tab that can further comprise an actuation member or a latching mechanism. Pet. 17–18 (citing Ex. 1001, 1:53). Petitioner relies on a statement in the Specification that the first and second arms are on either side of the pivot of the pivotally mounted tab. *Id.* (citing Ex. 1001, 7:8, Figs. 6–9). Patent Owner does not offer its own construction of these terms.

As we determined in our Decision on Institution, the Specification states that the tab provides a first arm and a second arm located on either side of the pivot member. Ex. 1001, 7:10–12; Dec. on Inst. 12–13. The Specification also states “[t]he first arm may comprise a latching member and the second arm may comprise an actuation member in order to unlatch the tab from a retracted position.” *Id.* at 1:53–58. The actuation member can “latch the tab in a retracted position” through a push movement by the user or contact movement of the sash window relative to the sash window restrictor. *Id.* at 1:57–58, 2:15–19. Based on the final record, we find no reason to depart from our initial determination that the claimed “first arm” and “second arm” mean a first and second portion of the tab, respectively, that can further comprise an actuation member or a latching mechanism. See Dec. on Inst. 13.

8. *Housing, tab, pushing element and a restraining element as “distinct components”*

Patent Owner contends that “the ‘461 patent requires that the housing, the tab, the pushing element and the restraining element in each of claims 1, 15, 26, 39 and 43 . . . must be distinct components.” PO Resp. 6–7 (citing

Ex. 2001 ¶ 28). Patent Owner contends that because the claims list several elements separately, an implication arises that those particular elements are distinct components. *Id.* at 5; *see also* Tr. 24:19–25:20. Relying on the testimony of Mr. Hawker, Patent Owner argues that the separate recitations of tab and restraining element in the claims would exclude an embodiment having the restraining element form a part of the tab. PO Resp. 6–7; Ex. 2001 ¶ 27.

Petitioner contends that “the claims here do not recite any mechanical structure limiting how the restraining element connects to the other structures in the claim.” Pet. Reply 10–11. Instead, Patent Owner chose to claim functional relationships, such as the restraining element is engaged or disengaged. *Id.* Petitioner contends that “the specification explicitly says that the tab can include the restraining element.” *Id.* at 11 (citing Ex. 1001, 1:53–59). Specifically, Petitioner argues that because “Patent Owner chose to define the tab as comprising arms above and below the pivot point,” and because “[t]hese arms can include the restraining elements or actuation members,” the restraining element may form part of the tab. *Id.*; *see also* Tr. 14:18–17:11 (“it’s clear from the patent specification that the -- the tab actually comprises further structures, including arms -- first arms and second arms -- and that the arms themselves can comprise further structures, being the latch . . .”).

Based on the complete record before us, we determine that the tab can include the restraining element and these elements do not have to be distinct as alleged by Patent Owner. *See* Ex. 1001, 1:53–59; *see also Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 n.3 (Fed. Cir. 2006) (“the use of two terms in a claim requires that they connote different

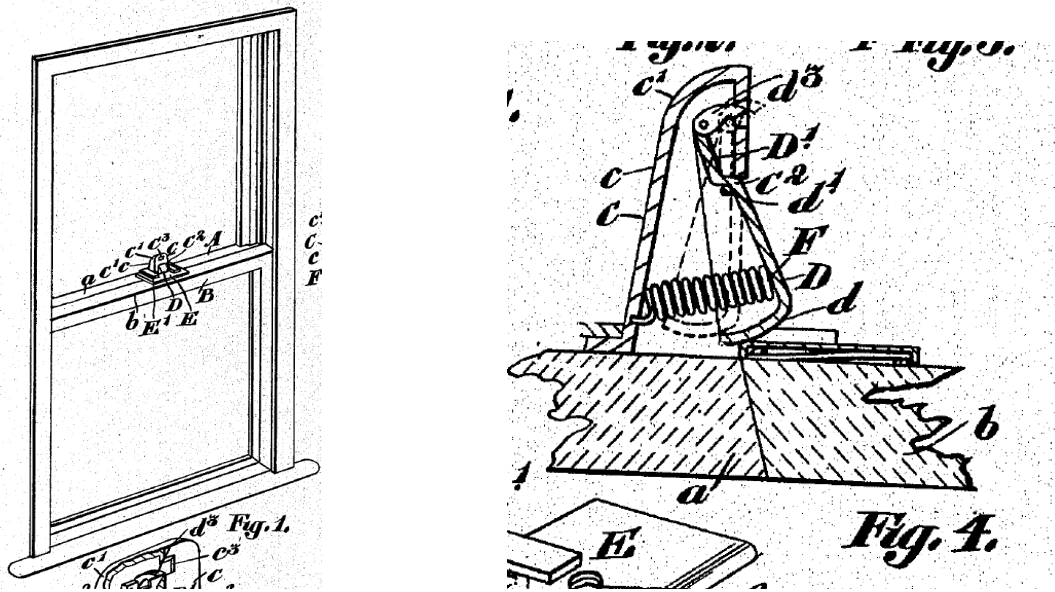
meanings, not that they necessarily refer to two different structures”). As noted in our analysis above, the claimed “first arm” and “second arm” mean a first and second portion of the tab, respectively, that can further comprise an actuation member or a latching mechanism. This is so because the Specification states “[t]he first arm may comprise a latching member and the second arm may comprise an actuation member in order to unlatch the tab from a retracted position.” *Id.* at 1:53–58. The Specification states that the tab provides a first arm and a second arm located on either side of the pivot member. Ex. 1001, 7:10–12. The intrinsic evidence is clear – the restraining element may form part of the tab and these elements do not have to be distinct structures as argued by Patent Owner.

*D. Anticipation Ground Based on Adams
(Claims 1–10, 13–20, 23–36, and 38–50)*

We instituted trial on the ground that the subject matter of claims 1–10, 13–20, 23–36, and 38–50 would have been anticipated by Adams. Dec. on Inst. 14–21; see Pet. 19–44. Having now considered the evidence in the complete record established during trial, we are persuaded that, based on this record, Petitioner has demonstrated by a preponderance of the evidence that the claims would have been unpatentable based on Adams under 35 U.S.C. § 102(b).

1. Adams

Adams describes an automatic sash lock and window fastener that will lock when the window goes from an opened to closed position. Ex. 1003, 1:9–15. The lock and fastener of Adams are depicted below.



Figures 1 (left) and 4 (right) of Adams depict a sash window lock mounted to a sash window assembly. Ex. 1003.

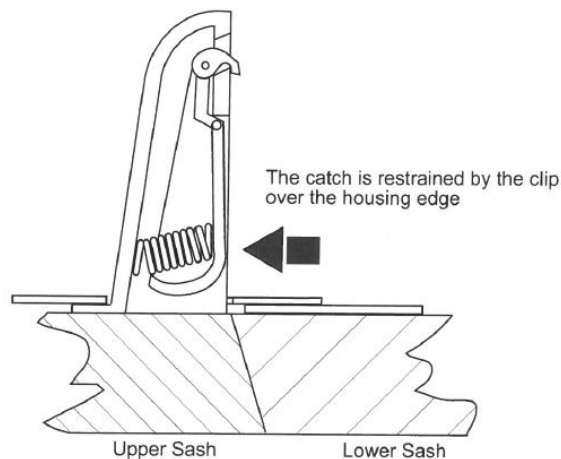
As depicted in Figures 1 and 4, restrictor housing C mounts to sash rail a. Tab D is pivotally mounted in housing C, and tab D includes arms above and below pivot d¹. Tab D pivots outwardly to restrict lower sash B. Spring F biases tab D toward the restricting position. Tab D can be pushed inwardly so that latching mechanism, c³ and d³, engages and holds tab D in a non-restricting position. *Id.* Upon raising lower sash B, sash B contacts catch (latch) d³ causing it to disengage whereby spring F biases tab D to the restricting position. See Ex. 1007 ¶¶ 31–34, 45.

2. Claim 1

With respect to claim 1, we have reviewed Petitioner's analysis and supporting declarations, as well as Patent Owner's contentions and supporting evidence, and are persuaded that Petitioner has proved by a preponderance of the evidence that claim 1 would have been anticipated based on Adams. See Pet. 19–25.

Petitioner identifies Adams' housing C, tab D, and spiral spring F, as corresponding to the claimed housing, tab, and pushing element, respectively. *See id.* at 22. Petitioner identifies the claimed restraining element as corresponding to the catch d³ of Adams and its engagement with opening c³ that allows catch d³ to catch upon the edge of the opening and protrude slightly through the opening. *Id.* at 22–23. According to Petitioner, the claimed first and second arm of the tab are disclosed by Adams' tab D having a first arm below pivot pin d¹ and a second arm above pivot pin d¹. *Id.* at 23. Petitioner considers catch d³ (restraining element) to be part of the second arm of the tab, and for the reasons discussed above, we find this position persuasive.

Petitioner identifies the claimed first and second pivot positions as also being disclosed by Adams. *Id.* at 20–22. Petitioner contends “spring F also corresponds to the structure for biasing the tab to pivot from the second pivot position toward the first pivot position, where the second pivot position is an unlocked position with the restraining latch engaged and the first pivot position is a locked position.” *Id.* at 20. Petitioner contends that when catch d³ is clipped over opening c³, the restraining element is engaged. *Id.* Thus, according to Petitioner, “[b]y pressing upwardly on this portion of the second arm the catch will unclip or disengage, allowing the spring F to pivot tab D toward the first position.” *Id.* Petitioner's expert creates a figure based on Figure 4 of Adams depicting the second pivot position. Ex. 1007 ¶ 51.



Petitioner's Representation of Figure 4 of Adams depicting the second pivot position (Ex. 1007 ¶ 51).

As depicted in Figure 4 of Adams, and Mr. Carlson's annotated figure above, a portion of the second arm, made up of the part of catch D that is above the pivot including D¹, is on the second side of the first plane and a portion of the second arm, d³, protrudes outside of the housing C through opening c³. *Id.* ¶ 52. The figure above also depicts how, according to Mr. Carlson, the entirety of the housing is on the second side of the first plane, where the plane is shown parallel to the surface of the housing on the right of the figure – as more specifically required by claim 8. *Id.*

Patent Owner disagrees with Petitioner's analysis for two primary reasons. Both of Patent Owner's contentions, which are premised on claim interpretations that we reject, are examined below. Patent Owner argues that the claims are not anticipated because Adams fails to disclose the pivotally moveable limitation (without other movement), and because Adams' tab (D) and restraining element (d³) are not distinct components.

Patent Owner first contends that "Petitioner seeks to improperly *change* its asserted correlations between respective elements as it addresses

different relationships among the elements that are recited in claim 1 of the '461 patent.” PO Resp. 8. Patent Owner argues that “Petitioner correlates the ‘tab’ recited in claim 1 in some instances to catch D of Adams ‘981, and in other instances to a combination of catch D plus hooked catch d³ of Adams ‘981.” *Id.* at 9. Patent Owner essentially argues that it is improper for Petitioner to characterize catch D plus hooked catch d³ as a tab and then also characterize the catch D of Adams alone as the tab. *Id.* at 10.

Patent Owner’s first contention is based, in part, on an interpretation that would require the tab and restraining element be distinct components – an interpretation we have rejected for the reasons set forth above. As explained above, the Specification of the ’461 patent makes clear that the tab may include the latch. Adams also discloses a configuration where the tab (D) includes a latch (d³). *See* Pet. Reply 18 (“the fact that the tab D includes a latch d³ doesn’t make the latch indistinct from the tab”). Thus, we disagree that Petitioner has taken an inconsistent or changed position in its analysis.

Patent Owner also contends that Adams fails to disclose that the tab is pivotally movable relative to the housing between at least a first pivot position and a second pivot position. PO Resp. 1–5, 11–14. Patent Owner argues “[t]he expression ‘pivotally movable relative to the housing’ means that the tab can be moved from the first pivot position to the second pivot position (and vice-versa) *by pivoting the tab relative to the housing.*” *Id.* at 11. According to Patent Owner, if the pivoting movement alone cannot cause the first element to move from a first position to a second position then the first element cannot be characterized as being pivotally movable

relative to the second element between a first and second position. *Id.*

Patent Owner contends that

[w]hether or not additional movement (pivotal or otherwise) can also occur does not alter the fact that in order to characterize a first element as pivotally movable relative to a second element between a first pivot position and a second pivot position, it is essential that merely pivoting the first element relative to the second element accomplishes such movement. . . . In other words, the broadest reasonable interpretation of the recitation that a first structure is “pivotally movable between a first pivot position and a second pivot position” relative to a second structure requires that the first structure can be moved from the first pivot position to the second pivot position (and vice-versa) by only pivoting the first structure relative to the second structure.

Id. at 11–12. Patent Owner’s contentions are based on a claim interpretation for the pivotally movable limitation that we determined was improper for the reasons set forth above. The fact that Adams may also have other elements, such as clip d³, that pivot or move in a manner not necessarily claimed does not contradict the fact that the Adams’ tab (D) pivots in a manner as required by claim 1. Upon release of Adams’ clip d³, both the catch and the tab D of Adams freely rotate in a pivoting manner in relation to the housing between first and second pivot positions. Further, any movement required for the claimed restraining element to achieve a disengaged arrangement could either be part of the pivotal movement of the tab or be a separate movement, such as the additional movement of clip d³ in Adams. Regardless of this additional movement of clip d³, the tab (D) is still pivotally movable relative to the housing from a first pivot position to a second pivot position.

For the reasons discussed above, we conclude that Petitioner has proved by a preponderance of the evidence that claim 1 would have been anticipated based on Adams.

3. Claims 2–10, 13–20, 23–36, and 38–50

With respect to claims 2–10, 13–20, 23–36, and 38–50, we have reviewed Petitioner’s analysis and supporting declarations and are persuaded that Petitioner has proved by a preponderance of the evidence that claims 2–10, 13–20, 23–36, and 38–50 would have been anticipated based on Adams. *See* Pet. 25–44. We examine each of these claims in turn.

Claims 2–10, 13, and 14 depend directly or indirectly from claim 1. Claim 2 additionally requires “the tab is pivotally movable relative to the housing among at least the first pivot position, the second pivot position and a third pivot position in which the restraining element is in a disengaged arrangement.” Ex. 1001, 12:55–59. Adams discloses this third pivot position when “the catch d^3 is disengaged from the c^3 opening and does not prevent the tab from pivoting, but the catch D has not yet moved to the first pivot position.” Pet. 25–26; Ex. 1007 ¶ 54. We find Petitioner’s contention persuasive because the broadest reasonable interpretation of a “pivot position,” as previously explained, encompasses a location of the tab relative to the housing at a point in time, such as when the catch d^3 becomes disengaged with the opening c^3 . Next, Petitioner sufficiently shows that claim 2’s requirement that “the tab is movable from the first pivot position to the second pivot position by applying force to the first arm and pushing the first arm to pivot the tab until the restraining element changes to an engaged arrangement,” is disclosed by Adams’ tab D being depressed such that the spring is overcome and D moves into the housing C. Ex. 1001, 12:60–63;

Pet. 26. Further, Adams' catch d^3 would move into opening c^3 in an engaged arrangement.

Petitioner identifies the claimed “the tab is automatically moved from the second pivot position to the third pivot position by moving a substantially flat surface of a structure along the first plane and in contact with the second arm,” (Ex. 1001, 12:64–67) as being disclosed by Adams' upper portion of the lower window sash B being a substantially flat surface that contacts the second arm and disengages the restraining element automatically when the lower sash B moves in relation to upper sash A such that Tab D would then automatically move from the second to the third position. Pet. 26. Finally, the claim requirement of “the tab is automatically moved from the third pivot position to the first pivot position by moving the substantially flat surface of a structure to a position where it is not in contact with the first arm” is disclosed by Adams' closing of the window to reset the lock – sash B moves beyond contact with the first arm D to move from the third position to the fully extended first position. *Id.*

Claim 3 further requires “the restraining element can be changed from an engaged arrangement to a disengaged arrangement by applying a force to the second arm,” and Petitioner establishes persuasively how Adams' applying a force to d^3 , which causes this portion of the second arm to disengage from the edge of opening c^3 , discloses this requirement. *Id.* at 26–27 (citing Ex. 1007 ¶ 55).

Petitioner identifies the claimed “the restraining element can be changed from a disengaged arrangement to an engaged arrangement by pivoting the tab” of claim 4 as disclosed by Adams' catch d^3 and opening c^3 acting as a restraining element and becoming engaged when the tab D pivots

and the catch d^3 hooks on to opening c^3 . *Id.* at 27 (citing Ex. 1003, 1:89–2:3; Ex. 1007 ¶¶ 46, 51–53).

Claim 5 recites limitations similar to a portion of claim 2. Specifically, claim 5 requires “the restraining element can be changed from an engaged arrangement to a disengaged arrangement by moving a substantially flat surface of a structure along the first plane and in contact with the second arm,” and Petitioner establishes persuasively how Adams discloses these elements as set forth in the analysis for claims 1 and 2. Pet. 27.

Petitioner sufficiently establishes that Adams’ disclosure of a vertical face of the housing C discloses a surface of the housing that is substantially parallel to the first plane as required by claim 6. *Id.* (citing Ex. 1003, 1:48–56, Figs. 4–5; Ex. 1007 ¶ 47). We find Mr. Carslon’s testimony and his annotated Adams’ Figure 4 particularly persuasive as to this limitation. Ex. 1007 ¶ 47.

Claim 7 depends from claim 6 and further requires “a plurality of apertures are provided that extend through the at least one surface of the housing that is substantially parallel to the first plane, each of the apertures having an axis that is substantially perpendicular to the first plane.” Ex. 1001, 13:21–25. Petitioner establishes persuasively how Adams discloses these limitations, identifying apertures at c^2 and c^3 that extend through the one surface of the housing and have an axis substantially perpendicular to the first plane. Pet. 27 (citing Ex. 1:89–2:3; Ex. 1007 ¶¶ 46, 51–53).

Claim 8 requires “an entirety of the housing is on the second side of the first plane,” and Petitioner establishes persuasively how Adams’ vertical face of C that forms the first plane is positioned entirely on the second side

of the first plane as further explained in our analysis above. *Id.* at 28 (citing Ex. 1003, Fig. 4; Ex. 1007 ¶¶ 51, 52).

Claim 9 recites “an entirety of the restrictor, except for at least: a portion of the second arm, is on the second side of the first plane if the tab is in the second pivot position,” and Petitioner establishes persuasively how Adam’s catch d^3 , which is part of the second arm, remains the only portion that is not on the second side of the first plane when tab D is in the second pivot position. *Id.* (citing Ex. 1003, Fig. 4; Ex. 1007 ¶¶ 50–52).

Claim 10 requires that the pushing element comprises a spring and claim 13 requires the restraining element comprises a snap. Petitioner establishes persuasively that Adams’ spring F and catch d^3 that snaps over the edge of opening c^3 disclose each of these limitations respectively. *Id.* at 28–29 (citing Ex. 1003, Figs. 2–4, 1:65–2:22; Ex. 1007 ¶¶ 45, 46). Each of claims 13, 23, and 38 requires that “the restraining element comprises a snap.” *See, e.g.*, Ex. 1001, 13:38–39. Petitioner contends that the catch d^3 of Adams may be considered a snap because the catch d^3 snaps over the edge of opening c^3 . Pet. 28–29; Ex. 1007 ¶ 46 (“In my opinion, the catch d^3 snaps over the edge of opening c^3 and thus forms a snap fit.”). Patent Owner does not address this limitation in its Response. Based on evidence in the complete record established during trial, Petitioner has established persuasively that latching mechanism, c^3 and d^3 , of Adams reasonably is considered a snap because of the way it engages, or snaps, over housing C. *See* Pet. 28–29, 32, 37–38; Ex. 1007 ¶ 46.

Claim 14 requires that “the housing comprises structure that defines a recess, and the first arm protrudes from the recess if the tab is in the first pivot position.” Ex. 1001, 13:40–43. Relying on Figures 1, 4, and 5 of

Adams and the testimony of Mr. Carlson, Petitioner establishes persuasively how Adams' housing (C) defines a recess (c^2) and the first arm of tab D protrudes from the recess when it is in first pivot position. *Id.* at 29 (citing Ex. 1007 ¶ 56).

Claim 15 recites many of the same limitations as claim 1 and Petitioner relies persuasively on its analysis of claim 1 for these limitations. Pet. 29. Claim 15 also requires a "third pivot position" limitation similar to claim 2 and Petitioner relies on its analysis of claim 2, which we find persuasive for the reasons set forth above. *Id.* at 30. Specifically, Petitioner contends "[t]he tab D is pivotally movable to a third pivot position, where the catch d^3 is disengaged from the c^3 opening but the catch D has not yet moved to the first pivot position." Pet. 21–22; Ex. 1007 ¶ 54. Claim 15 also requires "contacting the tab with a substantial flat surface of a structure by moving the substantially flat surface of the structure along the first plane defined by the substantially flat surface can cause the restraining element to the disengaged arrangement." Ex. 1001, 13:62–67. Petitioner establishes how this final limitation is disclosed by Adams' top rail of the sash with a substantially flat surface. When lower sash B is slid upward along the first plane, which is located along the front face of housing C, the contact made with catch d^3 disengages the clip from the edge of opening c^3 in housing C. Pet. 30 (citing Ex. 1003, Figs. 1–3; 1:42–47; 1:97–99; Ex. 1007 ¶¶ 57–58).

Claims 16–20, 23, 24, and 25 each recite limitations found in one or more claims discussed above and Petitioner relies persuasively on its prior analysis for disclosing each of these limitations. Pet. 30–32.

Independent claim 26 requires "[a] sliding system" as well as limitations related to "a first member and a second member." Ex. 1001,

14:35–67. Petitioner establishes persuasively how Adams’ upper A and lower B sashes disclose the first and second member limitations. Pet. 33–35. Relying on the supporting testimony of Mr. Carlson, Petitioner establishes how each of the limitations of claim 26 is disclosed by Adams. *Id.* For example, claim 26 also requires “a restrictor,” “a restraining element,” as well as “first” and “second pivot position” limitations similar to claim 1. *See id.* at 34–35. Claim 26 also recites

movement of the first member from the first closed position, with the restraining element in the engaged arrangement, to the first open position resulting in the first member contacting the tab and causing the restraining element to automatically change to a disengaged arrangement in which the restraining element does not prevent the tab from pivoting by the bias of the pushing element.

Ex. 1001, 14:60–67. Petitioner establishes persuasively how Adams’ lower sash B moves from the closed position depicted in Figure 2, with restraining element d³ engaged, to the first open position depicted in Figure 3. Pet. 34–35 (citing Ex. 1003, 1:69–70, 1:97–2:3, Figs. 4–5; Ex. 1007 ¶¶ 57–58). This movement permits lower sash B to contact catch D and the restraining element d³, which is then disengaged allowing spring F to pivot tab D to the first position. *Id.* We find persuasive Mr. Carlson’s depiction of this claimed movement in annotated Figure 4 of Adams discussed at paragraph 34 of his Declaration (Ex. 1007).

Claims 27–36 and 38 each depend directly or indirectly from claim 26. Petitioner provides persuasive analysis, supported by the testimony of Mr. Carlson, as to how Adams discloses each limitation found in these claims. *See* Pet. 35–37 (citing Ex. 1007 ¶¶ 45, 57–58). Petitioner explains how Adams discloses lower and upper sashes that partially overlap as

required by claims 29 and 28. *Id.* at 35–36. Claims 30 and 31 are directed to movement from a first open position to a first closed position and from a first pivot position to a second pivot position, respectively. Petitioner establishes persuasively how Adams discloses each of these movement limitations. *Id.* at 35. For claim 30, Adams’ disclosure of movement of the lower sash from open position to closed position causes the tab D to pivotally move to the extended first position. *Id.* For claim 31, Adams’ tab D is moveable from a first pivot position to a second pivot position by applying force and compressing spring F. *Id.* The catch d^3 will snap into opening c^3 and thus change to an engaged arrangement. *Id.* Petitioner relies persuasively on its analysis of prior claims for each of the remaining limitations of claim 32–37 and 38. *Id.* at 36–39.

Claim 39 contains the “means for selectively preventing movement of a first member” limitation, which, as discussed above, we determined that “a pivoting tab” performs the claimed function of preventing movement of the upper sash relative to the lower sash. Petitioner establishes persuasively how the limitations of claim 39 are disclosed by Adams’ sash A with a first surface substantially aligned in the first plane and sash B with a second surface substantially aligned in the second plane. *Id.* at 38 (“This means is represented by the interference of catch D with the leading edge of the lower sash B when the catch D is biased to its first position.”) (citing Ex. 1003, 1:59–61, Fig. 2; Ex. 1007 ¶ 60). *See also id.* at 39 (explaining how “[m]ovement of the lower sash B in closed position Fig. 2, with restraining element d^3 engaged, to the first open position seen in Fig. 3 results in contacting with catch D and the restraining element d^3 which is automatically disengaged freeing the spring F to pivot tab D to the first

position,” thus teaching the disengage the restraining element limitation of claim 39).

Claims 40–42 each depend directly or indirectly from claim 39 and each claim recites limitations found in one or more claims discussed above. Petitioner relies persuasively on its prior analysis for disclosing each of these limitations. *See* Pet. 39–40.

Claim 43 contains both the “means for biasing the tab to pivot from the second pivot position toward the first pivot position” limitation, and the “means for selectively preventing the tab from pivoting from the second pivot position toward the first pivot position” limitation examined above. As previously determined, a spring performs the claimed function of biasing the tab and a latching mechanism, or latch, performs the function of selectively preventing the tab from pivoting. Petitioner establishes persuasively how these limitations are disclosed by Adams’ spring F and the latching mechanism created by tab D’s catch d³, which prevents pivoting when engaged with the edge of opening c³. Pet. 40. The remaining limitations of claim 43 are similar in scope to those examined previously and Petitioner establishes how each is disclosed by Adams. *Id.* at 40–41 (citing Ex. 1007 ¶¶ 45, 61–66).

Claims 44–49 depend from claim 43 and recite limitations similar in scope to those discussed above. Petitioner provides persuasive analysis, supported by the testimony of Mr. Carlson, as to how Adams discloses each limitation found in these claims. *See* Pet. 41–43 (citing Ex. 1007 ¶¶ 34, 45, 47–53, 60–66).

Claim 50 is independent and similar in scope to claims 1 and 2 discussed above. Petitioner relies persuasively on its prior analysis for disclosing each of the limitations of claim 50. *See* Pet. 43–44.

Patent Owner relies on arguments similar to those made for claim 1 for each of the independent claims 15, 26, 39, 43, and 50. PO Resp. 18–37. Patent Owner repeats two primary arguments: Adams fails to disclose both the pivotally movable limitation and the claims should be interpreted such that the tab and the restraining element are distinct components. *Id.* For the reasons set forth above, and for the reasons provided by Petitioner, we find these contentions unpersuasive. *See* Pet. Reply 6–19.

For claims 15, 26, 39, 43, and 50, Patent Owner also argues that Adams does not disclose the claim requirement that “contacting the tab . . . can cause the restraining element to be automatically changed from the engaged arrangement to the disengaged arrangement,” because there is no portion of catch D that can be contacted to cause hooked catch d³ to be disengaged. PO Resp. 21–22, 24 (“because no portion of catch D can be contacted to cause a restraining element to be disengaged”), 26, 28, 30–31, 33, 36 (citing Ex. 2001 ¶¶ 57, 61, 69, 73, 80, 88). We find these contentions unpersuasive because Patent Owner’s arguments are based on an erroneous claim construction position. As we previously determined, the tab can include restraining element (d³) and these elements do not have to be distinct as alleged by Patent Owner. Thus, catch d³ may form part of the tab although it still performs a distinct function. Further, contact with restraining element d³ of the tab automatically changes the restraining element from the engaged arrangement to the disengaged arrangement. *See*

Pet. Reply 15 (“And the restraining element, the clip d³, is a distinct component from the tab though it forms part of the tab.”).

As for the remaining dependent claims, Patent Owner does not persuasively rebut Petitioner’s contentions regarding the specific limitations recited, but instead Patent Owner relies on arguments made with respect to independent claims—arguments that we determined unpersuasive based on the final record. For example, Patent Owner states that “[e]ach of claims 2–10, 13 and 14 depends from claim 1 and is therefore valid over Adams ‘981 for at least the same reasons (discussed above) that claim 1 is valid over Adams ‘981.” PO Resp. 18. Again, we find Patent Owner’s arguments unpersuasive for claim 1 as well as each independent claim.

We conclude that Petitioner has proved by a preponderance of the evidence that claims 2–10, 13–20, 23–36, and 38–50 would have been anticipated by Adams.

*B. Obviousness Ground Based on Adams and Kimura, Generowicz, or
Common Knowledge)
(Claims 11, 12, 21, 22, 37)*

We instituted trial on the ground that the subject matter of claims 11, 12, 21, 22, and 37 would have been obvious over Adams and Kimura, Generowicz, or common knowledge. Dec. on Inst. 22–24; *see* Pet. 44–47. Having now considered the evidence in the complete record established during trial, we are persuaded that, based on this record, Petitioner has demonstrated by a preponderance of the evidence that the claims would have been obvious over those references in combination.

1. Kimura

Petitioner relies on both Kimura and Generowicz as teaching use of magnetic latches and for demonstrating that magnet based latches were well-

known to a person of ordinary skill in the art. Pet. 45. Kimura describes using a magnet as a latching mechanism in a door latch lock. Ex. 1005, 4:15–21, Abstract; Ex. 1007 ¶¶ 70–73. Kimura discloses that “the attractive force of the magnets causes the latch to move forwards against the bias of the spring” in order to retain the latch in a latch hole. Ex. 1005, 4:15–21

2. Generowicz

Generowicz describes using a magnet as a restraining element in a window sash locking mechanism. Ex. 1006, 4:15–22. Generowicz discloses that “[t]he catch may be any suitable securing means such as a magnet or hook that secures the sash locking assembly to the keeper.” *Id.*

3. Common Knowledge

Petitioner also relies on the common knowledge of a person of ordinary skill in the art. Pet. 45. Petitioner contends that at the time of invention of the ’461 patent, the common knowledge included using magnets in a latch, locating the magnets as a matter of design choice, and incorporating their releasable designs to eliminate moving parts. *Id.* (citing Ex. 1007 ¶¶ 70–73).

4. Claims 11, 12, 21, 22, and 37

With respect to claims 11, 12, 21, 22, and 37, we have reviewed Petitioner’s analysis and supporting declarations and are persuaded that Petitioner has proved by a preponderance of the evidence that these claims would have been obvious over Adams and Kimura, Generowicz, or common knowledge. See Pet. 44–47; Ex. 1007 ¶¶ 69–73. Petitioner’s element-by-element analysis demonstrates where each limitation of claims 11, 12, 21, 22, and 37 is found in the combination of prior art. *Id.* For example, Petitioner identifies “the restraining element comprises a magnet” as being

taught by either Kimura's disclosure of magnets used in cabinet latches or Generowicz's disclosure of a window sash securing assembly where the catch may be any suitable mechanism including a magnet. Pet. 46.

Petitioner also contends that the use of magnets in a latch securing mechanism was within the common knowledge of the skilled artisan and, therefore, would have been obvious to substitute for Adams' catch d³. *Id.*

Petitioner establishes persuasively that a person of ordinary skill in the art would have been motivated to combine the teachings of Adams and Kimura or Adams and Generowicz. *Id.* at 45–47 (citing Ex. 1007 ¶¶ 69–73). For example, Petitioner contends that “Kimura and [Generowicz] disclose that latches with magnets are suitable mechanisms for latches” and substituting one for the other would have been within the common knowledge of the skilled artisan. *Id.* at 46; Ex. 1007 ¶¶ 70–72. Further, Petitioner contends that Generowicz discloses that a similar catch may be any suitable securing means such as a magnet and such a disclosure provides the motivation for substituting a magnet for a catch. *Id.*

For these claims, Patent Owner does not persuasively rebut Petitioner's contentions regarding the specific limitations recited, but instead Patent Owner relies on arguments made with respect to independent claims—arguments that we have determined to be unpersuasive based on the final record. See PO Resp. 37–42. Patent Owner also does not challenge Petitioner's reasons for combining the references in the manner suggested by Petitioner.

For the reasons discussed above, we conclude that Petitioner has proved by a preponderance of the evidence that claims 11, 12, 21, 22, and 37 would have been obvious over Adams in combination with Kimura,

Generowicz, or the common knowledge of a person of ordinary skill in the art.

*C. Obviousness Ground Based on Adams and Noseworthy, Zanona, or Common Knowledge
(Claims 13, 23, 38)*

We instituted trial on the ground that the subject matter of claims 13, 23, 38 would have been obvious over Adams and Noseworthy, Zanona, or common knowledge. Dec. on Inst. 25–27; *see* Pet. 47–49. Having now considered the evidence in the complete record established during trial, we are persuaded that, based on this record, Petitioner has demonstrated by a preponderance of the evidence that the claims would have been obvious over those references in combination.

1. Noseworthy

Both Noseworthy and Zanona are relied on by Petitioner as disclosing a snap as a restraining element. Pet. 48–49. Noseworthy describes a sash lock with a spring tongue and socket as the snap in a restraining element. Ex. 1013 at 2:73–78 (“the spring tongue or latch 23 will ride upon the keeper until it snaps into engagement with the socket”); Ex. 1007 ¶¶ 74–77.

2. Zanona

Zanona relates to a window lock or latch that is manually releasable to open and also capable of automatically setting the latch in a locking position when the sash is lowered to a closed position. Ex. 1004, 1:1–8. Zanona describes a spring to toggle or to snap a lock into engagement in a window lock mechanism. Ex. 1004, Figs. 1, 2, 5; Ex. 1007 ¶¶ 74–77.

3. Common Knowledge

Petitioner contends that “use of snap fits in a mechanical latch were in

the common knowledge of the POSA and were a suitable mechanism in a latch.” Pet. 49; Ex. 1007 ¶¶ 74–77.

4. Claims 13, 23, and 38

With respect to claims 13, 23, and 38, we have reviewed Petitioner’s analysis and supporting declarations and are persuaded that Petitioner has proved by a preponderance of the evidence that these claims would have been obvious over Adams and Noseworthy, Zanona, or common knowledge. See Pet. 47–49; Ex. 1007 ¶¶ 74–77. Petitioner relies on Adams in combination with either Noseworthy or Zanona because the latter references teach use of a snap for a restraining element. Pet. 48. Petitioner’s element-by-element analysis establishes persuasively where each limitation of claims 13, 23, and 38 is found in the combination of prior art. *Id.* 47–49.

Petitioner first contends that Adams alone teaches the restraining element comprises a snap. *Id.* at 48; Ex. 1007 ¶ 74 (Adams “teaches a catch or latch that snaps” and “elements d³ and c³ have a snap action as d³ engages with c³ and the terms latch, catch or snap can be used interchangeably to describe the mechanism”). Petitioner also asserts that a person of ordinary skill in the art would have been motivated to combine the teachings of Adams with Noseworthy or Zanona because “[t]he motivation for using a snap mechanism was well known at the time of the invention” and both references show “a snap mechanism as a releasable latch.” *Id.* at 48; Ex. 1007 ¶¶ 74–77. Petitioner further contends that a person of ordinary skill in the art would understand from Adams that any suitable latch could be used, and because snaps were well known to provide a releasable latch it would have been obvious to substitute a snap into Adams. Pet. 48; Ex. 1007 ¶ 76.

Based on the final record, we find persuasive Petitioner’s contention

that substitution of a snap, as taught by either Noseworthy or Zanona, with the latching mechanism, c³ and d³, of Adams would be a predictable substitution of known exchangeable elements. *See* Ex. 1007 ¶ 74 (“obvious to the skilled artisan to modify the ’981 Patent to accentuate the snap fit of the restraining element” and “benefits of snap fits were known at the time of the invention and the ’461 Patent implements a snap in a predictable and known fashion”). As explained by Petitioner, Noseworthy and Zanona demonstrate that a skilled artisan would have recognized that a snap would be a suitable mechanism for engaging a latch. Pet. 49.

For these claims, Patent Owner does not persuasively rebut Petitioner’s contentions regarding the specific limitations recited, but instead Patent Owner relies on arguments made with respect to independent claims—arguments that we determined unpersuasive based on the final record. *See* PO Resp. 42–46. Patent Owner also does not challenge Petitioner’s reasons for combining the references in the manner suggested by Petitioner.

For the reasons discussed above, we conclude that Petitioner has proved by a preponderance of the evidence that claims 13, 23, and 38 would have been obvious over Adams and Noseworthy, Zanona, or common knowledge.

*D. Obviousness Ground Based on Adams and Zanona
(Claims 26–37)*

We instituted trial on the ground that the subject matter of claims 26–37 would have been obvious over Adams and Zanona. Dec. on Inst. 27–28; *see* Pet. 49–50. Having now considered the evidence in the complete record established during trial, we are persuaded that, based on this record,

Petitioner has demonstrated by a preponderance of the evidence that the claims would have been obvious over those references in combination.

Claims 26–37 further recite that the tab in the first pivot position prevents movement of the first member relative to the second member from the “first closed position” beyond a “first relative position.” Ex. 1001, 14:48–51. Petitioner alternatively relies on Zanona as teaching placement of a window lock such that the window can be opened partially, thus creating a distinct “first relative position” apart from the “first closed position.” Pet. 49–50; Ex. 1007 ¶¶ 59, 69.

As explained by Petitioner’s expert, “[t]he POSA at the time of the invention based upon his common knowledge would understand that the restrictor could be mounted higher such as in a recess in the side of the upper sash or by raising or lengthening the housing with respect to the upper sash,” and Zanona “teaches a motivation to mount a window lock on the side member of a sash.” Ex. 1007 ¶ 59 (citing Ex. 1004, Fig. 4), 69. In such a configuration, “the window could be restricted in a partially open position,” according to Mr. Carlson. *Id.* We have considered Petitioner’s arguments, including Mr. Carlson’s Declaration and find them persuasive. We note that claim 37 requires “[a] sliding system as recited in claim 26, wherein the restraining element comprises a magnet.” Ex. 1001, 15:40–41. As discussed above, Petitioner contends that the use of magnets in a latch securing mechanism was within the common knowledge of the skilled artisan and, therefore, would have been obvious to substitute for Adams’ catch d³—Patent Owner has not challenged this contention. *See also* Ex. 1015 ¶ 51.

For these claims, Patent Owner does not persuasively rebut Petitioner's contentions regarding the specific limitations recited, but instead Patent Owner relies on arguments made with respect to independent claims—arguments that we determined unpersuasive based on the final record. See PO Resp. 47–50. Patent Owner also does not challenge Petitioner's reasons for combining the references in the manner suggested by Petitioner, which we find to be credible. See Pet. 48–50.

For the reasons discussed above, we conclude that Petitioner has proved by a preponderance of the evidence that claims 26–37 would have been obvious over Adams and Noseworthy, Zanona, or common knowledge.

*E. Obviousness Ground Based on Adams and Zanona and
Kimura or Generowicz
(Claim 38)*

We instituted trial on the ground that the subject matter of claim 38 would have been obvious over Adams and Zanona and Kimura or Generowicz. Dec. on Inst. 28–29; see Pet. 49–50. Having now considered the evidence in the complete record established during trial, we are persuaded that, based on this record, Petitioner has demonstrated by a preponderance of the evidence that claim 38 would have been obvious over those references in combination.

Petitioner's element-by-element analysis demonstrates where each limitation of claim 38 is found in the Adams and Zanona and Kimura or Generowicz combination. Pet. 49–50; Ex. 1007 ¶¶ 59, 69. For example, claim 38 requires “a sliding system as recited in claim 26, wherein the restraining element comprises a snap.” Ex. 1001, 15:42–43. As set forth above, Petitioner establishes persuasively how the combination of references

teaches these limitations and further provides a persuasive rationale on the final record for combining the teachings of the references.

For the reasons discussed above, we conclude that Petitioner has proved by a preponderance of the evidence that claim 38 would have been obvious over Adams and Zanona and Kimura or Generowicz.

F. Conclusion

Petitioner has demonstrated, by a preponderance of the evidence that claims 1–50 of the ’461 patent are unpatentable pursuant to 35 U.S.C. § 103(a).

III. CONTINGENT MOTION TO AMEND

In its Motion to Amend, Patent Owner moves, on a contingent basis, to substitute amended claims 51 and 52 in the event that we find claims 15 and 23 to be unpatentable. Mot. to Amend 1–3. Patent Owner also states that “[c]laims 16–21 and 24 are amended, but only to change their dependency from original claim 15 to Substitute Claim 51.” *Id.* at 3. We have determined that claims 15 and 23 are unpatentable. Accordingly, we consider each proposed substitute claim in Patent Owner’s Motion to Amend.

As the moving party, Patent Owner bears the burden of proof to establish that it is entitled to the relief requested. *See* 37 C.F.R. § 42.20(c). Entry of proposed amendments is not automatic, but occurs only upon the patent owner having met the requirements of 37 C.F.R. § 42.121 and demonstrating the patentability of the proposed substitute claims. *See MasterImage 3D, Inc. v. RealD Inc.*, Case IPR2015-00040 (PTAB July 15, 2015) (Paper 42, “*MasterImage*”) (precedential); *Idle Free Sys., Inc. v.*

Bergstrom, Inc., Case IPR2012-00027, slip op. at 7–8 (PTAB June 11, 2013) (Paper 26, “*Idle Free*”) (informative); *see also Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1307–08 (Fed. Cir. 2015) (upholding the approach established in *Idle Free* of allocating to the patent owner the burden of showing the patentability of any proposed substitute claims). For the reasons explained below, we conclude that Patent Owner has not met its burden with respect to proposed substitute claims 51 and 52, and proposed amended claims 16–21 and 24.

A. Proposed Substitute Claims 51 and 52

Patent Owner proposes to substitute independent claims 51 and 52 for independent claims 15 and 23, respectively.

Proposed substitute claim 51 is reproduced below, with strikethrough showing the subject matter deleted from claim 1 and underlining showing the subject matter added to claim 1:

51. (Proposed Substitute Claim for Original Claim 15) A restrictor, comprising:

a housing;

a tab pivotally mounted on the housing;

a pushing element; and

a restraining element

the tab being pivotally movable relative to the housing and about a pivot member, by movement consisting only of pivoting the tab about the pivot member, between at least:

a first pivot position, ~~and~~

a second pivot position in which the restrictor is in an engaged arrangement, in which the pushing element biases the tab to pivot away from the second pivot position toward the first pivot position and the restraining element prevents the tab from being pivoted by the bias of the pushing element, and

a third pivot position in which the restraining element is in a disengaged arrangement, in which the restraining element does not prevent the pushing element from pivoting the tab, and

contacting the tab with a substantially fiat surface of a structure by moving the substantially flat surface of the structure along a first plane defined by the substantially flat surface can cause the restraining element to be automatically changed from the engaged arrangement to the disengaged arrangement.

Mot. to Amend, App'x 33–34. Proposed independent claims 52 is reproduced below.

52. (Proposed Substitute Claim for Original Claim 23) A restrictor as recited in claim 51, ~~wherein the restraining element comprises a snap~~ wherein the tab consists of a single one-piece integral structure.

Id. at 34. Proposed amendments to dependent claims 16–21 and 24 change their dependency from original claim 15 to substitute claim 51, but those claims otherwise remain unchanged. *Id.* at 23–24. Below we examine whether proposed substitute claims 51 and 52 would have been obvious in light of the prior art cited in the Petition.⁴

B. Obviousness

We deny Patent Owner's Motion to Amend on the basis that proposed substitute claims 51 and 52, the only claims amended substantively by the motion, are unpatentable under 35 U.S.C. § 103(a) as obvious. Petitioner has demonstrated, with supporting testimony from Mr. Carlson (Ex. 1015), that the subject matter of proposed substitute claims 51 and 52 is unpatentable over Adams and Kimura or Generowicz. *See* Opp. to Mot. to Amend 21–22; Ex. 1015 ¶¶ 45–52. Although Patent Owner's proposed

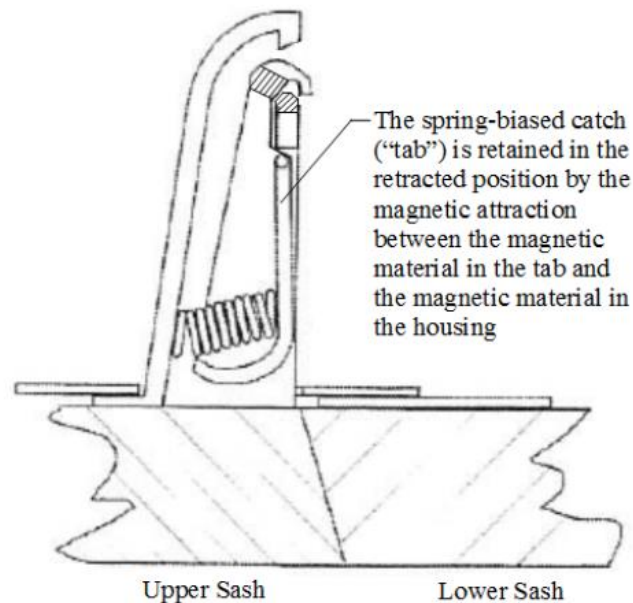
⁴ Given our disposition of this issue, we need not address other arguments made by Petitioner. *See* Opp. to Mot. to Amend 8–25.

amendments seemingly distinguish claims 51 and 52 over Adams alone, Patent Owner has not adequately addressed Petitioner's proposed obviousness analysis based on Adams and Kimura or Generowicz. *See* Reply to Mot. to Amend 10–12.

Patent Owner contends that proposed substitute claims 51 and 52 are patentable over the prior art of record including art Petitioner identified in the Petition and in its opposition to Patent Owner's Motion, as well as other material prior art known to Patent Owner. Mot. to Amend 6–16; Reply to Mot. to Amend 8–12. To distinguish that art, Patent Owner relies on the added limitation of claim 51 requiring a “the tab being pivotally movable relative to the housing and about a pivot member, by movement consisting only of pivoting the tab about the pivot member,” and the claim 52 limitation “wherein the tab consists of a single one-piece integral structure.” *Id.*

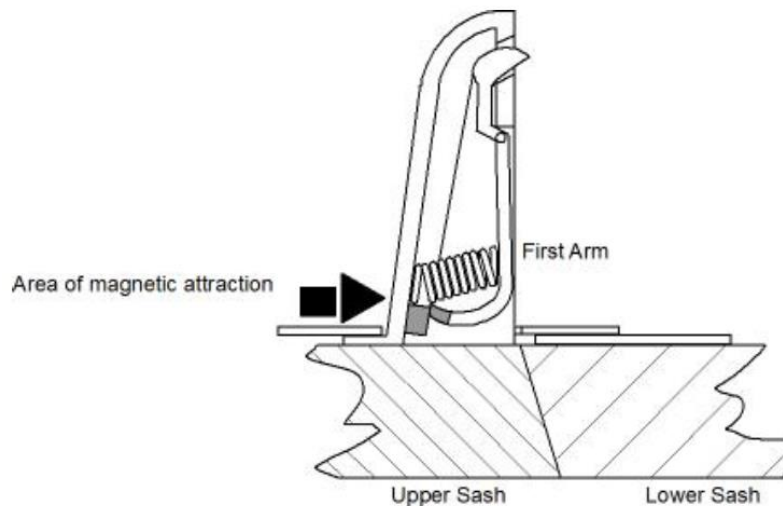
Petitioner contends that the Board should deny Patent Owner's Motion because substitute claims 51 and 52 are unpatentable as obvious over Adams and Kimura or Generowicz. Opp. to Mot. to Amend 22–24 (citing Ex. 1015 ¶¶ 45–52). Petitioner relies on Adams as teaching those elements of claim 51 that were not amended or added. *Id.* Petitioner then relies on Adams combined with either Kimura or Generowicz as teaching the newly added limitations. *Id.* Petitioner proposes modifying catch d³ of Adams to incorporate an integral one-piece tab with a magnetic latch as taught by Kimura or Generowicz. *Id.* Such an integral one-piece tab would be restrained by a magnetic force at either the top or bottom arm portion of the tab such that the tab rotated as a one-piece integral structure about the pivot member. *Id.*

Petitioner explains that Kimura teaches that magnets can be fixed in a recess in a unitary latch and in a recess in a base so that the magnets provide a restraining force against a spring. Opp. to Mot. to Amend 22 (citing Ex. 1005, 13:23–32). Relying on the testimony of Mr. Carlson, Petitioner contends that “modifying Adams to use magnets instead of a mechanical latch also suggests that the tab consists of a unitary structure.” *Id.* at 23 (citing Ex. 1015 ¶ 46). Mr. Carlson offers a drawing depicting the proposed combination of Adams and Kimura or Generowicz where the upper arm includes magnetic material.



Petitioner’s annotated figure depicts a hypothetical combination of Adams and Kimura or Generowicz. Ex. 1015 ¶ 47.

According to Mr. Carlson, it would also be a matter of design choice to position the magnetic latch on the lower arm as depicted at ¶ 48 of his Reply Declaration (Ex. 1015).



Petitioner's figure depicts a proposed combination of Adams and Kimura or Generowicz with a magnetic latching mechanism on the lower arm.

As shown in these proposed combinations, the tab structure would be unitary, or one-piece, and the tab would only be capable of movement consisting only of pivoting the tab about the pivot member. We find persuasive Mr. Carlson's testimony that "Adams modified in view of Kimura or the '831 Patent teaches a tab D pivotally moveable on pin d1. The tab D modified to include magnetic restraining elements can be unitary." Ex. 1015 ¶ 49 (claim 51). Mr. Carlson also testifies persuasively that "Kimura and the '831 Patent show latch mechanisms with magnetic restraints. Both suggest using a unitary structure for the latch to the exclusion of an assembled structure." *Id.* (claim 52) (citing Ex 1014 ¶¶ 46–49).

As we previously determined, Petitioner also provides a persuasive rationale, based on the evidence in the complete record established during trial, for combining Adams and Kimura or Generowicz. Petitioner notes "that Kimura (Exhibit 1005) teaches the use of magnets in cabinet latches" and that magnets and latches were interchangeable. Opp. to Mot. to Amend

22 (citing Pet. at 44); see Ex. 1015 ¶ 52 (“The prior art therefore teaches that the locking tab can consist of a unitary structure and that hooks and magnets are interchangeable. Where magnets are used, the art teaches that the latch or tab preferably consists of a single piece unitary structure.”). Substituting Adams’ latching mechanism for a unitary tab with a magnet as taught by either Kimura or Generowicz would have been understood as a matter of design choice because, as the record firmly establishes, it was within the common knowledge of the skilled artisan to substitute latches and magnets. See Ex. 1015 ¶ 51 (“Whether to use magnets, snap fits, unitary construction or the like are mere details subject to design and manufacturing tradeoffs. Using any of these structures in view of Adams would have been obvious to the skilled artisan in my opinion.”). Further, Patent Owner has not persuasively rebutted Petitioner’s rationale for combining Adams and Kimura or Generowicz.

Patent Owner argues against the proposed combination of Adams and Kimura or Generowicz because Adams does not have any magnetic structures, “and Petitioner cites no reference to any other document for modifying the shapes of structures in Adams ’981 or for adding the various structures that Petitioner added to Adams ’981 in Petitioner’s drawing.” Reply to Mot. to Amend 11. Patent Owner contends that making the entirety of catch D integral such that the entire catch D would rotate “would differ significantly from how the sash lock disclosed in Adams ’981 operates.” *Id.* Patent Owner also argues that the force that is needed through contact of the lower window sash and the hooked catch d³ is different from the force that would need to be applied through contact of the lower window sash to

engage the protruding portion of Petitioner's proposed tab to cause the entire catch D to rotate. *Id.* at 11–12.

We find Patent Owner's contentions unpersuasive on the final record before us. Petitioner offers a detailed analysis, supported by the testimony of Mr. Carlson (Ex. 1015 ¶¶ 45–52) as to how and why the modifications to Adams would be made in light of Kimura or Generowicz. Patent Owner does not discuss the teachings of Kimura or Generowicz related to integrating magnetic latches into similar designs. As to the precise design shape of the modified structure proposed by Mr. Carlson, Petitioner establishes persuasively that the design of integrating a magnetic latch into either the upper or lower arm as a single-piece design would have been within the understanding of one of ordinary skill in the art based on the teachings of the references. Further, the fact that different forces may be required to activate the proposed modified design does not detract from the proposed combination or otherwise suggest that the combination would be inoperative.

After considering the parties' arguments and evidence, we find that Petitioner has established that the newly added limitations do not patentably distinguish claims 51 and 52 over the prior art. Rather, the evidence in the complete record established during trial demonstrates that claims 51 and 52 would have been obvious to a person of ordinary skill in the art based on Adams and Kimura or Generowicz.

Apart from changing their dependency, no other claims have been substantively amended. *See, e.g.,* Mot. to Amend, 1, App'x 18–34. Because Patent Owner's amendments to the remaining dependent claims simply change the dependency from the original independent claim to the proposed

substitute claim, and because Patent Owner makes no separate argument directed to any dependent claim, we likewise deny Patent Owner's Motion to Amend as to all dependent claims. After considering the parties' arguments and evidence, the evidence in the complete record established during trial demonstrates that all proposed substitute claims would have been obvious to a person of ordinary skill in the art as detailed above.

C. Conclusion

We deny Patent Owner's Motion to Amend on the basis that claims 51 and 52 are unpatentable under 35 U.S.C. § 103(a) over Adams and Kimura or Generowicz.

IV. SUMMARY AND ORDER

Petitioner has demonstrated, by a preponderance of the evidence, under 35 U.S.C. § 103(a), that:

Claims 1–10, 13–20, 23–36, 38–50 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Adams;

Claims 11, 12, 21, 22, 37 are unpatentable under 35 U.S.C. § 103(a) over Adams and Kimura, Generowicz, or common knowledge;

Claims 13, 23, 38 are unpatentable under 35 U.S.C. § 103(a) over Adams and Noseworthy, Zanona, or common knowledge;

Claims 26–37 are unpatentable under 35 U.S.C. § 103(a) over Adams and Zanona; and

Claim 38 is unpatentable under 35 U.S.C. § 103(a) over Adams, Zanona, and Kimura or Generowicz.

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–50 of the '461 patent have been shown to be unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Amend is *denied*; and

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

Case IPR2016-00792

Patent 8,881,461 B2

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