

(“the ‘575 patent”).² Specifically, the alleged violation arises from Defendant’s use of an allegedly infringing product produced by Intervenor-Defendant, Industrial Smoke & Mirrors, Inc. (“ISM”). The ‘575 patent is entitled “Apparatus and Method for a Weapon Simulator” and relates to a weapon simulator that provides realistic full force recoil at the full rate of fire of an actual weapon and allows an instructor to alter the recoil rates of a weapon, while in use, to simulate different malfunctions. This matter is presently before the Court on the parties’ briefs regarding claim construction.³ A claim construction hearing was held on December 10, 2019, where the Court considered the parties’ arguments with respect to the intrinsic and extrinsic evidence. The Court determined that expert testimony was not necessary, and the parties did not present expert witnesses.

After fully considering the parties’ arguments, the Court’s interpretation of the disputed claim terms and phrases are as follows.

I. The ‘575 Patent

The ‘575 patent teaches a weapon simulator that uses an electric motor and computer to produce simulated recoil with variable intensity across various types of weaponry. The invention claims to provide realistic full force recoil and realistic recoil at the full rate of fire of an actual weapon. ‘575 patent, 2:66–3:8. The invention also allows an instructor to alter the recoil rates of a weapon, while in use, to simulate different malfunctions such as jams, duds, misfires, and round cook-off. *See generally* ‘575 patent.

The following drawing from the ‘575 patent is an example the mechanical portion of an embodiment of the ‘575 patent’s weapons simulator:

² A copy of the ‘575 patent is attached to the Complaint in Exhibit B from pages 2–16.

³ The Government and ISM jointly filed their claim construction briefs. As such, the Court will refer to them collectively as “Defendants,” except when addressing an individual party.

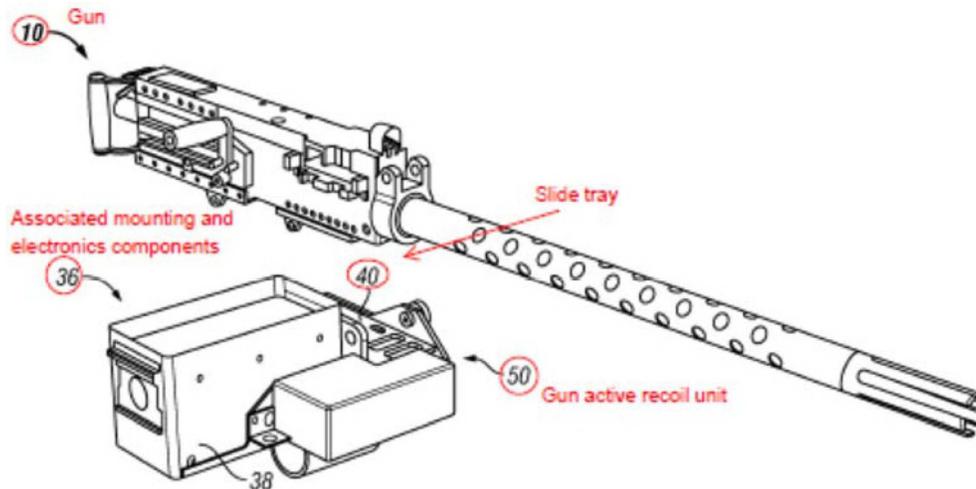


FIG. 2A

‘575 patent, fig. 2A.

II. Claim Construction – Legal Standard

Claim construction is a question of law. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388–391 (1996). When the trial court uses only intrinsic evidence (such as the patent claims and specification, and the patent prosecution history) to construe patent claims, “the judge’s determination will amount solely to a determination of law, and the Court of Appeals will review that construction *de novo*.” *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S.Ct. 831, 841 (2015). When the trial court utilizes extrinsic evidence to resolve a “subsidiary factual dispute that helps the court determine the proper interpretation of the written patent claim,” the Court of Appeals will accept the district court’s finding unless it was “clearly erroneous.” *Id.* at 841–843. Claim construction is not subject to a burden of proof or evidentiary burden. *E.g. Catalina Marketing Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 807 (Fed. Cir. 2002).

Generally, a trial court need not construe claim terms whose meaning the parties do not dispute. *E.g. O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2006). Further, a court construing patent claim terms need not adopt the constructions proposed by the parties, and should determine its own constructions if it determines the parties’ proposals to be legally flawed. *E.g. Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1323–24 (Fed. Cir. 2008), *abrogated on other grounds by Nautilus, Inc. v. Boisig Instruments, Inc.*, 572 U.S. 898, 901 (2014). *But see Yoon Ja Kim v. ConAgra Foods, Inc.*, 465 F.3d 1312, 1319 (Fed. Cir. 2006) (“While we may have the authority to adopt claim constructions which have not been proposed by either party we should be hesitant to do so.”). The disputed claim terms need only be construed sufficiently to resolve the particular issues in the case at hand. *E.g. Vivid Techs., Inc. v. Am. Science & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312

(Fed. Cir. 2005) (en banc) (citation and internal quotation marks omitted). Accordingly, “[c]laim construction begins and ends in all cases with the actual words of the claim.” *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (citation and internal quotation marks omitted).

“It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of the record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citing *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995); *Norian Corp. v. Stryker Corp.*, 363 F.3d 1321, 1326 (Fed. Cir. 2014)). “Words in a claim are generally given their ordinary and customary meaning.” *Vitronics*, 90 F.3d at 1582. However, “a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.” *Id.*; see also *Thorner v. Sony Computer Entertainment America LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (“To act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed term’ other than its plain and ordinary meaning.”) (citation omitted). “It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must ‘clearly express an intent’ to redefine the term.” *Thorner*, 669 F.3d at 1365 (quoting *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2008)).

“Thus, second, it is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning. The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” *Id.* (citing *Markman*, 52 F.3d at 979). “Claims must be read in view of the specification, of which they are a part.” *Markman*, 52 F.3d at 979.

“Third, the court may also consider the prosecution history of the patent, if in evidence.” *Vitronics*, 90 F.3d at 1582. “[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). Claim terms should not be construed one way during prosecution and another way during claim construction in litigation. See *Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005).

If intrinsic evidence is not sufficient to construe the disputed terms, extrinsic evidence such as dictionary definitions and prior art is considered. See *Vitronics*, 90 F.3d at 1584. Importantly, “while extrinsic evidence ‘can shed useful light on the relevant art’ . . . it is ‘less significant than the intrinsic record in determining the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)).

III. Person of Ordinary Skill in the Art (POSA)

In most cases, the qualifications of a person of ordinary skill in the relevant art must first be determined to sufficiently construe the disputed claim terms. *E.g. Phillips*, 415 F.3d 1303.

However, the Court is not required to define such qualifications if the meanings of the disputed terms are clear and unambiguous. *See Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1373 (Fed. Cir. 2004); *DSW, Inc. v. Shoe Pavilion, Inc.*, 537 F.3d 1342, 1347 (Fed. Cir. 2008) (“[A]bsent contravening evidence from the specification or prosecution history, plain and unambiguous claim language controls the construction analysis.”). As the Federal Circuit has explained:

In some cases, the ordinary meaning of claim language as understood by a person of ordinary skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.

Phillips, 415 F.3d at 1314.

Here, the Court agrees with the parties that the disputed claim terms largely involve common non-technical words that are clearly illuminated by reading the intrinsic evidence provided in the claims, specification, prosecution history, and submitted extrinsic evidence. *See* Defs.’ Claim Constr. Brief at 6; Pl.’s Responsive Claim Constr. Brief, ECF No. 50 at 1. As such, a determination of the level of skill in the relevant art is not necessary.

IV. Discussion

The parties have asked the Court for claim construction on four terms and phrases appearing in the ‘575 patent: (1) “dynamically altering a frequency of recoils per second when the weapon simulator is in use;” (2) “to alter a frequency of recoils per second when the simulator is in use;” (3) “gun active recoil unit;” and (4) “mounting pintle.” Because of the similarity between the first two disputed terms, the Court will address those terms together before addressing the remaining terms.

A. “Dynamically Altering A Frequency Of Recoils Per Second When The Weapon Simulator Is In Use” and “To Alter A Frequency Of Recoils Per Second When The Simulator Is In Use”

The phrase “dynamically altering a frequency of recoils per second when the weapon simulator is in use” appears in apparatus claim 1 and method claim 14, both of which are independent claims. The parties acknowledge that the phrase “to alter a frequency of recoils per second when the simulator is in use,” found in independent apparatus claim 25, is nearly identical to the disputed language in claims 1 and 14 and treat all three claims together.⁴ In pertinent part, these claims provide:

Apparatus Claim 1	Method Claim 14	Apparatus Claim 25
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⁴ The only differences between the language in claim 25 and the language in claims 1 and 14 are: (1) the form of the verb “alter;” and (2) omission of the word “dynamically.”

<p>A weapon simulator comprising:</p> <p>...</p> <p>A host computer in communication with said gun active recoil unit wherein the host computer is capable of <i>dynamically altering a frequency of recoils per second when the weapon simulator is in use.</i></p>	<p>A method of simulating weapon recoil with a weapon simulator comprising:</p> <p>...</p> <p>The gun active recoil unit responding to the signal from the host computer, wherein the host computer is capable of <i>dynamically altering a frequency of recoils per second when the weapon simulator is in use.</i></p>	<p>A weapon simulator comprising:</p> <p>...</p> <p>A processor for receiving instructions from a host computer which may receive information about said gun active recoil unit and command said gun active recoil unit through said processor <i>to alter a frequency of recoils per second when the weapon simulator is in use.</i></p>
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‘575 patent, 7:37–45, 8:13–23 (emphasis added). The proposed construction of the parties is as follows:

<p>“dynamically altering a frequency of recoils per second when the weapon simulator is in use”</p>	
<p>Plaintiff’s Construction</p>	<p>Defendants’ Construction</p>
<p>This language has its ordinary meaning – It has three parts: (1) dynamically performing an action; (2) the action: “altering a frequency of recoils per second;” and (3) when the action occurs: “when the weapon simulator is in use.” To the extent that Defendant may have focused on the term “dynamically,” Plaintiff submits that the term has an ordinary meaning – it describes some action or event that occurs when and as needed.</p>	<p>continuously altering a frequency of recoils per second between non-zero frequencies when the simulator is being operated</p>

<p>“to alter a frequency of recoils per second when the weapon simulator is in use”</p>	
<p>Plaintiff’s Construction</p>	<p>Defendants’ Construction</p>

This language has its ordinary meaning – It has two parts: (1) an action: “altering a frequency of recoils per second;” and (2) when the action occurs: “when the weapon simulator is in use.”	to alter a frequency of recoils per second between non-zero frequencies when the simulator is being operated
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Joint Claim Constr. Statement, Ex. B.

Plaintiff believes the language in all three terms have an ordinary meaning, while Defendants argue that construction of these terms “must exclude a simulator system capable of only a fixed rate of fire when in use.” According to Defendants, the applicants⁵ disclaimed subject matter of a “fixed rate of fire” during the prosecution phase in order to distinguish the ‘575 invention from prior art—the Wolff and Oishi patents—thereby limiting the breadth of these terms. Defs.’ Claim Constr. Brief, ECF No. 47 at 7–15.

For the reasons set forth below, the Court rejects Defendants’ characterization of the prosecution history and agrees with the Plaintiff that the phrases have an ordinary meaning.

i. The Applicants Did Not Disclaim Subject Matter Of A Fixed Rate Of Fire During The Prosecution Phase

Defendants claim that in distinguishing Wolff and Oishi, the applicants excluded a “simulator system capable of only a fixed rate of fire when in use.” Defendants argue that the term “dynamically” in claims 1 and 14 is undefined and proposes that the term be substituted with “continuously” to better clarify that a fixed rate of fire is not included within these claims. Defendants also contend that inserting the language “between non-zero frequencies” will clarify that claims 1, 14, and 25 do not include a simulator with a fixed rate of fire.

The Wolff patent concerns a vehicle-mounted weapon simulator that simulates weapon recoil by moving the weapon—a machine gun—forwards and backwards within a cradle at a fixed rate of about 10 Hz. This system uses a pneumatic recoil unit powered by pressurized air to produce a fixed rate of recoil, which cannot be altered while in use.

In the applicants’ August 21, 2012 Response, the applicants distinguished Wolff on the grounds that Wolff failed to teach a recoil unit that was “tuneable” or powered by electricity:

The present application at page 4, paragraph 17 identifies that the weapon simulator is electric and does not contain pneumatics. Further the recoil unit as described includes variable intensity to fine tune recoil. In contrast, Wolff teaches a pneumatic recoil unit that is powered by a recoil air cylinder. The pneumatic recoil unit of Wolff is not tuneable but fixed at 10 Hz for firing.

Defs.’ Claim Constr. Brief, Ex. B at 145. Defendants’ rely on the final line of this quoted

⁵ The named applicant, Randall S. Gurule, along with the other inventors (collectively “the applicants”), assigned their rights in the ‘575 patent to ACME on November 17, 2009.

language to claim that the applicants disclaimed subject matter of a fixed rate of fire.

In focusing on only this sentence, however, Defendants ignore the prior sentences which provide necessary context. In particular, Defendants ignore the sentence “the recoil unit as described includes variable intensity to fine tune recoil.” Read in full, the applicants were stating that its invention contains features that Wolff does not—namely the ability to produce variable intensity recoil—which is evident from the applicants’ use of the word “includes.” Although a simulator capable of *only* a fixed rate of recoil would be unpatentable in view of Wolff, a simulator capable of a fixed rate of recoil *and* variable rates of recoil would not. This conclusion is supported by the Examiner’s reference to Oishi in a December 6, 2012 response.

In the Examiner’s December 6, 2012 response, the Examiner noted that “Wolff does not disclose wherein the recoil unit is tuneable or where it is powered by an electric motor,” and determined that Oishi’s “tuneable recoil” and “the elimination of pneumatics” were “advantages” over the Wolff system. Defs.’ Claim Constr. Brief, Ex. B at 151 (“It would have been obvious to one of ordinary skill in the art at the time of the invention to consider such concepts in the Wolff system in order to provide the established advantages associated with the Oishi system, namely, tuneable recoil and also the elimination of pneumatics.”). Indeed, Oishi teaches a weapon simulator system that is “tuneable” in that the recoil rate can be altered by physically changing a weight mechanism in the device when the system is not in use, but once the weight is set, the recoil rate is fixed.

The invention disclosed in the ‘575 patent is not a system capable of *only* a fixed rate of fire. While it could certainly be said that in distinguishing the ‘575 invention from Wolff, the applicants disclaimed subject matter of a pneumatic recoil system, Defendants go too far in suggesting a disclaimer of a “fixed rate of fire.” As such, the Court does not agree with Defendants’ characterization of the ‘575 patent’s prosecution history.

Moreover, as Plaintiff aptly observes, a system that “continuously” changes the rate of recoil would thwart the primary purpose of a weapon simulator—establishing sufficient familiarity with gun recoil so as to be able to acquire a target while firing the gun. See Pl.’s Responsive Claim Constr. Brief at 2. This common sense understanding is reiterated in the specification. See ‘575 patent, 2:66–3:5 (“One embodiment of the present invention is a weapon simulator comprising a gun active recoil unit *that is designed for training with realistic recoil . . .* Training with realistic recoil enables a trainee . . . to anticipate and adapt to the recoil forces in order to keep the aiming point of the weapon on target *just as is required in the real world.*”) (emphasis added). And a claim construction that excludes the operation of the preferred embodiment is rarely, if ever, correct. See *Vitronics Corp. v. Conceptronics, Inc.*, 90 F.3d 1576, 1583–84 (Fed. Cir. 1996). As such, the Court rejects Defendants’ invitation to replace the term “dynamically” with the term “continuously.”

With regard to Defendants’ argument that insertion of the phrase “between non-zero frequencies” is necessary to clarify that the ‘575 invention excludes a system capable of only a fixed rate of fire when in use, such a revision is unnecessary. As explained above, the Court disagrees with Defendants that the applicants accepted such a limitation during the prosecution phase. Furthermore, the language “between non-zero frequencies” does not appear in the ‘575

patent or in its prosecution history. The Supreme Court has long cautioned against reading “into a claim an element that is not present,” explaining “if we once begin to include elements not mentioned in the claim . . . we should never know where to stop.” *McCarty v. Lehigh Val R. Co.*, 160 U.S. 110, 116 (1895). Although in *McCarty* it was the patentee arguing for the inclusion of an element not mentioned in the claims, the Supreme Court’s reasoning equally applicable when the alleged infringer does so.

Inserting the phrase “between non-zero frequencies” would also exclude the operation of a preferred embodiment. Both the specification and dependent claims 9, 17, and 18 reference “malfunctions.” The specification explains that these “malfunctions” include: jams, duds, out of ammunition, runaway recoil, weapon misfire, weapon sluggishness, and round cook-off. ‘575 patent, 2:9–13, 3:12–14. Of particular note is “weapon misfire,” which the specification describes as when “the host computer does not send [the] gun active recoil unit 50 recoil signals even when trigger 24 is depressed.” ‘575 patent, 6:36–38.

Logically, if the host computer does not send recoil signals even when the trigger is depressed, the frequency of recoil would be zero. Consequently, inserting the phrase “between non-zero frequencies” would exclude the “weapon misfire” malfunction. A claim construction that excludes the operation of the preferred embodiment is rarely, if ever, correct. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583–84 (Fed. Cir. 1996); *see also Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (“Claims must be read in view of the specification, of which they are a part.”). Therefore, the Court likewise rejects Defendants’ invitation to insert the phrase “between non-zero frequencies” into the disputed terms.

In sum, the Court finds that the applicants did not disclaim subject matter of a fixed rate of fire during the prosecution phase when the device also includes other rates of fire variable when the device is in use. In addition, Defendant’s proposed construction would exclude the operation of a preferred embodiment. Therefore, the Court declines to replace the term “dynamically” with “continuously” and similarly declines to insert the phrase “between non-zero frequencies.”

ii. “In Use” Has An Ordinary Meaning

Defendants argue that phrase “in use” should be replaced with “being operated” to clarify that “the invention of claims 1, 14, and 25 must alter a frequency of recoils while it is powered on and being used as a simulator.” Defs.’ Claim Constr. Brief at 14. Defendants contend that during the prosecution phase, the applicants accepted this limitation in order to overcome Oishi, which allows for the rate of fire to be modified only when the system is not in use. *Id.* at 13–14.

The Court agrees with Plaintiff that the phrase “in use” should be ascribed its plain and ordinary meaning. There is no meaningful difference between the terms “in use” and “being operated,” and Defendants’ arguments to the contrary are unpersuasive. While it is true that the applicants distinguished Oishi on grounds that the ‘575 invention allows the recoil rate to be altered while the system is in use, whereas the recoil rate in Oishi can be altered only when the system is not in use, both the applicants and the Examiner used the “in use” language throughout the prosecution phase. *See* Defs.’ Claim Constr. Brief, Ex. B at 194 (Applicants’ August 21,

2012 Response), Ex. B at 254 (Examiner’s Reasons for Allowance). In fact, “the Examiner suggested that the language in claims 1 and 25 ‘when the weapon simulator is in use’ was redundant and could be deleted.” *Id.* at 243 (Amendment and Response and Examiner Interview Summary).

Accordingly, the Court holds that the phrase “in use” has a plain and ordinary meaning.

B. “Gun Active Recoil Unit”

The term “gun active recoil unit” appears in apparatus claims 1, 3, 4, 5, and 25, as well as in method claims 14, 15, and 24. As the term is used in the apparatus claims, the parties focus on claims 1 and 25, which provide, in relevant part: “A weapon simulator comprising: a gun active recoil unit comprising a slide tray and at least one electric motor to power the gun active recoil unit.” As the term is used in the method claims, the parties focus on claim 14, which provides:

A method of simulating weapon recoil with a weapon simulator comprising:

- providing a gun mounted to a gun active recoil unit;
- squeezing a trigger on the gun to generate a signal;
- transmitting the signal from the gun to a host computer in communication with the gun active recoil unit;
- the gun active recoil unit responding to the signal from the host computer, wherein the host computer is capable of dynamically altering a frequency of recoils per second when the weapon simulator is in use; and
- simulating recoil via a slide tray disposed on the gun active recoil unit.

‘575 patent, 8:13–24.

The fundamental disagreement between the parties stems from the last line in claim 14: “simulating recoil via a slide tray *disposed on* the gun active recoil unit.” (emphasis added). As Defendants point out, “gun active recoil unit” is defined in claims 1 and 25 as comprising: (1) a slide tray; and (2) at least one electric motor. Defs.’ Claim Constr. Brief at 24. According to Defendants, “[c]laim 14 expressly removes the slide tray from the gun active recoil unit by stating that the slide tray is “disposed on” the gun active recoil unit. *Id.* Because of this discrepancy, Defendants contend that “gun active recoil unit” does not have a sufficiently definite meaning as the name for the structure, and therefore, must be analyzed as a “means-plus-function” limitation.

Plaintiff, on the other hand, contends that the term “gun active recoil unit” is plain English and needs no construction. Plaintiff argues that there is no function recited in apparatus claims 1 or 25, or method claim 14, that would indicate a means-plus-function limitation. Plaintiff maintains that apparatus claims 1 and 25 provide the meaning of the term: a “gun active recoil unit” is a mechanical unit with (1) a slide tray and (2) at least one electric motor. Because, claim 14 is an independent method claim, it defines method steps, not an apparatus. While it is

permissible to reference a particular apparatus in a method claim, Plaintiff contends that description in apparatus claims 1 and 25 control the meaning of “gun active recoil unit.”

For the reasons set forth below, the Court holds that “gun active recoil unit” is not a means-plus-function term and orders supplemental briefing.

i. 35 U.S.C. § 112(6) Does Not Apply

The term “gun active recoil unit” is not a means-plus-function limitation. Means-plus-function claiming occurs when a claim term is drafted according to 35 U.S.C. § 112(6),⁶ which provides:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claims shall be construed to cover the corresponding structure, materials, or acts described in the specification and equivalents thereof.

Williamson v. Citrix Online, LLC, 792 F.3d 1339, 1347 (Fed. Cir. 2015) (en banc). The Federal Circuit has explained that:

In enacting this provision, Congress struck a balance in allowing patentees to express a claim limitation by reciting a function to be performed rather than by reciting structure for performing that function, while placing specific constraints on how such a limitation is to be construed, namely, by restricting the scope of coverage to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.

Id. at 1347–1348 (citing *Northrop Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1350 (Fed. Cir. 2003)).

Claim construction of a means-plus-function limitation includes two steps. “First, the court must determine the claimed function.” *Applied Medical Resources Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir. 2006) (citing *JVW Enters. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1330 (Fed. Cir. 2005)). “Second, the court must identify the corresponding structure in the written description of the patent that performs that function.” *Id.*

Here, Defendants fail to identify any function in the eight claims containing the term “gun active recoil unit” that would indicate mean-plus-function claiming. Instead, they argue that the *specification* provides the function expressing a § 112(6) limitation. *See* Defs.’ Claim

⁶ Section 112 was amended and the subsections re-designated by the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), which took effect on September 16, 2012. Because the applications resulting in the ‘575 patent were filed before that date, the pre-AIA version of § 112 is applicable to the ‘575 patent.

Constr. Brief at 25–26. However, § 112(6) applies only where a *claim* describes a “specified function without the recital of structure, materials, or acts in support thereof” *See* 35 U.S.C. § 112(6). As such, the Court agrees with the Plaintiff that the term “gun active recoil unit” is not a means-plus-function limitation.

ii. Supplemental Briefing

The Court requires supplemental briefing on the construction of “gun active recoil unit.” Although the Court agrees with Plaintiff that 35 U.S.C. § 112(6) does not apply, the Court is troubled by the inconsistency in the description of “gun active recoil unit” in claims 1 and 25, on the one hand, and claim 14, on the other. The Court is specifically interested in the parties’ arguments regarding the rule of internal consistency, which is, that the same phrase used in different claims of the same patent should have the same meaning and, if this rule applies, what is the ramification of its application on this patent? Does the inconsistency in the meaning of “gun active recoil unit” render the patent indefinite? In addition, the Court needs to be briefed on the application of § 282(a), which states that: “Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims.” *See* 35 U.S.C. § 282(a).

C. “Mounting Pintle”

The term “mounting pintle” appears in dependent claim 3, which provides: “The weapon simulator of claim 1 wherein said gun active recoil unit comprises a plurality of mounting pintles.” ‘575 patent, 7:48–49. The proposed construction of the parties is as follows:

“mounting pintle”	
Plaintiff’s Construction	Defendants’ Construction
This language has its ordinary meaning – A pintle is a common and ordinary term that refers to “a mount that allows the gun to rotate.”	a fixed mount that allows a weapon to be rotated in at least one of elevation or azimuth, while keeping the gun in one fixed position, where the mounting is a rod attached to the underside of the gun that mates with a socket

Joint Claim Constr. Statement, Ex. B.

Plaintiff argues that “mounting pintle” is a common term used to describe how a movable structure is mounted and contends that the specification uses the term in its ordinary sense. Pl.’s Claim Constr. Brief at 11. On the other hand, Defendants argue that “a pintle is a specific type of gun mount” and “not all gun mounts are pintles.” Defs.’ Claim Constr. Brief at 16. Defendants claim that their construction is based on references available to the public which show what a person of ordinary skill in the art would understand a mounting pintle to mean. *Id.*

For the reasons set forth below, the Court defines “mounting pintle” as “a mount,

containing a pintle, that allows the gun to rotate.”

i. Claim Term Read in Light of the Specification

The starting point in claim interpretation is the ordinary and customary meaning of the claim. See *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010); *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“words in a claim are generally given their ordinary and customary meaning”). However, “[c]laims must be read in view of the specification, of which they are a part.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995).

The parties cite to the specification, column 4, lines 42–47, for their respective arguments. See Pl.’s Claim Constr. Brief at 11–12; Defs.’ Claim Constr. Brief at 15–16. This section provides:

In one embodiment of the present invention . . .

Mounting pintles can include but are not limited to pins, brackets, clamps, screws, bolts, threaded attachments, and combinations thereof. The mounting pintle supports a weapon (or unit with weapon). The pintle allows the rotation of the weapon system to aim in different directions. Pintles allow rotation in elevation, azimuth, or both.

‘575 patent, 4:42–47.

In addition, the parties rely on the drawings in figures 2B, 2C, 6, and 7 of the ‘575 patent. Figures 2C and 6 provide illustrations of the pintle 34 for mounting in the CH-46:

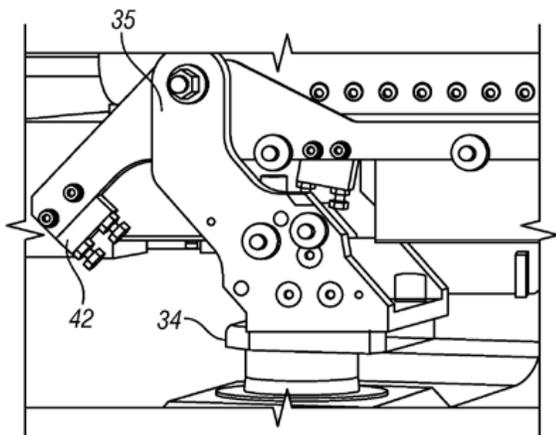


FIG. 2C

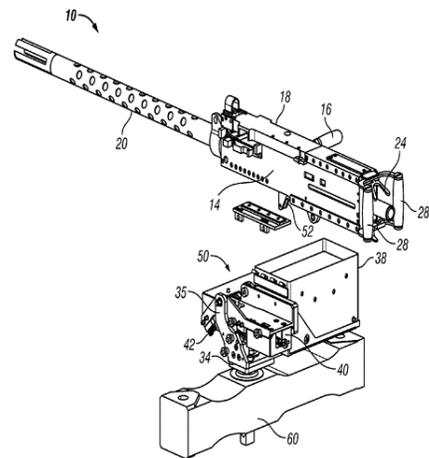


FIG. 6

‘575 patent, figs. 2C, 6; see also 2:55–56; 4:52–55. Figures 2B and 7 provide illustrations of the pintle 32 for mounting in the CH-53:

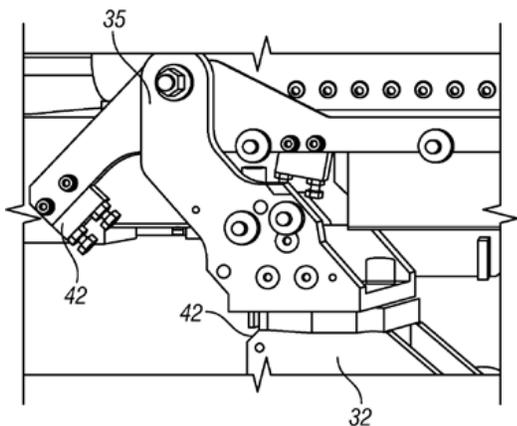


FIG. 2B

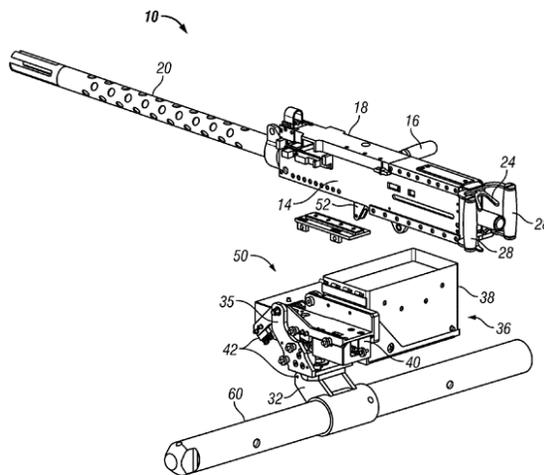


FIG. 7

'575 patent, figs. 2B, 7; see also 2:57–58; 4:52–55.

Plaintiff argues that the term “mounting pintle” is used in accordance with its plain and ordinary meaning and makes no suggestion that the drafter intended to act as his own lexicographer. According to Plaintiff, the examples provided in the '575 patent are expressly only illustrative, as indicated by the phrase “[m]ounting pintles *can include but are not limited to*” Pl.’s Responsive Claim Constr. Brief at 9. Plaintiff also notes that the language quoted from the specification is expressly within the description of an embodiment of the invention, and maintains that it is improper to rely upon an embodiment in the specification to limit the construction of a term, even when it reflects a single or preferred embodiment. In addition, Plaintiff argues that if the Court were to adopt Defendants’ proposed construction, a whole new set of terms within that construction would need to be construed, such as: “rod,” “attachment,” “underside of the gun,” “mates,” and “socket.” *Id.* at 10–11.

Defendants’ position, on the other hand, is that “while all pintles are gun mounts, not all gun mounts are pintles.” Def.’s Responsive Claim Constr. Brief, ECF No. 49 at 7. Defendants explain that “pintles are fixed mounts where a rod is attached to the underside of the gun and the rod mates with a socket, allowing the weapon to be rotated in at least one of elevation or azimuth, while keeping the gun in one fixed position.” *Id.* Defendants contend that Plaintiff’s construction would impermissibly sweep non-pintle mounts into the claimed limitation, such as a bipod mount that allows the weapon to be fired at different elevations but does not allow for horizontal movement. *Id.*

The Court concludes that “mounting pintle” should be defined as “a mount, containing a pintle, that allows the gun to rotate.” There is no indication that the drafter of the '575 patent intended to act as his own lexicographer with respect to the term “mounting pintle.” See *Thorner v. Sony Computer Entertainment America LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (“It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must ‘clearly express an intent’ to redefine the term.”) (citation omitted). The specification and drawings show that “mounting pintle” is a structural limitation

with two components: (1) a mount, which can include but is not limited to pins, brackets, clamps, screws, bolts, threaded attachments, and combinations thereof; and (2) a pintle. The mount is a structure that attaches to the gun and allows for rotation in one direction, and the pintle is a rod or pin that attaches to a structure, such as a tripod, and allows for rotation in another direction. This conforms with the description provided in the specification. *See* ‘575 patent, 4:42–47 (“The pintle allows the rotation of the weapon system to aim in different directions. Pintles allow rotation in elevation, azimuth, or both.”).

ii. Extrinsic Evidence

The dictionary definitions proffered by the parties do not provide any meaningful clarity. Defendants cite to the 2003 edition of the McGraw-Hill Dictionary of Scientific and Technical Terms, which defines “pintle” as “a vertical pivot pin, as on a rudder or a gun carriage.” This dictionary defines “gun carriage” as “mobile or fixed support for a gun; sometimes includes the elevating and traversing mechanisms.” *McGraw-Hill Dictionary of Scientific & Technical Terms* 932 (6th ed. 2003). Plaintiff cites to Webster’s New Collegiate Dictionary 150th Anniversary Edition, 1981, which defines “pintle” as “a usu. upright pivot pin on which another part turns.” Thus, the parties seem to agree that a “pintle” is a vertical or upright pivot pin.

Although the proffered dictionary definitions do not provide meaningful clarity, Defendants cite to two weapons manuals that do. The U.S. Army Field Manual No. 3-22.68, Crew-Served Machine Guns, 5.56-mm and 7.62-mm (Jan. 31, 2003) (“Army Field Manual”) and Detroit Arsenal, Ordnance Corps, U.S. Army, Weapon Mounts for Secondary Armament (April 1957) (“Weapon Mounts for Secondary Armament”), both provide illustrations of “pintles” that align with the drawings in the ‘575 patent. *See* Joint Claim Constr. Statement, Ex. D; Defs.’ Claim Constr. Brief, Ex. I. (Army Field Manual), Ex. J (Weapon Mounts for Secondary Armament). For example, the Army Field Manual provides the following illustration of a “pintle,” labeled 1, as it is used to mount a M240B machine gun on a tripod:

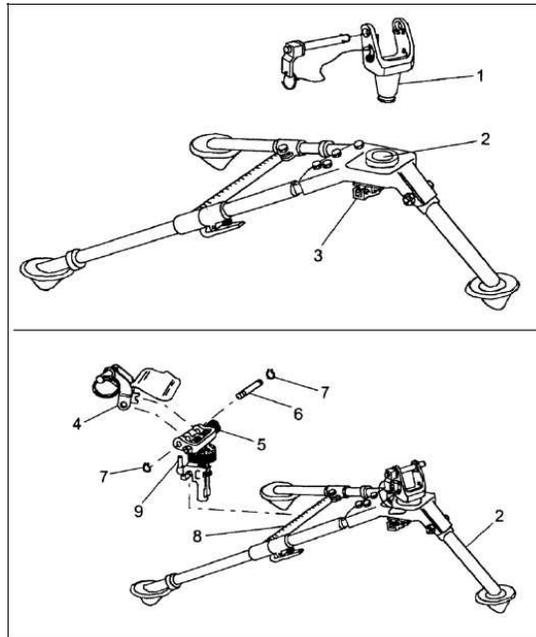


Figure 3-30. Mounting the M240B on the M122A1.

U.S. Army Field Manual at 3-35.

While the illustrations in both manuals refer to the structure as a “pintle” rather than “mounting pintle,” they are consistent in containing: (1) a fork-like “mount” that attaches to the weapon; and (2) a vertical pin or rod that attaches to another structure, such as a tripod. *See* Army Field Manual at 3-34 to 3-35; *Weapon Mounts for Secondary Armament* at 219, 234, 236, 238, 239. And this structure is consistent with the drawings found in figures 2B, 2C, 6, and 7 of the ‘575 patent. As such, these manuals bolster the Court’s conclusion that a “mounting pintle” is “a mount, containing a pintle, that allows the gun to rotate.”

V. Conclusion

The Court concludes that the phrases “dynamically altering a frequency of recoils per second when the weapon simulator is in use” and “to alter a frequency of recoils per second when the simulator is in use” have a plain and ordinary meaning. The Court defines “mounting pintle” as “a mount, containing a pintle, that allows the gun to rotate.” With respect to “gun active recoil unit,” the Court agrees with Plaintiff that this term is not a means-plus-function limitation. However, the Court is troubled by the inconsistency in the description of “gun active recoil unit” in claims 1 and 25, on the one hand, and claim 14, on the other, and therefore **ORDERS** supplemental briefing on the following:

1. Does the rule of internal consistency apply to the term “gun active recoil unit,” and if so, what is the ramification of its application on the ‘575 patent?
2. Does the inconsistency in the meaning of “gun active recoil unit” render the ‘575

patent indefinite?

3. In answering these questions, the parties should address the application, if any, of 35 U.S.C. § 282(a), which provides: “Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims.” *See* 35 U.S.C. § 282(a).

The parties shall file simultaneous supplemental briefs, **not to exceed 10 pages**, addressing the questions above regarding construction of the term “gun active recoil unit” **on or before January 17, 2020**. The supplemental briefing ordered herein shall be confined to the questions presented by the Court. Extraneous matter will not be considered.

Furthermore, the parties are directed to file redactions to this opinion, if any, **by no later than Monday, January 6, 2020**.

IT IS SO ORDERED.

s/Edward J. Damich
EDWARD J. DAMICH
Senior Judge