

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK**

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ORTHOARM INCORPORATED,

Plaintiff,

-against-

REPORT AND RECOMMENDATION

16-CV-5433 (BMC) (ST)

DENTSPLY GAC INTERNATIONAL and
DENTSPLY SIRONA INC.,

Defendants.

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TISCIONE, United States Magistrate Judge:

Plaintiff OrthoArm Incorporated (“OrthoArm”) brought suit against Defendants Dentsply GAC International and Dentsply Sirona Inc. (collectively, “Dentsply” or “Defendants”) on September 29, 2016, seeking damages resulting from Dentsply’s alleged infringement of U.S. Patent No. 8,636,507 (the “507 Patent”), which is held by OrthoArm. *See* Dkt. No. 17 (“Am. Compl.”) at 4-8. In November 2016, the parties jointly applied for a hearing pursuant to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996). Minute Order, Nov. 15, 2016. On June 26, 2017, the Honorable Brian M. Cogan, United States District Judge, referred the matter to me to conduct the *Markman* hearing. Referral Order, June 26, 2017. Having held the hearing and reviewed the parties’ submissions, I respectfully recommend that the Court adopt the following construction based on my determination that prosecution history disclaimer narrows the scope of the term “movable” in claim 1 of the 507 patent from its plain and ordinary meaning. The term “movable” in claim 1 of U.S. Patent No. 8,636,507, is construed as: capable of being moved, by a practitioner, between an open position and a closed position in a lateral direction only, without the need for the

practitioner to rotate the shutter.

I. BACKGROUND

A. The Self-Ligating Bracket

The patent at issue in this case concerns a “self-ligating” orthodontic bracket assembly. *See, e.g.*, Dkt. No. 33-1 (“Patent 507” or “Patent”) at Title. “[A]n orthodontic bracket [assembly] is the part of braces ... that adheres to the tooth and secures a wire that’s known as an archwire that runs along the dental arch and corrects the position of teeth.” Dkt. No. 45 (“Hearing Tr.”) at 5.¹ A “self-ligating” bracket assembly, such as the one disclosed in Patent 507, is manufactured with a built-in, movable shutter that can hold the wire in place and eliminates the need for rubber bands or some other means to hold the archwire. *Id.*; Dkt. No. 33 (“Pl.’s Opening Br.”) at 6.

The three figures below show an embodiment of the self-ligating bracket assembly in the 507 Patent. Patent 507, at Figures 1, 5, 6. The labial (1),² lingual (2), occlusal (5), and gingival (6) directions are shown in the figures. Patent 507, at 3:3-6.³ The parties have stipulated that “labial” means in the direction of the lip; “lingual” means in the direction of the tongue; “occlusal” means in the direction of the biting surface of the tooth; and “gingival” means in the direction of the gums. *See* Hearing Tr. at 6. Thus, the self-ligating bracket is attached to the “labial,” or lip-facing, surface of the tooth;⁴ the “lingual” surface of the tooth is the inward-facing surface that is closest to the tongue;⁵ and “occlusal gingival movement” would be movement from the biting end of the tooth towards the gums.⁶

¹ All page numbers are to ECF pages unless otherwise noted.

² Parenthetical numerals indicate figure numbering in the 507 Patent.

³ Citations to patents are in the format “column number: line number.”

⁴ Patent 507, at 3:26-27.

⁵ Hearing Tr. at 6.

⁶ Hearing Tr. at 42.

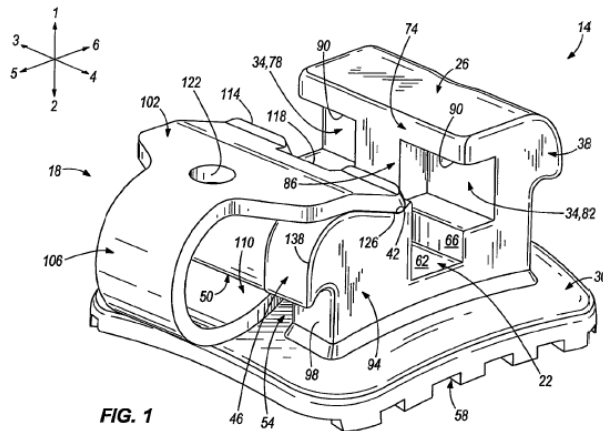


FIG. 1

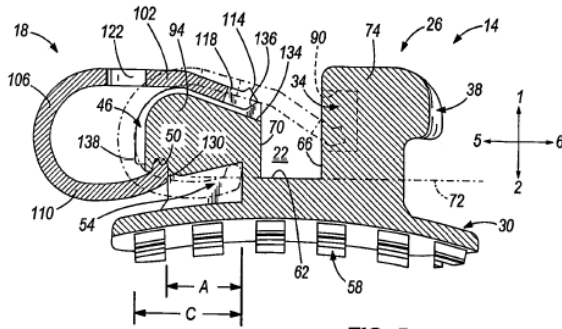


FIG. 5

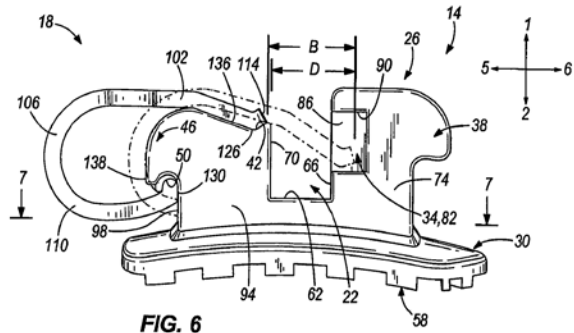


FIG. 6

The self-ligating bracket assembly has a bracket (14) and a shutter (18). Patent 507 at 3:10-13. The bracket (14) can be attached to the tooth with attachment portions (58). *Id.* at 5:35-36. The bracket body has a slot (22), with a side surface (70), for holding an archwire (not shown). *Id.* at 3:10-16, 32-34, 35-37. The bracket (14) has a closed position (Figures 5-6, broken outlines) in which the shutter (18) inhibits access to the archwire slot (22), and an open position (Figures 5-6, solid outlines) in which the shutter (18) allows access to the archwire slot (22). *Id.* at 3:11-15; 5:1-2. The shutter (18) has a lingual end (130) and a labial end (114). *Id.* at 5:8, 46.

Claim 1, the Patent's sole independent claim, specifies that "the side surface [of the archwire slot] is closer to the open labial location [of the shutter] than to the closed labial

location [of the shutter].”⁷ In addition, claim 1 requires that “a first occlusal-gingival distance from the closed lingual location [of the shutter] to the open lingual location [of the shutter] is from 70% to 90% a second occlusal-gingival distance from the closed labial location to the side surface.” The first occlusal-gingival distance is shown as “A” in Figure 5, and the second occlusal-gingival distance is shown as “B” in Figure 6. Pl.’s Opening Br. at 9. In other words, the claim requires that distance A is between 70-90% of distance B.

Finally, claim 1 requires that the shutter be “movable between a closed position...and an open position.” *See* Patent 507, at 2:10-12. The scope of the term “movable” in claim 1 is in dispute.

B. The Parties

OrthoArm is a company registered at 707-2300 Yonge Street in Toronto, Ontario. Am. Compl. ¶ 2. It is in the business of developing, designing, patenting, and licensing devices, systems, and methods in the field of orthodontics. *Id.* ¶ 9.⁸ The 507 Patent, entitled the Self-Ligating Orthodontic Bracket, is currently owned by OrthoArm.⁹ *Id.* ¶ 16. Defendant Dentsply

⁷ The full text of claim 1 provides the following: “A self-ligating orthodontic bracket comprising: a body having an archwire slot defined at least partially by an occlusal side surface and a lingual surface, wherein a mesio-gingival reference plane is tangent to a lingualmost point of the lingual surface, the body further having an occlusal-gingival opening, wherein the reference plane intersects the opening; and a locking shutter coupled to the body and movable between a closed position where access to the archwire slot is inhibited and an open position where access to the archwire slot is permitted, wherein the locking shutter includes a lingual end located in the opening at a closed lingual location when the locking shutter is in the closed position, and wherein the lingual end is located at an open lingual location when the locking shutter is in the open position, wherein the locking shutter further includes a labial end located at a closed labial location when the locking shutter is in the closed position and at an open labial location when the locking shutter is in the open position, wherein the side surface is closer to the open labial location than to the closed labial location, and wherein a first occlusal-gingival distance from the closed lingual location to the open lingual location is from 70% to 90% a second occlusal-gingival distance from the closed labial location to the side surface.” Patent 507, at claim 1.

⁸ OrthoArm’s principal is Dr. John Voudouris, a practicing orthodontist and clinical research scientist who is listed as the inventor on twelve issued U.S. Patents for self-ligating orthodontic brackets, including the 507 Patent. Am. Compl. ¶¶ 9, 10, 17.

⁹ Plaintiff owns the patent by assignment. Am. Compl. ¶ 16.

Sirona Inc. is a Delaware corporation doing business at 30-30 47th Avenue, Suite 500 in Long Island City, New York. *Id.* ¶ 3; Dkt. No. 18 (“Ans. to Am. Compl.”) ¶ 3. Defendant Dentsply GAC International is an affiliate of Dentsply Sirona Inc., with its principal place of business at 335 Knickerbocker Avenue in Bohemia, New York. Am. Compl. ¶ 4; Ans. to Am. Compl. ¶ 4. In 1997, OrthoArm licensed to Dentsply the right to manufacture, use, market, and sell self-ligating brackets under a patent not at issue here, along with the right to grant sublicenses. Am. Compl. ¶ 11; Ans. to Am. Compl. ¶ 11.

C. The Dispute

The issued 507 Patent contains eleven claims. Pl.’s Opening Br. at 6. Claim 1 is the only independent claim. *Id.* The term to be construed, “movable,” appears only once in claim 1: “The invention claimed is . . . a locking shutter coupled to the body and *movable* between a closed position where access to the archwire slot is inhibited and an open position where access to the archwire slot is permitted . . .” Patent 507, at claim 1.¹⁰ The term “movable” does not appear in any other claim, and it is not explicitly defined in the specification. Pl.’s Opening Br. at 6; Dkt. No. 36 (“Def.’s Opp’n Br.”) at 17.

OrthoArm asserts that an invention by Dentsply, known as the “In-Ovation Mini,” infringes on the 507 Patent. *See* Am. Compl. ¶ 13. Dentsply counters that its product does not infringe on the 507 Patent because the In-Ovation Mini “closes with *pivoting*-slide motion[,]” and the 507 Patent “expressly surrendered, or disclaimed, shutters that require rotational movement” during prosecution of the 507 Patent. Def.’s Opp’n Br. at 8 (emphasis in original). OrthoArm contends that the claim term “movable,” by its ordinary meaning, encompasses any change in position, including rotational movement, and no disclaimer exists in the prosecution

¹⁰ Emphasis added unless otherwise noted.

history to suggest that that the definition of the term should be limited to exclude rotational movement. *See generally* Pl.’s Opening Br. at 4, 12-17; Dkt. No. 37 (“Pl.’s Reply Br.”) at 6-7.

Consequently, the sole issue before this Court is whether a disavowal exists in the prosecution history of the 507 Patent. *See, e.g.*, Hearing Tr. at 3-4. Specifically, to construe the term “movable,” this Court must examine the prosecution history of the 507 Patent and determine whether and to what extent OrthoArm disclaimed shutters that move rotationally.

D. The Prosecution History

According to the prosecution history records filed by the parties, the United States Patent and Trademark Office (“USPTO”) issued two consecutive rejections against OrthoArm’s 507 Patent application (the “507 Application”). *See* Dkt. Nos. 33-2 (“First Office Action”), 33-6 (“Second Office Action”). The Examiner in both the First Office Action and the Second Office Action rejected the pending claims based on the same prior art references. First Office Action at 1; Second Office Action at 1. Specifically, the Examiner pointed to U.S. Patent Nos. 6,776,613 (“Orisaka”) and 6,939,133 (“Voudouris”), figures of which are included below as annotated by the Examiner. First Office Action at 5 (Figure 2A depicting Voudouris); Second Office Action at 5 (Figure 2 depicting Orikasa) *see also* Dkt. Nos. 33-3 (the Orikasa patent), 33-4 (the Voudouris patent).

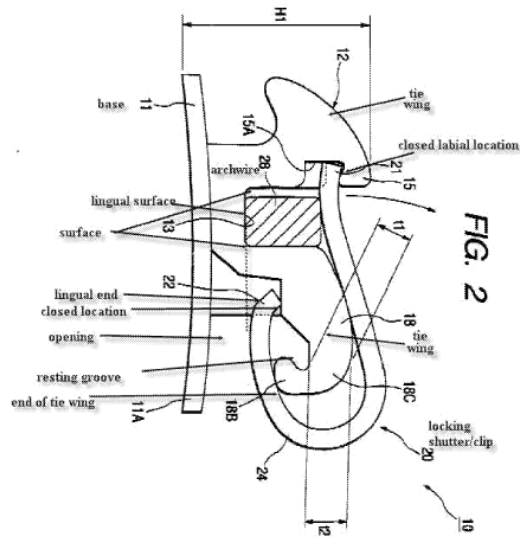
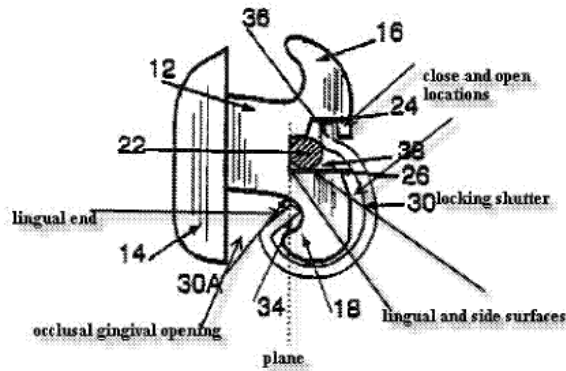


FIG. 2A



In the First Office Action, dated May 5, 2011, the Examiner rejected then-pending claims 1-7 and 9-20 in the 507 Application as “unpatentable over Voudouris . . . in view of Orikasa.” First Office Action at 4. OrthoArm responded to the First Office Action on August 5, 2011. Dkt. No. 33-5 (“First Response”). In the First Response, OrthoArm made a number of arguments, which it characterizes as an attempt to convince the Examiner that the claims were patentable by “focusing on certain distance/position requirements of the claims.” See Pl.’s Opening Br. at 13. The First Response distinguishes Voudouris on four different grounds. Two of the grounds

relate solely to the positioning of the labial and lingual ends of the shutter mechanism relative to the archwire slot. First Response at 9-11. The other two grounds, however, also note the operational differences between the claims and the prior art. *Id.* at 9-12.

Specifically, the First Response notes the fact that “Voudouris discloses that the lingual end of the locking shutter remains in the same location whether the locking shutter is in the open or closed position.” *Id.* at 9. Thus, “as the locking shutter of Voudouris transitions from an open position to a closed position, or vice-versa, the entire shutter is *merely rotating* around the single point at which the lingual end of the shutter is located.” *Id.* Plaintiffs then distinguish the claims in the 507 Patent: “Conversely, here, all claims of the present invention require that lingual end of the shutter is at different locations depending on whether the shutter is in an open or closed position.” *Id.*

In addition, the First Response argues that “it would not have been obvious to modify the teachings of Voudouris or Orikasa to teach the required distance ratios of the present invention [between the open and closed locations of the shutter ends] because the operation of the present invention is different than that of the cited prior art.” *Id.* at 11. In particular, the Response notes that “[t]o open and close the shutter of the present invention, *a practitioner only needs to move the shutter in a lateral direction.*” *Id.* The response contrasts this with the cited prior art: “*Conversely, the designs of both Voudouris and Orikasa have a necessity of rotation.* That is, to transition between open and closed positions, both Voudouris and Orikasa *require a rotational movement...*” *Id.*

The response then continues to emphasize the lack of rotational movement in the 507 claims and explains the benefits of having only lateral movement:

Because the *present invention only requires movement in a lateral direction*, the bracket is able to maintain a low profile. There are *three benefits* to this resultant low profile. First, it minimizes irritation of the lips because contact between the bracket and the lips is reduced. Second, because the arch wire slot is closer to the tooth

surface, there is less torque, or moment, placed on the tooth This allows for the patient to experience a less painful treatment when the brackets are used in orthodontic procedures. Third, the low profile provides a more aesthetically pleasing looking bracket.

Id. at 11-12.

In the Second Office Action, dated December 16, 2011, the Examiner found that claims 1-20 in the 507 Application were unpatentable because “it would have been obvious to one of ordinary skill in the art at the time ... the invention was made to modify the bracket of Orikasa by providing the open labial location being close[r to] the [side] surface as taught by Voudouris....” Second Office Action at 5. OrthoArm responded to the Second Office Action on June 18, 2012. *See* Dkt. No. 33-7 (“Second Response”). In the Second Response, OrthoArm argued that “it would not be obvious to combine the teaching of these references,” because “[the] modification is impossible due to the operation of the Orikasa bracket.” *Id.* at 8. In particular, because “Orikasa requires a two step process,” where “[t]he second step requires rotating the locking shutter, . . . the open labial location [in the Orikasa bracket] certainly cannot be positioned at a resting groove on the body of the bracket that is adjacent to the arch wire slot as taught in Voudouris” as proposed by the Examiner. *Id.* Thus, the Second Response concludes that “the combining step suggested by the Office that serves as the sole basis for the present rejection is not technically feasible” and is not an appropriate rejection by the Examiner. *Id.* at 8-9.

The Second Response also added a new claim – claim 21 – which provided: “The self-ligating bracket of claim 1, wherein moving the locking shutter from a closed position to an open position does *not require rotation* of the locking shutter.” *Id.* at 7. OrthoArm stated that “support for new [c]laim 21 is found throughout the specification as filed.” *Id.* at 8. This response also explained that not requiring rotation distinguished claim 21 from the prior art:

Orikasa requires the entire locking shutter to be *rotated* about the bracket body in order to place the locking shutter in an open position. Voudouris also requires

rotation of its locking shutter to place the locking shutter in an open position. Therefore, new [c]laim 21 is not anticipated nor rendered obvious by cited references.

Id. at 9 (internal citations omitted).

On September 10, 2012, the Examiner conducted a telephone interview with the patentee's representative. *See* Dkt. No. 48 ("Pl.'s Supp. Br.") at 5; Dkt. No. 48-1 ("Examiner-Initiated Interview Summary"). Following the interview, and with agreement from the patentee, the Examiner cancelled claim 21. *See* Pl.'s Supp. Br. at 5. In a subsequent Examiner-Initiated Interview Summary, the Examiner explained that claim 21 was requested to be cancelled because "[c]laim 21 include[s] limitation not supported by [the] original spec[ification]." *See* Examiner-Initiated Interview Summary.

On November 9, 2012, the USPTO sent OrthoArm a Notice of Allowability for the 507 Patent Application, allowing remaining claims 1-11. Dkt. No. 33-8 ("Notice of Allowability"). In his reasons for allowance in the Notice, the Examiner cited to most of the claim limitations of claim 1, and noted that those limitations "in combination with [other] limitations set forth in the claim(s)" are non-obvious over the prior art of record. Notice of Allowability at 6. One of the noted limitations the Examiner explicitly recited was:

[A] self-ligating orthodontic bracket... wherein a first occlusal-gingival distance from the closed lingual location to the open lingual location is from 70% to 90% of a second occlusal-gingival distance from the closed labial location to the side surface....

Id.

On January 7, 2014, OrthoArm filed a continuation of the 507 Patent, containing twenty new claims, with the same specification as the 507 Patent. Dkt. No. 49-1 (Patent Application No. 14/149,585, the "585 Application"). Independent claims 1 and 12 of the 585 Application were directed to "[a] self-ligating orthodontic bracket comprising.... a locking shutter coupled to

the body and movable between a closed position...and an open position” 585 Application at claims 1, 12. On December 17, 2015, the USPTO rejected the claims in the 585 Application. *See* Dkt. No. 49-2 (the “585 Office Action”).

The Examiner found all twenty claims unpatentable over Orikasa in view of Voudouris because, *inter alia*, “[i]t would have been an obvious matter of design choice to vary the angle of the [occlusal gingival] opening, since applicant has not disclosed that it solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the opening as angled in Orikasa.” *Id.* at 9; *see also id.* at 6.¹¹ OrthoArm responded on June 17, 2016. *See* Dkt. No. 49-4 (the “585 Response”). In the 585 Response, OrthoArm amended claims 1 and 12 so that the word “movable” was replaced with the word “slidable,” such that the claims read: “a locking shutter coupled to the body and slidable between a closed position ...and an open position” *See id.* at 3, 5. It then argued that:

Orikasa requires a two-step process First, the locking shutter is moved in the occlusal direction The second step requires rotating the entire locking shutter ... allowing access to the archwire slot and placing the bracket in the open position. Therefore, movement of the shutter of Orikasa from a closed position to an open position cannot be performed by *only sliding the shutter as presently claimed*, but *instead requires a rotational step*. Additionally, nothing in Orikasa or Voudouris discloses or provides any motivation to modify the Orikasa bracket to somehow eliminate this *necessary rotational step*.

585 Response at 7-8. The parties have not filed any additional documents regarding the 585 Application, nor have they represented whether the 585 Application remains pending before the USPTO.

¹¹ The examiner also rejected claims 1-11 on the grounds that they were “not patentably distinct from” the 507 Patent. *See* 585 Office Action at 5. The applicant therefore executed a terminal disclaimer to obviate a double patenting rejection over a prior patent on February 27, 2017. *See* Dkt. No. 49-3.

II. DISCUSSION

A. OrthoArm's Arguments

OrthoArm argues that “‘movable’ does not require construction because the term is a commonly understood, non-technical word[,] and there is nothing in the claims, specification, or prosecution history of the [507 Patent] justifying the use of anything other than the ordinary and customary meaning of the term.” Pl.’s Opening Br. at 4. However, OrthoArm continues, “[s]hould the Court nevertheless decide that construction is necessary,” the term “movable” should be defined as follows: “capable of changing position.” *Id.* at 17.

OrthoArm advances several arguments in support of its position. First, it argues that because the claim language itself is “utterly silent regarding how the locking shutter moves,” and instead focuses on “specific distances between various locations on the locking shutter and the body,” nothing in the claim language suggests departing from the ordinary and customary meaning of the term “movable.” *Id.* at 9. Second, it argues that “[t]he specification of the [507 Patent] imposes no specialized meaning on ‘movable,’ and contains no indication that the term should be given anything other than its ordinary and customary meaning.” *Id.* Third, OrthoArm argues that “[t]he prosecution history of the [507 Patent] likewise provides no justification for a construction that departs from the ordinary and customary meaning of ‘movable,’” because the movement of the shutter was only discussed “in the context of distinguishing the position/distance of the parts of the shutter from the position/distance of the prior art.” *Id.* at 12 (emphasis removed); *see also* Hearing Tr. at 50-51 (discussing OrthoArm’s argument that the prosecution history reflects a distance-based, not a movement-based argument to distinguish over the prior art); Pl.’s Reply Br. at 6 (arguing that the remarks in the prosecution history “must be viewed in context, and in their entirety”). OrthoArm argues that the remarks related to shutter

movement in the prosecution history are thus “ancillary,” “mere statements,” or “nothing more than an explanation” of the structural claim limitations—not rising to the level of a clear and unmistakable disclaimer of claim scope under the law. Pl.’s Opening Br. at 15; Pl.’s Reply Br. at 5. Fourth, OrthoArm argues, in the Notice of Allowability, the Examiner “specifically focuse[d] on the ... positional/distance limitations, but never even mention[ed] the word ‘movable[,]’ [which] confirms that the Examiner did not consider the term ‘movable’ to impart any particular type or direction of movement limitation to distinguish the claimed invention from the prior art.” Pl.’s Opening Br. at 15-16. Fifth, OrthoArm asserts that, as evidenced by Figure 5 of the 507 Patent, “some type of non-linear movement necessarily takes place as the shutter [on the self-ligating bracket] moves between the open and closed positions,” such that Dentsply’s proposed construction could exclude every embodiment disclosed in the Patent. Pl.’s Reply Br. at 12.

Additionally, OrthoArm asserts the following arguments to negate or limit a finding of disclaimer: (1) “if [Dentsply’s] construction were to be adopted by the Court, the Court would need to construe several additional terms that do not even appear in the claims, including ‘lateral,’ ‘rotational,’ ‘motion,’ and ‘movement,’ in order to save the claims from being indefinite,” Pl.’s Opening Br. at 5; *see also* Pl.’s Reply Br. at 11-12; (2) in the prosecution history, OrthoArm did not discuss *all* rotational shutter movements but was in fact distinguishing its invention from the prior art on the basis that the shutters in Orikasa and Voudouris “pivot about a fixed point” and thus “under[go] what can only be described as *only* rotation,” Pl.’s Reply Br. at 8 (emphasis in original); (3) “[t]here is no need for [Dentsply’s] manufactured disclaimer because the claim language itself excludes shutters, such as the Voudouris and Orikasa shutters, that pivot about the ...[lingual] end[,]” *id.* at 10-11 (emphasis removed); (4) “the existence of claim 21 [claiming “moving the locking shutter...” without “requir[ing]

rotation of the locking shutter”] eliminates the possibility of a clear and unmistakable disavowal of the scope of the term ‘movable’” because “under the doctrine of claim differentiation, the scope of claim 1 is presumptively broader than that of claim 21....[and thus claim 1] must not exclude from its scope shutters that are able to have some element of motion that can be characterized as ‘rotation’...” Pl.’s Supp. Br. at 3; and (5) the cancellation of claim 21 before issuance of the Patent demonstrates that there was no disavowal because “the Examiner made it clear that an interpretation of claim 1 that would require an absence of rotation was not possible [since the 507 Patent specification] did not disclose any embodiments encompassing such a limitation.” *Id.* at 5-6.

B. Dentsply’s Arguments

Dentsply asserts the following: the term movable should be construed to mean “the shutter can be moved between an open position and a closed position through lateral motion only, without the need for rotational movement” because OrthoArm “expressly surrendered, or disclaimed, shutters that require rotation from the scope of its claims.” Def.’s Opp’n Br. at 8. In support of its position, Dentsply makes a number of arguments. First, it argues that during prosecution of the 507 Patent, OrthoArm “twice defined the...invention in terms of a locking shutter that only needs to move in a lateral direction[,]” which justifies Dentsply’s construction of the term “movable.” *Id.* at 11. Second, Dentsply argues, OrthoArm associated advantages with this lateral, non-rotational motion, which further suggests that OrthoArm should be held to its characterization of the invention during prosecution. *See id.* at 12-13. Third, Dentsply argues that OrthoArm’s use of the disjunctive phrases “different than” and “conversely” in distinguishing the invention from the prior art demonstrates that “the prior art shutters – which require rotational movement – are different and distinct from the shutters of the invention[.]” *Id.*

at 13 (internal quotations marks and citation omitted). And fourth, Dentsply argues that OrthoArm's use of the word "only" in describing the invention as "'only' requir[ing] something...[and] not requir[ing] something else" in its prosecution of the patent often dictates a finding of disclaimer. *Id.* at 14.

In addition, Dentsply makes a number of arguments in response to OrthoArm's contentions: (1) by definition, prosecution history disclaimer narrows the ordinary meaning of a term that would otherwise apply, such that OrthoArm's arguments about the ordinary meaning of the term "movable" are irrelevant, *see id.* at 15-16; (2) the fact that the specification "contains little disclosure concerning the meaning of [the] term" "movable" supports a finding of disclaimer, *id.* at 17; (3) OrthoArm's remarks disclaiming rotation in the prosecution history were necessary to gain allowance of the 507 Application and limited the scope of the claims regardless of their intended purpose, *see id.* at 19, 21-27; (4) the fact that the Examiner's Reasons for Allowance did not specifically refer to the term "movable" does not override OrthoArm's disclaimer, *see id.* at 28-30; (5) OrthoArm's arguments regarding indefiniteness resulting from Dentsply's proposed construction "improperly conflate[] claim construction with validity issues," *see id.* at 30; (6) OrthoArm has characterized Dentsply's proposed construction too narrowly, *see id.* at 32; (7) OrthoArm has waived its claim differentiation argument regarding claim 21 by failing to raise it before the *Markman* hearing, and, regardless, claim differentiation cannot be used to overcome prosecution disclaimer, OrthoArm made no other explicit attempts to rescind its disclaiming statements to the Examiner, and the Examiner's cancellation of claim 21 did not negate the disclaimer, *see Dkt. No. 49* ("Def.'s Supp. Br.") at 6-13; and (8) OrthoArm "repeated its assertion that the specification supports claims that exclude rotation" in the course of prosecuting the related 585 Application that has the same specification as the 507 Patent. *Id.*

at 13-15.

C. Analysis

As indicated above, OrthoArm and Dentsply have agreed that the sole issue before the Court on this motion is whether the statements made by OrthoArm during prosecution of the 507 Patent amount to a clear and unmistakable disavowal of scope of the term “movable.” *See* Hearing Tr. at 3-4. For the following reasons, this Court respectfully recommends that prosecution history disclaimer be found in the prosecution history of the 507 Patent.

i. Legal Standard

“Claim construction is a question of law exclusively for the courts to resolve....” *Auto-Kaps, LLC v. Clorox Co.*, 2016 WL 6988834, at *2 (E.D.N.Y. Nov. 29, 2016) (citing *Markman*, 52 F.3d at 970-71). “To construe a patent claim, a court analyzes the intrinsic evidence of record, which consists of the claims, the written description of the patent itself, and, if in evidence, the prosecution history.” *Id.* (citing *Biovail Corp. Int’l v. Andrx Pharm., Inc.*, 239 F.3d 1297, 1300 (Fed. Cir. 2001)). “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc).

Generally, claim terms are given their ordinary and customary meaning—“the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1313. Where the prosecution history of a patent defines a term in a manner that is different than the term’s “ordinary and customary meaning,” however, the ordinary meaning may no longer be controlling. *Auto-Kaps*, 2016 WL 6988834, at *3. In fact, if

a clear disavowal is present in the prosecution history, courts are compelled to depart from the plain meaning of a claim term. *See GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014); *see also Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1366 (Fed. Cir. 2014) (“Although we generally construe terms according to their plain and ordinary meanings to one of ordinary skill in the art, we depart from that meaning where there is disclaimer.”). The party seeking to invoke prosecution history disclaimer bears the burden of proving that a clear and unmistakable disclaimer exists. *See Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1063-64 (Fed. Cir. 2016) (citing *Elbex Video, Ltd. v. Sensormatic Elecs. Corp.*, 508 F.3d 1366, 1371 (Fed. Cir. 2007)).

ii. Plaintiff’s Clear and Unambiguous Statements Constituted Disclaimer

“The public notice function of patents requires that a patentee be prevented from expressly stating during prosecution that the claims do not cover a particular device and then later suing for infringement by that same device.” *Pall Corp. v. PTI Techs. Inc.*, 259 F.3d 1383, 1393 (Fed. Cir. 2001). “In order to disavow claim scope during prosecution[,] ‘a patent applicant must clearly and unambiguously express surrender of subject matter.’” *Voda v. Cordis Corp.*, 536 F.3d 1311, 1321 (Fed. Cir. 2008) (quoting *Sorensen v. Int’l Trade Comm’n*, 427 F.3d 1375, 1378–79 (Fed. Cir. 2005)). “Applicants need not ‘submit affirmative disclaimers along the lines of ‘I hereby disclaim the following ...’ during prosecution ... to meet the applicable standard[,]’” however. *523 IP LLC v. CureMD.Com*, 48 F. Supp. 3d 600, 613 (S.D.N.Y. 2014) (quoting *Saffran v. Johnson & Johnson*, 712 F.3d 549, 559 (Fed. Cir. 2013)). “Any explanation, elaboration, or qualification presented by the inventor during patent examination is relevant, for the role of claim construction is to ‘capture the scope of the actual invention’ that is disclosed, described, and patented.” *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1063 (Fed. Cir. 2016)

(internal quotation marks omitted) (quoting *Fenner Invs., Ltd. v. Cellco P'ship*, 778 F.3d 1320, 1323 (Fed. Cir. 2015)).

On several occasions during prosecution of the 507 Patent, OrthoArm made statements describing the “present invention” as requiring only lateral motion for operation and distinguishing the rotational motion required for the operation of prior art devices. In the First Response, Plaintiff argued that the 507 Application was patentable over the prior art because, “[t]o open and close the shutter of the *present invention*, a practitioner *only needs to move the shutter in a lateral direction*” while “[c]onversely, the designs of [the cited prior art] have a *necessity of rotation*” and “require a rotational movement” to move open and close. First Response at 11. The First Response also emphasized that “[b]ecause the *present invention only requires movement in a lateral direction*,” it is “able to maintain a low profile,” which results in three benefits for the orthodontic patient. *Id.* at 12.

Plaintiff reiterated the emphasis on “the necessity of rotation” in the prior art in the Second Response. Second Response at 9. And, in a further attempt to distinguish the prior art based on rotational movement, OrthoArm added claim 21 directed to an embodiment where “moving the locking shutter from a closed position to an open position does *not require rotation* of the locking shutter.” *Id.* at 10.

Additionally, to the extent statements by the patentee in the prosecution of a related patent are relevant,¹² the statements made by the Plaintiff regarding the 585 Application offer additional support for a finding of disclaimer. Specifically, in response to a rejection of the 585

¹² In the view of this Court, the statements made in the First Response and the Second Response are sufficient to support a finding of claim scope disclaimer, without need to reference the 585 Response. However, comments made while prosecuting related patent applications can be relevant to questions of disavowal. *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (“Any statement of the patentee in the prosecution of a related application as to the scope of the invention would be relevant to claim construction....”).

Application by the Examiner, the Plaintiff once again emphasized the necessity of rotation in the same prior art references previously cited against the 507 Application, and contrasted this feature with the “slidable” operation of the self-ligating orthodontic bracket described in the specification common to both 507 and 585 applications. *See* 585 Response at 7-8.

Together, these statements illuminate how OrthoArm understood its invention—as one that “only” requires the user to slide the shutter laterally in order to open the bracket, without requiring the user to rotate the shutter. First Response at 11; *see Phillips*, 415 F.3d at 1317. The Federal Circuit has emphasized, moreover, that repeated, definitive, and unqualified assertions regarding a claim term in the prosecution history, such as those seen here, “extend[] beyond illuminating ‘how the inventor understood the invention’” and limit the scope of that term in the claims. *See Saffran*, 712 F.3d at 559 (quoting *Phillips*, 415 F.3d at 1317). Thus, OrthoArm’s statements clearly and unambiguously limit the scope of the term “movable” as used in the context of how the locking shutter moves “between a closed position...and an open position” as claimed. This Court sees no other reasonable interpretation of OrthoArm’s statements.¹³ *Cf. Biogen Idec, Inc. v. GlaxoSmithKline LLC*, 713 F.3d 1090, 1100 (Fed. Cir. 2013) (“[W]hen a prosecution argument is subject to more than one reasonable interpretation, it cannot rise to the

¹³ On this point, the Court takes note of OrthoArm’s argument that its prosecution history statements were an attempt to distinguish the invention from the prior art on the basis that the shutters in Orikasa and Voudouris “pivot about a fixed point,” and thus “under[go] what can only be described as *only* rotation.” Pl.’s Reply Br. at 8 (emphasis in original). In other words, OrthoArm is arguing that the prosecution history statements did not “clearly and unmistakably reflect an intention to disclaim *any* shutter that may move with what might be called ‘rotation.’” *Id.* at 10 (emphasis in original). Though this argument is a clever way to spin the statements made in the prosecution history, it is unconvincing. Based on the record before this Court, OrthoArm never made arguments to the USPTO about the “pivoting motion” used by Voudouris or Orikasa. Although OrthoArm characterized the Voudouris shutter as “merely rotating around the single point at...the lingual end,” First Response at 9, it also specifically discussed the “two step process” used to access the archwire slot on the Orikasa bracket, whereby the shutter must be moved *laterally* in the occlusal direction before it is rotated, and thus opened, Second Response at 9. Consequently, OrthoArm’s proposed interpretation of its comments is not reasonable in light of the record before this Court, and does not overcome the disclaimer.

level of a clear and unmistakable disclaimer.”). By stating what type of motion the user of the 507 Patent bracket must use in order to open the shutter, and distinguishing that motion from the type required to open the shutter on the Orikasa and Voudouris brackets, OrthoArm plainly disavowed a shutter that requires the user to use rotational movement to open or close the bracket. *See, e.g.*, Second Response at 9-10. “[B]y distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover, he is by implication surrendering such protection.” *Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1304 (Fed. Cir. 1997). As such, while the ordinary meaning of the term “movable” may encompass any change in position, *see* Pl.’s Opening Br. at 4, 17, OrthoArm’s statements during prosecution of the 507 Patent narrowed the meaning of that term.

As Defendants point out, a number of factors lend support to finding disavowal in this case. First, OrthoArm listed a number of advantages of the non-rotational movement of the shutter. First Response at 12; *see also Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1376-77 (Fed. Cir. 2008) (finding disclaimer where, *inter alia*, applicant associated advantages with its design as compared to prior art). Second, it used disjunctive language, such as “conversely,” in distinguishing what it defined as its “present invention” from the prior art. *See* First Response at 11-12; *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1197 (Fed. Cir. 2013) (finding disclaimer where, *inter alia*, a patent used the disjunctive phrase “as opposed to”); *Am. Calcar, Inc. v. Am. Honda Motor Co.*, 651 F.3d 1318, 1340 (Fed. Cir. 2011) (holding that an applicant “clearly and unmistakably surrendered” certain subject matter when it distinguished its invention from prior art by, *inter alia*, using the phrase “rather than”). Third, OrthoArm used the word “only” in describing the requirements of the invention, e.g., “[t]o open and close the shutter of the present invention, a practitioner **only** needs to move the shutter in a lateral direction.” *See*

First Response at 11; *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1363-64 (Fed. Cir. 2017) (finding “unequivocal and unambiguous disavowal” based, *inter alia*, on the patent owner’s repeated statements that “only” one thing was required by the claims in the patent).

In sum, the record fully supports a finding of prosecution history disclaimer of the term “movable.” The scope of the disclaimer and Plaintiff’s arguments in opposition to the finding of disclaimer are addressed in turn below.

iii. Scope of Disclaimer Should Consider the User Perspective

Although the Court finds that Defendants met their burden in showing that disclaimer occurred, the Court does not agree with Defendants’ interpretation of the scope of that disclaimer. Dentsply asserts that OrthoArm “expressly surrendered, or disclaimed, shutters that require rotation from the scope of its claims.” Def.’s Opp’n Br. at 1. Based on the full context of the statements in the prosecution history, however, such an interpretation is too broad.¹⁴

This Court agrees with Plaintiff that, based on the record, the ends of the 507 Patent shutter appear to move in a non-lateral motion when the bracket is opened or closed. *See* 507 Patent, Figures 1 and 5. OrthoArm did not state that the shutter *itself* moves *only* in a lateral direction, as Defendants imply. Instead, OrthoArm’s comments regarding the lateral motion of the shutter were made in terms of the user or the practitioner who actually opens and closes the shutter. *See, e.g.*, First Response at 10 (“To open and close the shutter of the present invention, *a practitioner* only needs to move the shutter in a lateral direction.”).

Therefore, although OrthoArm has disavowed brackets that require *the user* to move the

¹⁴ In addition, to the extent that Defendants’ construction would exclude *all* embodiments of the 507 Patent, as argued by OrthoArm, *see, e.g.*, Pl.’s Reply Br. at 12, such a construction is also disfavored under Federal Circuit law. *See, e.g., Kaneka Corp. v. Xiamen Kingdomway Grp. Co.*, 790 F.3d 1298, 1304 (Fed. Cir. 2015) (“A construction that excludes *all* disclosed embodiments ... is especially disfavored.” (emphasis in original)).

shutter rotationally, it has not disavowed shutters that “can be moved” in any sort of non-lateral motion, as suggested by Defendants.¹⁵ Thus, this Court respectfully recommends that in claim 1 of the 507 Patent, the term “movable” be construed to mean “capable of being moved, by a practitioner, between an open position and a closed position in a lateral direction only, without the need for the practitioner to rotate the shutter.”

iv. OrthoArm’s Arguments Attempting to Negate or Limit Disclaimer Are Not Persuasive

1. Claim Language & Specification Do Not Negate Disclaimer

Plaintiff argues that “there is nothing in the claim language indicating that ‘movable’ should be given any meaning other than its ordinary and customary meaning,” and furthermore, “[t]he specification of the [507 Patent] imposes no specialized meaning on ‘movable,’ and contains no indication that the term should be given anything other than its ordinary and customary meaning.” Pl.’s Opening Br. at 9. These arguments cannot overcome the prosecution history disclaimer here. Although it is true that the prosecution history “must always receive consideration in context[.]” *Computer Docking Station*, 519 F.3d at 1378, the context in this case does not contradict a finding of disavowal.

With respect to claim language, as noted by Dentsply, it is “precisely the point of prosecution disclaimer” to narrow otherwise broad claim language. *TMC Fuel Injection Sys., LLC v. Ford Motor Co.*, 682 F. App’x 895, 899 (Fed. Cir. 2017). “Where an applicant argues that a claim possesses a feature that the prior art does not possess in order to overcome a prior art

¹⁵ The Court notes that the use of the passive voice in Defendants’ construction creates ambiguity with respect to who is performing the shutter movement. *See* Def.’s Opp’n Br. at 8 (proposing to construe the term moveable as “the shutter *can be moved* between an open position and a closed position through lateral motion only, without the need for rotational movement”). This imprecision suggests a wider scope of disclaimer than perhaps intended by Defendants. *See id.* at 33 (explaining the limited scope of Defendants’ disclaimer proposal).

rejection, the argument may serve to narrow the scope of otherwise broad claim language.” *Seachange Int’l, Inc. v. C-COR Inc.*, 413 F.3d 1361, 1372-1373 (Fed. Cir. 2005). Thus, it does not matter that nothing in the claim language suggests narrowing the scope of the term movable, because the statements OrthoArm made in the prosecution history amounted to a clear and unambiguous disavowal.

And regarding the specification, its silence on the definition of the term “movable” weighs against OrthoArm’s argument. The Federal Circuit has indicated that where the specification of a patent does not provide “an express definition” of the disputed term, it cannot “override [the prosecution history] or make the distinctions in the prosecution history ambiguous.” *Computer Docking Station*, 519 F.3d at 1378.¹⁶ Thus, nothing in the claim language or the specification of the 507 Patent undermines a finding of disavowal.

2. Plaintiff’s Subjective Intent or Reason in Making Narrowing Statements is Irrelevant

OrthoArm argues that the prosecution history of the 507 Patent does not contain a disclaimer because the movement of the shutter was only discussed in the “context of distinguishing the position/distance of the parts of the shutter from the position/distance of the prior art.” *See* Pl.’s Opening Br. at 12 (emphasis removed). OrthoArm also attempts to diminish the importance of its remarks in the prosecution history by referring to them as “ancillary,”

¹⁶ The Court notes that, relatedly, OrthoArm has argued that no specialized meaning should be given to the term “movable” because “the context provided by the specification . . . confirms that the inventive concepts relate, at least in part, to the configuration of the orthodontic bracket when the shutter is in its open and closed positions, and *do not relate to* the particular manner in which the shutter moves.” Pl.’s Opening Br. at 11. In support of this argument, OrthoArm cites *Phillips* for the proposition that “[i]n most cases, the best source for discerning the proper context of the claim terms is the patent specification wherein the patent applicant describes the invention.” *Id.* at 11-12 (internal quotation marks omitted) (quoting *Phillips*, 451 F.3d at 1315). For the reasons already discussed, however, references to the specification of the 507 Patent do not overcome the clear and unambiguous disavowal in the prosecution history.

“mere statements,” or “nothing more than an explanation” of the structural claim limitations—not rising to the level of a clear and unmistakable disclaimer of claim scope under the law. Pl.’s Opening Br. at 15; Pl.’s Reply Br. at 5.

These arguments are not persuasive for a variety of reasons. First, the fact that the argument was one of a number of distinctions made by the patentee does not negate disclaimer. *Computer Docking Station*, 519 F.3d at 1377 (“[A] disavowal, if clear and unambiguous, can lie in a single distinction among many.”). Thus, although OrthoArm made statements regarding the “position/distance” of the shutter on its invention in order to distinguish it from the prior art, *see, e.g.*, First Response at 10 (“Voudouris is silent about a first occlusal-gingival distance from the closed lingual location . . . to the open lingual location . . . [being] at least about 70% of a second occlusal-gingival distance from the closed labial location to the side surface.” (quoting First Office Action)), it also made statements distinguishing the prior art based on the type of movement used by the practitioner to open or close the shutter of each bracket. *See, e.g., id.* at 11 (“Conversely [to the present invention], the designs of both Voudouris and Orikasa have a necessity of rotation.”). As such, OrthoArm’s statements regarding the position and distance of the ends of the shutter were merely *an additional* way to distinguish the 507 Patent from the Orikasa and Voudouris patents, and do not contradict a finding of disavowal.

Second, the patentee’s subjective intent, reason, or purpose for making the disclaiming remarks, i.e., as being mere explanations or considered unnecessary to overcome the prior art, cannot be considered in view of the public notice function of the prosecution history record. *Biogen, Inc. v. Berlex Labs., Inc.*, 318 F.3d 1132, 1139 (Fed. Cir. 2003) (“The court correctly viewed the prosecution history not for the . . .the applicant’s subjective intent, but as an official record that is created in the knowledge that its audience is not only the patent examining officials and the applicant, but the interested public.”). “[T]he interested public has the right to rely on

the inventor's statements made during prosecution....” *Fenner Invs.*, 778 F.3d at 1325 .

Furthermore, “[I]mitations clearly adopted by the applicant during prosecution are not subject to negation during litigation, on the argument that the limitations were not really needed in order to overcome the reference.” *MarcTec, LLC v. Johnson & Johnson*, 394 F. App’x 685, 687 (Fed. Cir. 2010). Thus, the Court need not, and will not, address the question of whether the statements were *necessary* to overcome the prior art rejections; the statements surrendered claim scope in either case. *See TMC Fuel Injection Sys.*, 682 F. App’x at 899 (“It is immaterial whether or not [the patent holder] needed to make such a broad disclaimer in order to traverse the prior art because ‘the scope of surrender is not limited to what is absolutely necessary to avoid a prior art reference; patentees may surrender more than necessary.’” (quoting *Tech. Props. Ltd. v. Huawei Techs. Co.*, 849 F.3d 1349, 1359 (Fed. Cir. 2017))).

3. Examiner’s Reasons for Allowance Do Not Negate Disclaimer

OrthoArm argues that, as evidenced by the Notice of Allowability, “the Examiner did not consider the term ‘movable’ to impart any particular type or direction of movement limitation to distinguish the claimed invention from the prior art.” Pl.’s Opening Br. at 16. Instead, OrthoArm asserts, the Examiner focused upon the “positional/distance limitations” in the reasons for allowance. *Id.* at 15. Accepting, *arguendo*, OrthoArm’s characterization of the Examiner’s reasons for allowance,¹⁷ OrthoArm cites no law in support of its suggestion that statements in the Notice of Allowability should overcome a prosecution history disclaimer. In fact, the Federal Circuit has indicated that “[w]hile the examiner’s interpretation can be pertinent, the applicant’s own interpretation has far more significance” in the context of prosecution history disclaimer. *Altair Eng’g, Inc. v. LEDdynamics, Inc.*, 413 F. App’x 251, 255 (Fed. Cir. 2011). Moreover, the

¹⁷ Although the reasons generally note that “limitations set forth in the claim(s)” are relevant to the Examiner’s decision. Notice of Allowability at 6.

Federal Circuit has indicated that “drawing inferences of the meaning of claim terms from an examiner’s silence [to a particular aspect of a claim] is not a proper basis on which to construe a patent claim.” *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1342 (Fed. Cir. 2001). Similarly, where a patent applicant distinguishes its invention from prior art on multiple grounds, but the Examiner cites only one ground in its reasons for allowance, the Examiner’s statement “does not erase the applicants’ clear disavowal” based upon the grounds not mentioned. *Computer Docking Station*, 519 F.3d at 1377 (citing *Laitram Corp. v. Morehouse Indus., Inc.*, 143 F.3d 1456, 1462 (Fed. Cir. 1998)); *see also Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003) (“[T]he examiner’s remarks do not negate the effect of the applicant’s disclaimer.”). Consequently, the reasons for allowance in the Notice of Allowability do not prevent a finding of disavowal.

4. Recommended Construction Does Not Exclude All Embodiments of the 507 Patent

In its Reply Brief, OrthoArm argued that since “some type of non-linear movement necessarily takes place as the shutter moves between the open and closed positions[.]” Dentsply’s proposed construction could exclude every embodiment disclosed in the 507 Patent. Pl.’s Reply Br. at 12. Although prosecution history can compel a construction that excludes even preferred embodiments, *see N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1346 (Fed. Cir. 2005), the Court’s recommended construction does not exclude every embodiment, or even the preferred embodiment, disclosed in the 507 Patent. Specifically, the Court’s recommended definition would *not* exclude any rotational movement of the shutter, but only the need for the *practitioner* to rotate the shutter.

As discussed above, this Court agrees with Plaintiff that, based on the record, the ends of the 507 Patent shutter appear to move in a non-lateral motion when the bracket is opened or

closed. *See* 507 Patent, Figures 1 and 5. Therefore, Defendants’ proposed construction, if adopted, would have likely been inconsistent with the preferred embodiment of the 507 Patent. *See* Pl.’s Reply Br. at 12 (citing to Figure 5, 6, and 8 of the 507 Patent as evidence that the shutter undergoes non-linear movement as it is open or closed).¹⁸ However, as stated above, this Court does not agree with Defendants’ interpretation of the scope of OrthoArm’s disclaimer and has not adopted that construction.

5. Recommended Construction Does Not Render Claims Indefinite

OrthoArm argues that “Defendants’ proposed construction does anything but define and clarify the disputed claim term [I]f Defendants’ construction were to be adopted . . . , the Court would need to construe several additional terms that do not even appear in the claims, including ‘lateral,’ ‘rotational,’ ‘motion,’ and ‘movement,’ in order to save the terms from being indefinite.” Pl.’s Opening Br. at 5. Specifically, OrthoArm argues that “Defendants’ proposed construction is . . . problematic because it uses directional terms that themselves are subject to interpretation.” Pl.’s Reply Br. at 11. Plaintiff insists that Defendant’s “construction does not serve the purpose of claim construction, which is ‘to determine the meaning and scope of the patent claims that the plaintiff alleges have been infringed.’” *Id.* at 12 (quoting *Every Penny Counts, Inc. v. Am. Express Co.*, 563 F.3d 1378 (Fed. Cir. 2009)) (internal quotation marks omitted). Defendants respond that such an argument “improperly conflates claim construction with validity issues.” Def.’s Opp’n Br. at 30. Furthermore, Defendants argue, “OrthoArm had no trouble using and understanding ‘lateral’ and ‘rotational’ [when it used those terms in the prosecution history] without defining any reference frame.” *Id.* at 30-31.

¹⁸ Although the parties dispute whether Defendants’ proposed construction would, in fact, exclude the preferred embodiment of the 507 Patent, *see* Def.’s Opp’n Br. at 32, this Court need not reach that issue because it has not adopted Defendants’ proposed construction.

Although this Court has not recommended adopting Defendants' proposed construction, the definition recommended by the Court does include the words "moved," "lateral," and "rotate," such that Plaintiff's argument is still applicable. Nonetheless, in the view of this Court, the words "moved," "lateral," and "rotate," as used to define the term "movable," need no construction at this time.

First, Plaintiff has failed to explain how the words "moved," "lateral," and "rotate," "***read in light of the*** patent's specification and ***prosecution history***, [would] fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2123 (2014). In fact, Plaintiff *admits* that the words are derived from the prosecution history, where they are given appropriate context to one of ordinary skill in the art. Pl.'s Reply Br. at 12 ("[A]pplicant's remarks were made in a series of detailed written exchanges in which the applicant and the examiner ***created the context within which the terms were being used.***").

Second the plain and ordinary meaning of the words "moved," "lateral," and "rotate" appears to be unambiguous as they are used in the specification and prosecution history. The Federal Circuit warns that "[c]ourts should be cautious not to allow claim construction to morph into a mini-trial on validity" where the plain and ordinary meaning of terms is clear. *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1374 (Fed. Cir. 2014). In fact, the Federal Circuit has said that "[t]he doctrine of construing claims to preserve their validity...[is] of limited utility" in context where terms are not ambiguous.¹⁹ *Phillips*, 415 F.3d at 1328.

Third, Plaintiff has not cited any caselaw to suggest that prosecution history disclaimer

¹⁹ Nevertheless, the Court can address any remaining indefiniteness arguments at later stage and potentially revise its proposed construction if the parties continue to debate this issue. See *Cipher Pharm. Inc. v. Actavis Labs. FL, Inc.*, 99 F. Supp. 3d 508, 514 (D.N.J. 2015) (indefiniteness issue may be more appropriate for summary judgment where Court's construction "does not resolve the indefiniteness issue").

can be overcome by an argument that terms in the proposed construction may create indefiniteness.²⁰ Thus, OrthoArm's argument regarding validity does not change this Court's analysis on the question of disclaimer.

6. "Pivoting" Distinction Cannot Be Considered

OrthoArm argues that "[t]here is no need for [Dentsply's] manufactured disclaimer because *the claim language itself* excludes shutters, such as the Voudouris and Orikasa shutters, that pivot about the occlusal end." Pl.'s Reply Br. at 10-11 (emphasis in original). This argument is not persuasive. To the extent that this is an argument that the prosecution history statements were "mere explanations" of the claim language and should thus not constitute disclaimer, as already detailed *supra* on pp. 24-25, the patentee's subjective reason for making disclaiming remarks cannot be considered in view of the public notice function of the prosecution history record. *Biogen, Inc.*, 318 F.3d at 1139. "[T]he interested public has the right to rely on the inventor's statements made during prosecution...." *Fenner Invs.*, 778 F.3d at 1325.

Furthermore, as detailed *supra* in note 13, any attempt by OrthoArm to limit disclaimer to focus on "pivoting" or to exclude art that "undergoes what can be described as *only* rotation" is unpersuasive. Pl.'s Reply Br. at 8 (emphasis in original). OrthoArm did not discuss "pivoting" while prosecuting the 507 Patent. *See supra* note 13. In addition, although OrthoArm characterized the Voudouris shutter as "merely rotating around the single point," First Response at 9, it also specifically discussed the "two step process" used to access the archwire slot on the Orikasa bracket, whereby the shutter must be moved *laterally* in the occlusal direction *before it is rotated*, and thus opened, Second Response at 9. Thus, OrthoArm did not characterize all of

²⁰ Plaintiff also has not cited any caselaw to suggest that directional terms, when used to construe a claim term, create validity or indefiniteness issues.

the prior art references as undergoing “only rotation.” As such, whether the claim language of the 507 Patent excludes shutters that “pivot about the occlusal end” is irrelevant to the question of whether OrthoArm disclaimed the scope of the term “movable” in the prosecution history.

7. Claim Differentiation Does Not Overcome Disclaimer

Plaintiff’s argument regarding claim differentiation proceeds as follows: “[T]he existence of claim 21 [claiming “moving the locking shutter...” without “requir[ing] rotation of the locking shutter”] eliminates the possibility of a clear and unmistakable disavowal of the scope of the term ‘movable’” because “under the doctrine of claim differentiation, the scope of claim 1 is presumptively broader than that of claim 21.” Pl.’s Supp. Br. at 3. Thus, “claim 1...must not exclude from its scope shutters that are able to have some element of motion that can be characterized as ‘rotation.’” *Id.* at 3. Furthermore, Plaintiff argues, the fact that claim 21 was cancelled by the Examiner demonstrates that there was no disavowal because “the examiner made it clear that an interpretation of claim 1 that would require an absence of rotation was not possible [since the 507 Patent specification] did not disclose any embodiments encompassing such a limitation.”²¹ *Id.* at 5-6.

The Court’s recommended construction focuses not on the movement of the shutter in general, however, but on the movement of the shutter *by a practitioner*. Thus, a claim differentiation argument focusing on generally “moving the locking shutter” does not impact the scope of disclaimer.²²

²¹ The Court notes that there is no formal evidence that the Examiner held that perspective as these are representations made by Plaintiff about what the Examiner said during a phone interview.

²² Dentsply’s arguments that OrthoArm waived the claim differentiation argument by not addressing it before the *Markman* hearing are therefore also moot. *See* Def.’s Supp. Br. at 6-7. The Court notes, however, that, at least for patent appeals, “[Federal Circuit] precedent makes clear that in the context of claim construction, a waiver may occur if a party raises a new issue ..., as by, *e.g.*, presenting a new question of claim scope...[but] waiver will not necessarily occur... if a party simply present[s] new or additional arguments in support of ‘the scope of its claim construction....’” *CCS Fitness, Inc. v. Brunswick*

Furthermore, to the extent this argument is not mooted by the Court's recommended construction, the Federal Circuit has repeatedly held that "where found, prosecution history disclaimer can overcome the presumption of claim differentiation." *Biogen Idec*, 713 F.3d at 1097; *see also Fenner Invs.*, 778 F.3d at 1327 ("Although claim differentiation is a useful analytic tool, it cannot enlarge the meaning of a claim beyond that which is supported by the patent documents, or relieve any claim of limitations imposed by the prosecution history."). "[T]he doctrine of claim differentiation ... does not override clear statements of scope in the specification and the prosecution history." *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1302 (Fed. Cir. 1999). In sum, the doctrine of claim differentiation is not persuasive here, as it cannot overcome the strong evidence of prosecution history disclaimer in this case.

In addition, Plaintiff has failed to cite, and this Court has not found, any caselaw suggesting that the doctrine of claim differentiation should be applied to limit prosecution disclaimer where the claim was *cancelled by the Examiner*. To the contrary, the Federal Circuit has indicated that "[w]hile the examiner's interpretation can be pertinent, the applicant's own interpretation has far more significance" in the context of prosecution history disclaimer. *Altair Eng'g*, 413 F. App'x at 255. For example, "unasserted or cancelled claims [cancelled by the patentee] may provide 'probative evidence' that an embodiment is not within the scope of an asserted claim." *PSN Ill., LLC v. Ivoclar Vivadent, Inc.*, 525 F.3d 1159, 1166 (Fed. Cir. 2008). The fact that the patentee did not object to the Examiner's cancellation of the claim only muddles the claim differentiation argument in terms of what the patentee represented to be the scope of the invention in the prosecution history. *Cf. Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364, 1382 (Fed. Cir. 2001) ("Where a patentee disputes an examiner's statement on the record,

Corp., 288 F.3d 1359, 1370–71 (Fed. Cir. 2002) (quoting *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1347 (Fed. Cir. 2001)) (citations omitted).

