

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW HAMPSHIRE**

Davies Innovations, Inc.

v.

Civil No. 16-cv-352-LM
Opinion No. 2017 DNH 166

SIG Sauer, Inc. and
Sturm, Ruger & Company, Inc.

O R D E R

Plaintiff Davies Innovations, Inc. brought separate patent infringement lawsuits against SIG Sauer, Inc. ("SIG") and Sturm, Ruger & Company, Inc. ("Ruger") in the United States District Court for the Southern District of Texas, Galveston Division. See Davies Innovations, Inc. v. SIG Sauer, Inc., No. 3:15-cv-00281 (S.D. Tex. filed Oct. 9, 2015); Davies Innovations, Inc. v. Sturm, Ruger & Company, Inc., No. 3:15-cv-00282 (S.D. Tex. filed Oct. 9, 2015). In both actions, plaintiff alleged infringement of the same patent, United States Patent No. 7,827,722 (the "'722 Patent"), which discloses a rifle.

Defendants separately moved in their respective actions to transfer their cases to this court, and both motions were granted. Once transferred, the court consolidated the two cases for pre-trial purposes, including claim construction proceedings.

The parties differ over the meaning of a number of terms as they appear in several claims of the '722 patent. The court received briefing and, on June 30, 2017, conducted a hearing on this issue in accordance with [Markman v. Westview Instruments, Inc.](#), 517 U.S. 370, 388 (1996). The parties used the hearing solely to present oral argument. Based on the parties' presentations and memoranda, the court interprets the disputed claim terms as summarized below.

STANDARD OF REVIEW

The meaning of language in a patent claim presents a question of law for the court to decide. [Markman](#), 517 U.S. at 388. "[T]he words of a claim are generally given their ordinary and customary meaning," i.e., "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 v. AWH Corp.](#), 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc) (quotation marks omitted). In arriving at this meaning,

a claim construction analysis must begin and remain centered on the claim language itself, for that is the language the patentee has chosen to particularly point out and distinctly claim the subject matter which the patentee regards his invention. The claims, of course, do not stand alone. Rather, they are part of a fully integrated written instrument, consisting principally of a specification that concludes with the claims. For that reason, claims must be read in light of the specification, of which they are a part.

[Source Vagabond Sys. Ltd. v. Hydrapak, Inc.](#), 753 F.3d 1291, 1299 (Fed. Cir. 2014) (citations, quotation marks, and bracketing by the court omitted).

Yet “[w]hen consulting the specification to clarify the meaning of claim terms, courts must take care not to import limitations into the claims from the specification.” [Abbott Labs. v. Sandoz, Inc.](#), 566 F.3d 1282, 1288 (Fed. Cir. 2009) (en banc). “It is therefore important not to confuse exemplars or preferred embodiments in the specification that serve to teach and enable the invention with limitations that define the outer boundaries of claim scope.” [Intervet Inc. v. Merial Ltd.](#), 617 F.3d 1282, 1287 (Fed. Cir. 2010) (citing [Phillips](#), 415 F.3d at 1323).

“In addition to consulting the specification, . . . a court should also consider the patent’s prosecution history, if it is in evidence.” [Phillips](#), 415 F.3d at 1317 (quotation marks and citation omitted). The court examines the prosecution history “to discern the applicant’s express acquiescence with or distinction of the prior art as further indication of the scope of the claims.” [Chimie v. PPG Indus., Inc.](#), 402 F.3d 1371, 1377 (Fed. Cir. 2005).

Further, though “less significant than the intrinsic record” to claim construction, the court may also “rely on extrinsic evidence, which consists of all evidence external to

the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” [Phillips](#), 415 F.3d at 1317 (quotation marks and citation omitted). Although “extrinsic evidence may be useful to the court, . . . it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” [Id.](#) at 1319; see also [Bell Atl. Network Servs., Inc. v. Covad Commc’ns Grp., Inc.](#), 262 F.3d 1258, 1269 (Fed. Cir. 2001) (“extrinsic evidence may be used only to assist in the proper understanding of the disputed limitation; it may not be used to vary, contradict, expand, or limit the claim language from how it is defined, even by implication, in the specification or file history”).

BACKGROUND

The ‘722 patent issued on November 9, 2010. Robert Davies, the inventor, was the President of Advance Device Design and RF Power Devices, Inc. After Mr. Davies passed away in October 2012, the ‘722 patent was assigned, first to Mr. Davies’ friend, David Stanowski, and subsequently, on October 7, 2015, to Davies Innovations, Inc. (“Davies”), the plaintiff in this case. Two days after the latter assignment, Davies filed the instant lawsuits against SIG and Ruger, alleging that both defendants infringe the ‘722 patent by making, using, offering to sell, and

selling rifles covered by the patent's claims. See 35 U.S.C. § 271(a).

The '722 patent generally discloses a gas-piston driven rifle having an upper receiver, a bolt carrier, a barrel, a handguard, and a gas-piston operating system that is at least partially removable through a plug in the front of a barrel coupling that serves to redirect gases from the discharge of the weapon to a piston assembly. The gases force the piston assembly rearward, causing a force to be exerted on the bolt carrier, which forces the bolt carrier rearward to eject the spent cartridge casing.

The parties differ over the meaning of four terms as they appear in, among others, claim 1 of the '722 patent.¹ Claim 1, with the disputed claim terms underlined, provides:

1. A rifle having an upper receiver carrying a bolt carrier and a barrel attached to the upper receiver, the rifle further comprising:

an operating system extending forwardly along the barrel and terminating in a barrel coupling² including

¹ Each of the disputed terms in claim 1 also appears in independent claim 5 and all but "a piston moveable between a retracted position and an extended position within the cylinder" appear in independent claim 8.

² In their claim construction briefs, the parties differed over the meaning of the term "barrel coupling" as it appears in claim 1 and other claims. At the beginning of the hearing, the parties notified the court that they had agreed to the following construction of that term: "a component for affixing at least the piston assembly of the operating system."

a piston assembly coupled to the barrel for receiving propelling gasses from the barrel, the piston assembly having a cylinder with an open forward end, a piston moveable between a retracted position and an extended position within the cylinder, and an end plug removably closing the open forward end of the cylinder to permit passage of the piston therethrough when the plug is removed.

a tubular handguard having a forward end, a rearward end, a central void extending between the forward end and the rearward end, and a channel extending therealong adjacent the central void, the tubular handguard received about the barrel with the channel providing clearance for the operating system and the forward end being open to permit access to the barrel coupling and end plug of the operating system; and

a barrel nut coupling the barrel to the receiver, and the tubular handguard encircling the barrel is received about and coupled to the barrel nut.

Doc. no. 1-1 at 22, Claim 1 (emphasis added).

In addition, the parties differ over the meaning of one term as it appears in claim 8 of the '722 patent. Claim 8, in relevant part and with the disputed claim term underlined, discloses a rifle comprising:

an operating system extending along the barrel and terminating in a barrel coupling including a piston assembly coupled to the barrel for receiving propelling gasses from the barrel, the piston assembly having a cylinder with an open forward end, a piston/pushrod assembly moveable between a retracted position and an extended position, and an end plug removably closing the open forward end of the cylinder

to permit passage of the piston/pushrod assembly therethrough when the plug is removed;

Id. at 22, Claim 8 (emphasis added).³

DISCUSSION

As noted, the parties differ over four terms as they appear in claim 1 and one term as it appears in claim 8 of the '722 patent. The court resolves those disputes as follows.

I. Independent claim 1⁴

A. "a piston moveable between a retracted position and an extended position within the cylinder"

Claim 1 of the '722 patent recites a piston assembly having a cylinder with "a piston moveable between a retracted position and an extended position within the cylinder." Davies argues that construction of this term is unnecessary and that it should be given its plain and ordinary meaning. SIG disagrees, arguing that the term means "a piston that laterally moves between a forward (retracted) position and a rearward (extended) position, in each of which positions the piston is borne by and resides directly inside the cylinder." Ruger "agrees with and adopts

³ The disputed claim term in claim 8 does not appear in any other claim, though claim 9 uses the phrase "piston/pushrod assembly."

⁴ The same construction applies to the terms as they appear in any claim in the '722 patent.

the positions and arguments set forth in SIG's Opening Claim Construction Brief."⁵ Doc. no. 76 at 9.

SIG contends that its proposed construction helps to clarify two elements of this disputed claim term—that the piston is located within the cylinder and that the piston moves from a forward to rearward position therein. The court addresses each element separately.

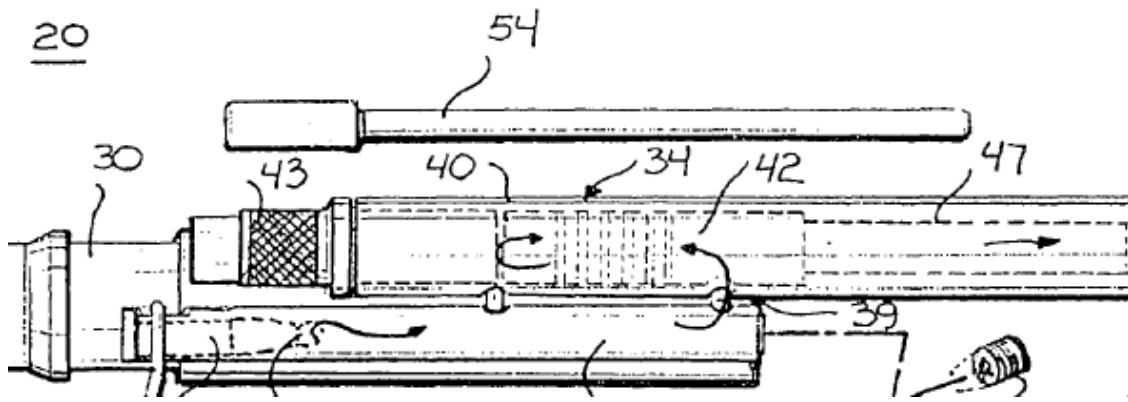
1. Location of the Piston

SIG asserts that the intrinsic evidence shows that the piston must be housed within the cylinder without anything in between the piston and the cylinder. It therefore proposes a construction of this term as requiring that the piston is "borne by and resides directly inside the cylinder."

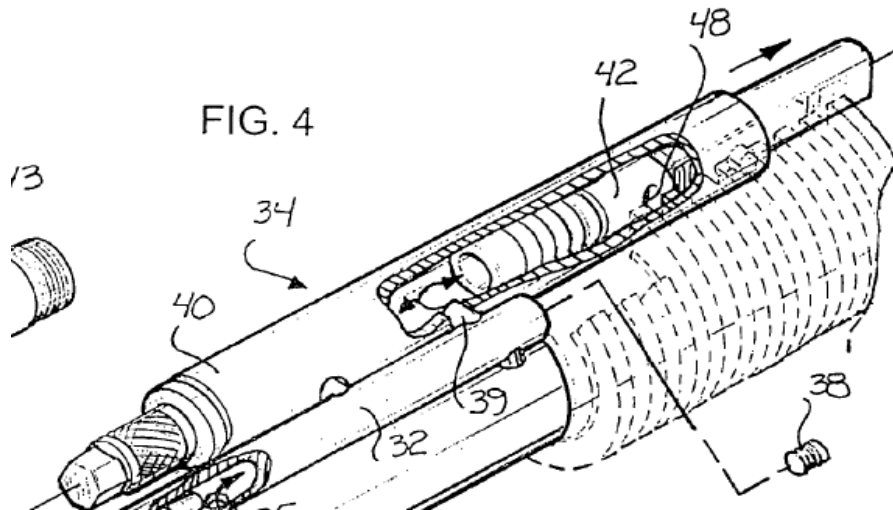
In support of its position, SIG cites several pieces of intrinsic evidence. First, it relies on other parts of the '722 patent. SIG refers to the following language from the specification: "Piston 42 is carried within cylinder 40 and includes a hollow piston head 45 with self cleaning grooves 46 formed in piston head 45, to prevent build-up of powder residue

⁵ Ruger's position is not entirely clear, in that it proposes a construction of "the plain and ordinary meaning which Ruger believes to be consistent with SIG's proposed construction." Doc. no. 76 at 9. Other than asserting in its opening brief that it adopted SIG's positions and arguments on this claim term, Ruger offered no argument in its briefs or at the hearing concerning this term.

such as carbon, engaging an inner surface of cylinder 40." Doc. no. 1-1 at Col. 4, ll. 55-59 (emphasis added). In addition, SIG refers to Figures 3 and 4 in the '722 patent, noting that in both "there is no interstitial vessel or other tube between the piston 42 and the cylinder 40." Doc. no. 77 at 11. Partial views of Figures 3 and 4 are shown below.



Doc. no. 1-1 at 4, Fig. 3.



Id. at 5, Fig. 4.

The portions of the '722 patent upon which SIG relies do not support limiting the claim in the way SIG proposes. For

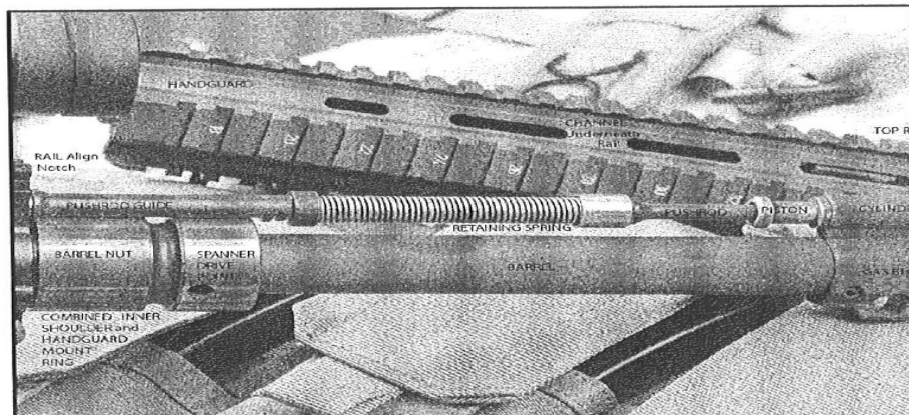
example, SIG cites language in the specification under the heading "DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT." Doc. no. 1-1 at Col. 4, ll. 8-9. Similarly, Figures 3 and 4 in the '722 patent upon which SIG relies represent a "preferred embodiment" of the invention. Id. at Col. 3, ll. 21-25 (providing "detailed description of a preferred embodiment" as set out in the drawings). While this evidence may suggest that the piston is "borne by and resides directly inside the cylinder," claims are not limited by preferred embodiments absent a clear expression of intent to limit the claims' scope to those embodiments. [Enzo Biochem, Inc. v. Applera Corp.](#), 599 F.3d 1325, 1342 (Fed. Cir. 2010); see also [Info-Hold, Inc. v. Applied Media Techs. Corp.](#), 783 F.3d 1262, 1267 (Fed. Cir. 2015) ("We find nothing in the '374 patent's preferred embodiments or the remainder of the specification that evinces a clear intention to restrict the invention's communications to those initiated by the server."). SIG points to no clear expression of the inventor's intent to limit the claims' scope to the preferred embodiment and, therefore, the cited portions of the '722 patent do not support SIG's proposed construction.

SIG disagrees that Figures 3 and 4 represent only a preferred embodiment. It notes that the specification describes Figure 3 as representing a drawing of a portion of the rifle "in accordance with the present invention." Doc. no. 1-1 at Col. 3,

11. 31-32. SIG argues that such language shows that Figure 3 imposes a limitation on the invention. Although SIG is correct that use of the phrase "present invention" can limit the scope of the entire invention in certain circumstances, see Verizon Servs. Corp. v. Vonage Holdings Corp., 503 F.3d 1295, 1308 (Fed. Cir. 2007), the use of that phrase is not always so limiting, see, e.g., Voda v. Cordis Corp., 536 F.3d 1311, 1320-21 (Fed. Cir. 2008) (noting that although parts of the specification referred to a certain embodiment as the "present invention," the specification did not uniformly refer to the invention as being so limited, and the prosecution history did not reveal such a limitation). That this language is not so limiting here is supported by other language in the specification which provides that "[v]arious changes and modifications to the embodiments herein chosen for purposes of illustration will readily occur to those skilled in the art." Doc. no. 1-1 at Col. 10, ll. 61-63; see True Fitness Tech., Inc. v. Precor Inc., 203 F. Supp. 2d 1078, 1081 (E.D. Mo. 2001) (noting that similar "boilerplate" language weighs against construing a feature of a patent's drawings as a limitation). Therefore, the specification and Figures 3 and 4 do not mandate adoption of SIG's construction.

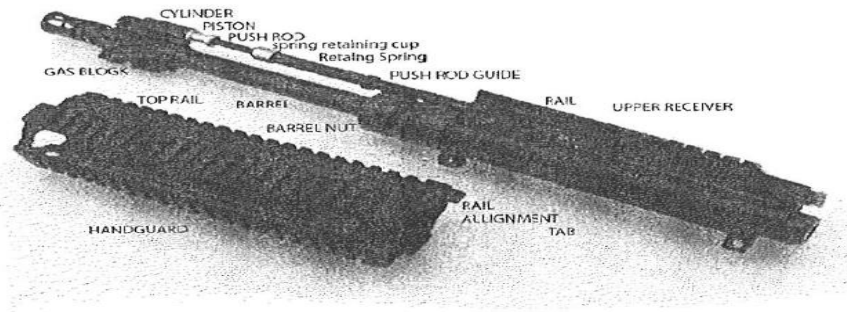
Second, SIG relies on a May 30, 2010 presentation Mr. Davies made to the Special Operations Peculiar MODification Conference entitled "Chronology Advanced Device Design, Inc.

Rifle Development" (the "presentation"), and which he showed to the patent office ("PTO") in an effort to overcome prior art during prosecution of the '722 patent.⁶ In his submission to the PTO, the inventor referred to the photographs in the presentation as those "of my invention as described and claimed in the above identified application" for the '722 patent. Doc. no. 77-10 at 2. SIG asserts that the photographs in the presentation, depicted below, show the operating system with a piston within the cylinder without anything between the piston and the cylinder.



Doc. no. 77-4 at 13.

⁶ Throughout this order, the court often refers to the prosecution history and Mr. Davies' representations to the PTO. To avoid confusion with Davies, the corporate plaintiff in this case, the court will refer to Mr. Davies as "the inventor."



Id. at 14.

Although pictures of the inventor's commercial embodiment in the presentation may be compatible with SIG's construction, "infringement is determined on the basis of the claims, not on the basis of a comparison with the patentee's commercial embodiment of the claimed invention.'" [Int'l Visual Corp. v. Crown Metal Mfg. Co., Inc.](#), 991 F.2d 768, 772 (Fed. Cir. 1993) (quoting [ACS Hosp. Sys., Inc. v. Montefiore Hosp.](#), 732 F.2d 1572, 1578 (Fed. Cir. 1984) (alterations omitted)). Therefore, the court will not impose a limitation based on the pictures of the inventor's commercial embodiment of the '722 patent.

The language of the claim requires that the piston be moveable "within the cylinder." Therefore, as Davies observes, that phrase would be sufficiently clear to a person of ordinary skill in the art as to need no additional clarification.

2. Movement of the piston

SIG argues that the words "retracted position" and "extended position" require clarification because "the intuitive

perception would be that something being 'retracted' would become closer to the shooter, and 'extended' would characterize being something farther away from the shooter." Doc. no. 77 at 10. SIG notes that in the '722 patent, "the intuitive proximity of 'retracted' vs. 'extended' position is reversed" and, therefore, argues that the claim language should be interpreted to clarify the location of those positions. Id. In addition, SIG seeks to add the word "laterally" to describe the movement of the piston.

As the parties concede, they do not disagree over the piston's movement as it is set forth in this claim term. They agree that the piston is moveable from one end of the cylinder to the other, and the piston moves side-to-side within the cylinder. SIG argues that its proposed construction is useful to a lay jury, while Davies contends that the existing language is sufficiently clear that it needs no clarification.

The court agrees that clarification of the piston's movement in this claim term may be useful to the jury.⁷ SIG's proposed construction, however, imposes additional limitations on the claim term, none of which is supported by the intrinsic

⁷ At the hearing, Davies represented that "retracted" and "extended," in this context, are not terms of art, but rather simply language used by the inventor to describe the relative positions of the piston. The court thus need not import any definition of the terms, and clarifies them only in light of the intrinsic evidence.

evidence. For example, although the parties agree that the piston moves horizontally within the cylinder (rather than vertically), that term "lateral" is absent from the '722 patent, and there is nothing in the intrinsic evidence to show that the piston must move in that fashion. In addition, the limitation is that the piston must be moveable—that is, able to move—between two positions within the cylinder, not that it must move between those positions, as SIG proposes.

As the parties agree, the words "retracted" and "extended" as used in this claim term are used to denote opposite ends of the cylinder. Therefore, the court construes the phrase "a piston moveable between a retracted position and an extended position" to mean "a piston moveable between two positions at opposite ends."

3. Summary

The court construes the term "a piston moveable between a retracted position and an extended position within the cylinder" to mean "a piston moveable between two positions at opposite ends within the cylinder."

B. "an end plug removably closing the open forward end of the cylinder"

Claim 1 of the '722 patent recites a piston assembly having "an end plug removably closing the open forward end of the

cylinder.” As with the previous claim term, Davies and Ruger argue that this term should be given its plain and ordinary meaning. SIG disagrees, arguing that this term means “a cap, separate from the cylinder in which the piston resides, that can be removed from (and when in place, closes) the open forward end of the cylinder.” The court, again, concludes that SIG’s proposed construction imports unnecessary and unsupported limitations into the claim, and so declines to adopt it.

SIG asserts that its proposed construction helps to clarify two elements of the term—that the “end plug is not an integral part of the cylinder (in which cylinder the piston is found)” and that the end plug operates as a removable cap, separate from the cylinder.

Once again, the parties do not necessarily disagree as to the scope of this claim term. In an effort to clarify the term, however, SIG unnecessarily adds words or phrases that change the meaning of the term or are redundant. For example, SIG proposes to change the term “end plug” to “cap,” a change it describes as “innocent” and providing “clarity.” Doc. no. 84 at 10. But SIG offers no support for use of the word “cap.” That word does not appear anywhere in the specification and SIG essentially agrees that it uses the word so as not to use the same language as used in the ‘722 patent. Even if the court felt it necessary to use a different word than the inventor himself used, which it does

not, the word "cap" is not synonymous with the term "end plug" as it is used in the '722 patent. The word "cap" denotes covering something, see, e.g., Merriam-Webster Online Dictionary, <http://www.merriam-webster.com/dictionary/cap> (last visited August 29, 2017) (defining "cap" as "an overlaying or covering structure"), while the patent clearly describes the end plug as something that inserts into, rather than merely covers, the cylinder.

In addition, SIG seeks to insert the phrase "in which the piston resides" to describe the cylinder. That addition, however, is unnecessary, as the language immediately preceding this claim term identifies, first, the cylinder to which the term refers, and second, that the piston is within it, as discussed supra. See doc. no. 1-1 at Col. 11, ll. 11-14 ("a piston moveable between a retracted position and an extended position within the cylinder, and an end plug removably closing the open forward end of the cylinder").

Finally, SIG contends that the proper construction must include language showing that the end plug is separate from the cylinder. It asserts that for the end plug to be removable, "it must of necessity be a separate component." Doc. no. 84 at 11. SIG adds that an "object cannot remove itself from itself, or otherwise treat itself as a separate object capable of relative manipulation in space." Id. In making that argument, however,

SIG implicitly concedes that the language in the claim term is self-explanatory, and thus needs no clarification.

SIG's proposed construction of this term "would contribute nothing but meaningless verbiage to the definition of the claimed invention." [Harris Corp. v. IXYS Corp.](#), 114 F.3d 1149, 1152 (Fed. Cir. 1997). Therefore, the court declines to adopt SIG's proposal.

The claim term, however, could benefit from clarification, as the phrase "removably closing" is, at the very least, awkward. Therefore, the court construes "an end plug removably closing the open forward end of the cylinder" to mean: "an end plug that closes the open forward end of the cylinder and that can be removed."⁸

C. "tubular handguard encircling the barrel"

The parties differ over the proper construction of the term "tubular handguard encircling the barrel." Davies urges that

⁸ The court proposed this construction at the hearing. Although the parties maintained that they endorsed their proposed constructions (or, in the case of Davies and Ruger, their argument that the limitation did not require a construction), none of the parties voiced an immediate objection to the court's proposal. SIG, however, requested that the court add the phrase "from the cylinder" at the end, so that the full construction would read "an end plug that closes the open forward end of the cylinder and that can be removed from the cylinder." The court sees no reason to include this proposed additional language for the reasons discussed supra, and declines to do so.

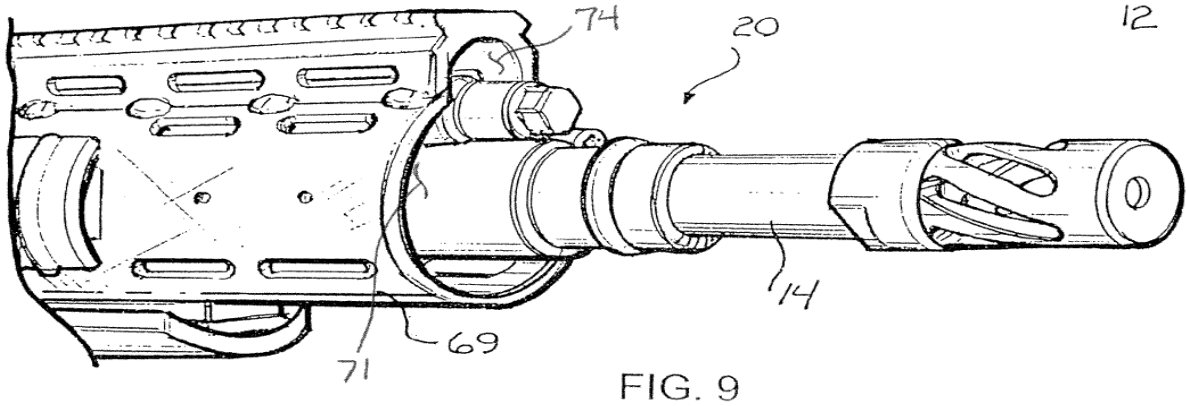
the term should be given its plain and ordinary meaning and that no construction is required. Ruger proposes "a substantially circular handguard composed of one or more pieces." SIG proposes "a one-piece, generally cylindrical handguard that continuously surrounds the barrel." The parties' competing proposals demonstrate that two elements of the limitation require clarification: 1) whether the handguard must be a single piece or can be more than one piece (SIG argues that the handguard must be one piece, while Ruger and Davies contend that the handguard can be more than one piece), and 2) the shape of the handguard (SIG and Ruger argue that the handguard must be circular or cylindrical, while Davies contends that the handguard must only be tubular).

1. Number of Pieces

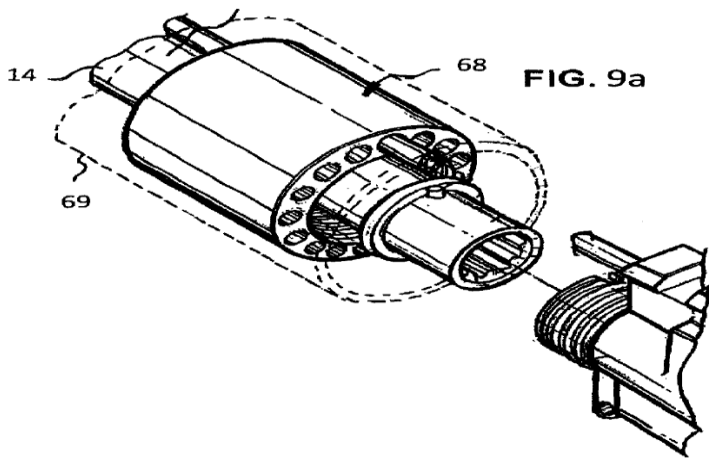
SIG argues that the limitation requires that the handguard be only one piece, and it asserts that the intrinsic evidence supports such a requirement. Specifically, SIG refers to Figures 9 and 9a in the '722 patent, as well as language in the specification and the prosecution history.

a. Figures 9 and 9a

First, SIG points to Figures 9 and 9a of the '722 patent:



Doc. no. 1-1 at 7, Fig. 9.



Id. at 8, Fig. 9a. According to SIG, both figures show a one-piece, rather than a two-piece, handguard, and thus limit the invention accordingly.

Assuming these drawings definitively show a unitary handguard, that fact would not be sufficient to support SIG's proposed limitation. As discussed above, SIG points to no clear

intent by the inventor to limit the scope of the patent's claims to the embodiment set forth in the figures.⁹ See [Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.](#), 340 F.3d 1298, 1306-07 (Fed. Cir. 2003) ("the mere fact that the patent drawings depict a particular embodiment of the patent does not operate to limit the claims to that specific configuration").

Even if the figures could limit the claim, it is far from clear that either drawing shows a unitary handguard. Both figures represent only a "partial perspective view" of the handguard. Doc. no. 1-1 at Col. 3, ll. 45, 47. SIG offers no support for the assertion that a person of ordinary skill in the art, viewing these incomplete renditions, would view them as depicting a one-piece handguard.

⁹ To support its contention that Figures 9 and 9a operate to limit the scope of the invention, SIG cites the inventor's "Response to Notice of Non-Compliant Appeal Brief" which he submitted to the PTO during prosecution of the '722 patent. In that document, the inventor explained:

The element claimed wherein the forward end of the handguard is open to permit access to the barrel coupling of the operating system is clearly stated in the explanation of the subject matter of the independent claims as being shown in FIG. 9. However, there is no specific language in the specification to which attention can be directed, as it is simply shown in FIG. 9.

Doc. no. 77-14 at 22. SIG fails to show that this language evinces a clear intent to limit the scope of the invention to the drawings in Figure 9 and 9a.

Therefore, the drawings in Figures 9 and 9a do not support SIG's proposed construction.

b. Specification

SIG next points to the following language in the '722 patent's specification:

Barrel nut **68** also carries a hand guard **69** having a central void **71** and a channel **74** extending therealong and adjacent thereto (see FIG. **9** and FIG. **9a.**) and is described in detail in co-pending U.S. patent application entitled "RIFLE HAND-GUARD SYSTEM WITH INEGRATED BARREL NUT" filed 25 Mar. 2002, Ser. No. 10/105,700, herein incorporated by reference.

Doc. no. 1-1 Col. 6, ll. 1-7. In other words, in describing the handguard disclosed in the '722 patent, the inventor incorporated Mr. Davies' 10/105,700 patent application (the "'700 application") into the specification.¹⁰

In an August 6, 2003 Response, Amendment and Request for Reconsideration, the inventor amended the '700 application to refer to a "unitary tubular handguard" to overcome an anticipation rejection. In explaining the amendment, the inventor stated:

Claims 1-3, 8-11 and 16 have been rejected as being anticipated by Olson. Withdrawal of the rejection is requested because independent claims 1 and 9 have been amended to more specifically set out the tubular handguard as being a "unitary tubular handguard." The

¹⁰ The '700 application eventually became United States Patent No. 6,694,660 (the "'660 patent"). The '660 patent issued on February 24, 2004, prior to the June 16, 2006 filing of the application that gave rise to the '722 patent.

hand guard of Olson is taught as and must be constructed of two halves. A unitary tubular handguard, as claimed in amended claims 1 and 9, cannot be employed in Olson. The specific elements of the handguard system require as [sic] two piece construction. Since each and every element of the invention as claimed in amended claims 1 and 9 are not taught by Olson, there can be no anticipation.

Doc. no. 77-24 at 12. SIG argues that, by distinguishing the Olson reference on these grounds when prosecuting the '700 application, the inventor specifically disclaimed a handguard composed of more than one piece in the '722 patent.

SIG's arguments as to the '700 application do not support a claim limitation of a unitary handguard in the '722 patent. SIG ignores the sentence immediately following the language in the '722 patent's specification that incorporates the '700 application. That sentence reads: "It will be understood that other barrel nuts and hand guards can be employed if desired." Doc. no. 1-1 at Col. 6, ll. 7-8. Thus, the specification explicitly left room for more than the handguard described in the '700 application, and specifically did not limit the handguard disclosed in the '722 patent to the one claimed in the '700 application.

In addition, as both Davies and Ruger note, the '700 application demonstrates that Mr. Davies understood how to claim a unitary handguard if he so desired. See doc. no. 77-24 at 4 (claiming a "unitary tubular handguard . . ."). The fact that

he did not include such a limitation in the '722 patent further evinces his intent to not limit the handguard disclosed in the '722 patent to a unitary piece.¹¹ For those reasons, the '700 application's reference to a unitary tubular handguard does not support reading that limitation into the '722 patent.

c. Prosecution history

Finally, SIG relies on the '722 patent's prosecution history. Specifically, SIG notes that on January 4, 2007, the Patent Examiner rejected certain claims in the '722 patent as obvious, see [35 U.S.C. § 103](#), in light of two other patents: U.S. Patent No. 6,671,990 ("Booth"), which disclosed a handguard system, and U.S. Patent No. 4,244,273 ("Langendorfer"), which disclosed a rifle.

Specifically, the examiner rejected certain claims in the '722 patent, noting that at "the time of the invention, one having ordinary skill in the art would have found it obvious to provide the rifle of Langendorfer," which did not disclose the details of a handguard, "with the features of Booth," which did. Doc. no. [77-18](#) at 6. SIG invokes the inventor's attempts to distinguish Booth and Langendorfer as limiting the invention

¹¹ Further, as Ruger noted at the hearing, if SIG's reading were correct, then the court would necessarily have to read in every limitation from the '700 application into the handguard disclosed in the '722 patent.

disclosed in the '722 patent as having a unitary handguard. The court discusses each patent in turn.

i. Booth patent

SIG cites the inventor's "Amendment and Response to First Office Action" dated May 8, 2007. In that response, the inventor noted:

Booth teaches a hand guard with a central void, but offers no teaching or suggestion of a channel adjacent thereto. Furthermore, there is no suggestion or teaching that any portion of the operating system at the forward end of the handguard is accessible. Therefore, since each and every element of the invention as claime[d] in amended claims 30 and 41 are not taught by Booth, there can be no anticipation.

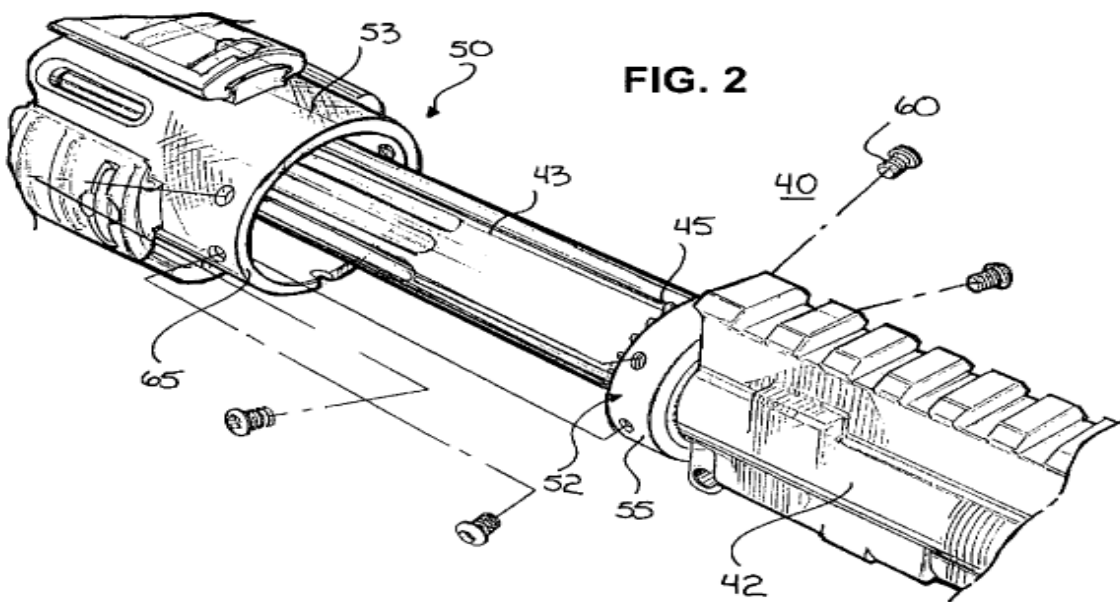
Doc. no. [77-17](#) at 17-18. SIG argues that because the inventor distinguished Booth on certain bases but did not argue that the handguard disclosed in the '722 patent was or could be a two-piece solution, in contrast to Booth's single-piece handguard, the inventor necessarily conceded that the '722 patent disclosed a unitary handguard.

SIG offers no support for the proposition that a patentee's failure to distinguish his invention from prior art on a particular element is a concession that such element exists in the inventor's invention. SIG argues simply that "human nature" dictates that the inventor would have attempted to overcome the rejection on every basis he could. The law, however, does not impose such a duty on a patentee. See, e.g., [DeMarini Sports,](#)

[Inc. v. Worth, Inc.](#), 239 F.3d 1314, 1326-27 (Fed. Cir. 2001)

(refusing to rely on ambiguity surrounding patentee's lack of argument during prosecution to construe claim term).

Even if the law did impose such a duty, however, it is far from clear that Booth discloses a unitary handguard. In listing Booth's features, the examiner noted only that Booth discloses a "tubular handguard." Doc. no. 77-18 at 5. SIG, once more, relies only on a drawing in the Booth patent, which it asserts is "clearly depicting a one-piece handguard."



Doc. no. 77 at 19. Similar to SIG's attempt to use Figures 9 and 9a in the '722 patent to limit the scope of the patent's terms, its attempt to use drawings in the Booth patent to support its argument falls flat. As with Figures 9 and 9a, it

is far from clear that the drawings in the Booth patent show a unitary handguard, or in any way impose such a limitation on the Booth claims.

Thus, SIG attempts to draw conclusions from the inventor's failure to distinguish Booth on grounds not raised by the examiner and not claimed in the Booth patent. For obvious reasons, the court declines to follow SIG's lead.

ii. Langendorfer patent

SIG similarly relies on the inventor's March 12, 2008 brief appealing the final rejection of the '722 patent. Responding again to the § 103 obviousness rejection, the inventor stated:

Langendorfer does not teach the details of the handguard, and therefore does not and cannot teach or suggest a channel extending therealong providing clearance for the operating system. Specifically, Langendorfer teaches handguards 31. In a conventional rifle of this type, the handguard is formed of two halves. While not specifically described, this must be the case by the use of the plural.

Doc. no. [77-15](#) at 20-21. SIG argues that this language "definitively put to rest" that the tubular handguard claimed in the '722 patent must be unitary. Doc. no. [77](#) at 20.

"The Federal Circuit has cautioned against excessive reliance on prosecution history for claim construction purposes because the prosecution history 'often lacks the clarity of the specification and this is less useful for claim construction purposes.'" [Biedermann Motech GMBH v. Alphatec Spine, Inc.](#), 482

F. Supp. 2d 32, 34-35 (D. Mass. 2007) (quoting [Phillips](#), 415 F.3d at 1317). Thus, a prosecution history disclaimer of claim scope “must be both clear and unmistakable.” [Sorensen v. Int’l Trade Comm’n](#), 427 F.3d 1375, 1379 (Fed. Cir. 2005) (citation omitted). “This may occur, for example, when the patentee explicitly characterizes an aspect of his invention in a specific manner to overcome prior art.” [Purdue Pharma L.P. v. Endo Pharm. Inc.](#), 438 F.3d 1123, 1136 (Fed. Cir. 2006).

Here, it is far from clear that the cited language shows that the inventor was disclaiming a handguard that consisted of more than one piece. Although the inventor referenced Langendorfer having a handguard “formed of two halves,” he does not clearly express that an element of his invention is a unitary handguard or explain the significance of Langendorfer’s two-piece handguard vis-à-vis his invention. Such statements in the prosecution history are “far too slender a reed to support the judicial narrowing of a clear claim term.” [N. Telecom Ltd. v. Samsung Elecs. Co., Ltd.](#), 215 F.3d 1281, 1294 (Fed. Cir. 2000); see also [Rexnord Corp. v. Laitram Corp.](#), 274 F.3d 1336, 1347 (Fed. Cir. 2001) (refusing to limit the ordinary meaning of the claim because the alleged disclaimer in the file wrapper was at best “inconclusive”).

Therefore, the language in the prosecution history regarding the Langendorfer rifle cited by SIG does not

unmistakably show that the '722 patent claims a unitary handguard.

d. Summary

For the reasons set forth above, the intrinsic evidence does not support a claim limitation requiring the handguard to be a single piece.

2. Shape of the handguard

Davies asserts that, because the claims recite a "tubular" handguard, the court need not clarify the shape of the handguard. Ruger contends that the handguard must be "substantially circular," while SIG argues that it must be "generally cylindrical." Ruger and SIG represent that their proposed constructions regarding the shape of the handguard are generally consistent with each other. Because SIG agreed that its proposed construction of "generally cylindrical" was essentially the same as Ruger's proposed construction of "substantially circular," it joined Ruger's arguments.¹²

a. Substantially circular

Ruger argues that the word "tubular" imposes a limitation that the handguard must be circular. The intrinsic evidence

¹² Ruger and SIG concede that neither the claim language nor the specification uses the term "circular" or "cylindrical" when describing the handguard.

Ruger cites in support of that argument, however, does not compel such a reading.

To support its proposed construction, Ruger notes that Figures 9 and 9a, which provide partial views of the handguard and are replicated above, see supra Part I.C.1.a, show that the handguard in the '722 patent has "a substantially circular cross-section." Doc. no. 76 at 10. Ruger also refers to other figures in the '722 patent showing elements of the claimed rifle that are described in the specification as "tubular." Ruger notes that each figure containing a "tubular" component shows that component as having a circular shape. Although Ruger's descriptions of the figures may be correct, as discussed above, nothing in the '722 patent evinces the inventor's intention to limit the claims' scope to the embodiments represented in the figures. Therefore, the figures in the '722 patent alone do not support imposing a limitation that the handguard must be substantially circular.

Ruger also quotes language from the '700 application, which, as discussed above, is incorporated by reference into the '722 patent's specification. The relevant language describes the handguard as having a "diameter," which, Ruger asserts, is "associated with circles." Id. at 9. Ruger's reliance on the use of the word "diameter" in the '700 application, however, does not support such a limitation in the '722 patent. Even if

that word did support a limitation that the handguard disclosed in the '700 application must be circular, for the reasons discussed supra Part 1.C.1.b., the handguard in the '722 patent is not limited by that application.¹³

Setting the word "tubular" aside, Ruger also asserts that the word "encircling" requires the handguard to be substantially circular. Ruger finds no support for that assertion in the intrinsic evidence. The only time the word "encircling" is used in the '722 patent is to describe the tubular handguard, and nothing in the specification limits the handguard to a circular shape. Ruger instead hangs its argument on the Merriam-Webster dictionary definition of encircle, which defines the word as "to form a circle around." Doc. no. 76-7 at 4. The intrinsic evidence, however, is clear that the handguard need only be tubular and, therefore, the court need not resort to extrinsic evidence such as a dictionary definition.¹⁴

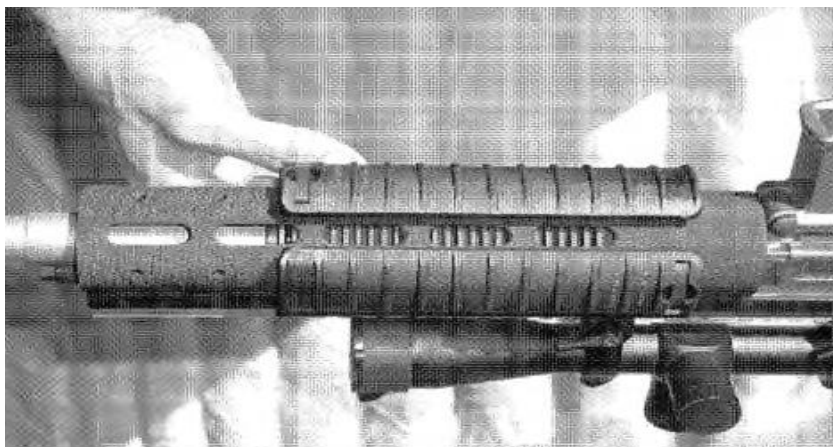
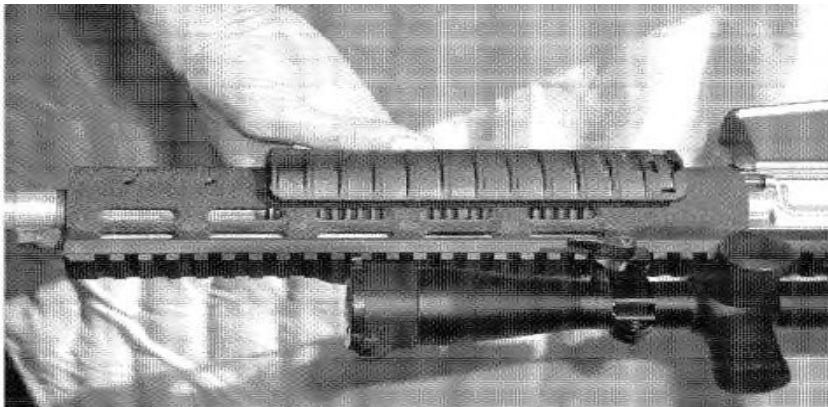
¹³ Indeed, Ruger persuasively made that very argument with regard to the unitary versus two-piece limitation.

¹⁴ Even if the court did consider the dictionary definition Ruger puts forth, it would not change the conclusion. The same dictionary cited by Ruger also defines "encircle" as "to pass completely around," see doc. no. 76-7 at 4, which appears to the court to be a more relevant definition of the term as used in the claims of the '722 patent.

For those reasons, the court declines to adopt Ruger's proposed construction that the tubular handguard must be "substantially circular."

b. Generally cylindrical

In addition to echoing Ruger's arguments, SIG cites the May 30, 2010 presentation that the inventor included with his declaration to the PTO during prosecution of the '722 patent. See supra Part I.A.1. SIG notes that both pictures in the presentation show a handguard in a "substantially cylindrical fashion":



Doc. no. 77 at 21.

SIG's attempt to limit the shape of the '722 patent's handguard to that included with the inventor's presentation to the PTO is without merit. As discussed above, the pictures in that presentation represent a commercial embodiment of the inventor's invention, and the court will not impose a limitation based solely on pictures of that embodiment absent any evidence that the inventor intended to so limit his claims.¹⁵

Further, as Davies notes, the specification uses the term "cylindrical" to describe other elements of the invention. For example, the specification refers to a "cylindrical base member," doc. no. 1-1 at Col. 4, ll. 32, and a "cylindrical" weight, id. at Col. 6, ll. 52. Thus, as Davies notes, the inventor understood how to use the word "cylindrical" and did not do so to describe the handguard in the '722 patent. This fact further supports a conclusion that the shape of the handguard is not required to be cylindrical.

3. Summary

The intrinsic evidence shows that the handguard must be tubular and encircle the barrel, and is not required to be a unitary handguard. The words "tubular" and "encircling" are

¹⁵ SIG also proposes that the court construe the claim term to require that the handguard "continuously surrounds" the barrel. SIG offered little argument in its briefing or at the hearing to support that limitation, and the court declines to adopt it.

sufficiently clear to a person of ordinary skill in the art to not require clarification. Therefore, the court construes the term "tubular handguard encircling the barrel" to mean "tubular handguard composed of one or more pieces encircling the barrel."

D. "channel providing clearance for the operating system"

The claims of the '722 patent further recite a handguard with a "channel providing clearance for the operating system." As with each preceding disputed claim term, Davies contends that this term should be given its plain and ordinary meaning and needs no construction. Ruger and SIG propose the following construction: "a space within the handguard extending to the forward part of the handguard and giving space to accommodate the operating system."

As the parties agree in their briefing, there is no dispute that the handguard must contain a channel that provides room for and accommodates at least a portion of the operating system. As the inventor stated in his October 7, 2009 Amendment and Response to the PTO, the handguard's "channel is defined by its function, namely, providing clearance for the operating system. Since clearance is required, it is inherent that at least portions of the operating system are within the channel." Doc. no. 77-13 at 15. Although Ruger and SIG seek to clarify that requirement in their proposed construction, the function of the

channel is not in dispute. The court agrees with Davies that the phrase "providing clearance for the operating system" conveys that function in a manner that needs no clarification.

The parties differ, however, as to whether the claim limitation requires that the channel must extend to the forward part of the handguard. Ruger and SIG assert that the prosecution history requires such a limitation. Specifically, Ruger and SIG point to the March 12, 2008 appeal brief filed with the PTO, in which the inventor attempted to overcome the examiner's rejection of several claims, including claim 1, under [35 U.S.C. § 102\(e\)](#) as being anticipated by Booth.¹⁶ See supra Part I.C.1.c.ii. The inventor first explained the elements of that claim:

Claim 30 includes the element "the handguard being tubular and having a forward end, a rearward end, a central void extending between the forward end and the rearward end, and a channel extending therealong adjacent the central void." Additionally, the forward end of the channel is open to permit access to the barrel coupling.

Doc. no. [77-15](#) at 14. To overcome the prior art rejection, the inventor argued:

Booth teaches a hand guard with a central void, but offers no teaching or suggestion of a channel adjacent thereto. Furthermore, Booth would not contemplate the use of a channel as it would be an unnecessary expense and complication not needed for the operation of the firearm of Booth. The rejection states that Booth

¹⁶ Claim 30 of the application became claim 1 of the issued patent.

teaches a channel 80. However, it must be pointed out that channel 80 of Booth does not extend along the central void adjacent thereto

Id. Relevant to Ruger and SIG's argument, the inventor further distinguished Booth on the following grounds:

Additionally, there is no suggestion or teaching that any portion of the operating system at the forward end of the handguard of Booth is accessible. The channel 80 of Booth does not extend to the forward portion of the handguard, and does not accommodate the operating system. Therefore, there can be no open end of the channel at the forward portion, to permit access to the operating system. This is not taught nor is it an inherent characteristic of the device taught. Therefore, since each and every element of the invention as claimed in claim 30 is not taught by Booth, there can be no anticipation.

Id. at 15 (emphasis added).

Ruger and SIG argue that through this language, the inventor distinguished Booth based on the fact that its channel does not extend to the forward portion of the handguard, which the inventor notes is an element of his invention. Thus, Ruger and SIG assert that the inventor understood and claimed in the '722 patent a channel that extends to the forward portion of the handguard.

Davies disputes that the language in the inventor's appellate brief imposes a length requirement for the channel. Though Davies acknowledges that the inventor stated that the channel in Booth does not extend to the forward portion of the handguard, it argues that this language related to whether the

channel was open to permit access to the barrel coupling. Because the inventor distinguished Booth primarily on the grounds that Booth did not teach a channel at all, Davies argues that the inventor's statement regarding the extension of the channel was merely a way to explain that the channel was not open and therefore did not accommodate the barrel coupling.

The court does not find Davies' argument persuasive. In his appellate brief, the inventor expressly distinguished the channel on Booth's handguard because it did not extend to the forward portion of the handguard. The inventor subsequently noted that this was an element of his invention, when he stated that "[t]herefore, since each and every element of the invention as claimed in claim 30 is not taught by Booth, there can be no anticipation." Doc. no. 77-15 at 15. Thus, the inventor clearly and unmistakably represented that the channel disclosed in his invention must extend to the forward portion of the handguard.

Therefore, the court construes the term "channel providing clearance for the operating system" to mean a "channel extending to the forward portion of the handguard and providing clearance for the operating system."

II. Independent claim 8

The final disputed claim term appears in claim 8. Claim 8, with the disputed claim term underlined, provides in relevant part:

8. A rifle comprising:

* * *

an operating system extending along the barrel and terminating in a barrel coupling including a piston assembly coupled to the barrel for receiving propelling gasses from the barrel, the piston assembly having a cylinder with an open forward end, a piston/pushrod assembly moveable between a retracted position and an extended position, and an end plug removably closing the open forward end of the cylinder to permit passage of the piston/pushrod assembly therethrough when the plug is removed

Doc. no. 1-1, Col. 12, ll. 16, 22-31.

Davies contends that the claim term "passage of the piston/pushrod assembly" should be given its plain and ordinary meaning and needs no construction, and that the plain and ordinary meaning is "passage of the piston or pushrod." Ruger and SIG assert that the term's proper construction is: "removal of the piston and push rod assembly resulting from movement through the forward (front) end of the cylinder."¹⁷

¹⁷ The '722 patent interchangeably refers to a "push rod" and "pushrod" to describe the same component, number 54.

The parties focus their arguments not on the “passage” element, but on what constitutes a “piston/pushrod assembly.” Davies argues that the forward slash between the words “piston” and “pushrod” is a disjunctive indicator. That is, Davies contends that the plain and ordinary meaning of the claim term is that the cylinder must permit passage of the piston or the pushrod.

Davies’ reading of the disputed claim term is not supported by the intrinsic evidence. As the parties note, the phrase “piston/pushrod assembly” does not appear in the ‘722 patent’s specification. The ‘722 patent does, however, use the word “assembly” several times in reference to rifle components. In each instance, it identifies the combination of multiple parts. See, e.g., 1-1, Col. 4, ll. 50-51 (“Piston assembly **34** includes a cylinder **40**, a piston **42** and an end plug **43**.”); id. at Col. 5, ll. 22-25) (describing a “bolt carrier assembly **15**,” which includes a “drive key **60**” and a “bolt carrier **22**”); id. at Col. 12, ll. 17-18 (“an upper receiver/handguard assembly including an upper receiver and a handguard”). Thus, the use of the word “assembly” elsewhere in the ‘722 patent supports the reading, argued by SIG and Ruger, that the phrase “piston/pushrod assembly” means both the piston and the pushrod.¹⁸

¹⁸ Though not raised by the parties, the court notes that the specification contains one reference to a “pushrod

Nor does the use of the forward slash elsewhere in the '722 patent support Davies' position. To the contrary, the plain language used earlier in claim 8 provides such evidence that the use of a forward slash in the '722 patent means "and." As noted above, earlier in claim 8, the inventor disclosed "an upper receiver/handguard assembly including an upper receiver and a handguard." Doc. no. 1-1 at Col. 12, ll. 17-18. Thus, the inventor's use of a forward slash when discussing a different assembly in the same claim meant both components, rather than either component.¹⁹

assembly": "Thus, a new and improved automatic/semi-automatic rifle is disclosed which is more reliable because it uses a positive acting pushrod assembly, rather than a gas ejection system." Doc. no. 1-1, Col. 10, ll. 48-50. Unlike the examples above, the specific components of this assembly are not spelled out, as it appears to refer to the system by which the rifle fires a bullet.

¹⁹ Davies cites cases to support its contention that a forward slash used in a claim term means "or." The cases Davies cites, however, draw that conclusion from the intrinsic evidence of the specific patent they are construing. See [Negotiated Data Sols., LLC v. Dell, Inc.](#), 596 F. Supp. 2d 949, 993 (E.D. Tex. 2009) (relying on language in the specification that "clearly suggests that the use of the slash in 'framer/deframer' is meant to mean 'or'"); [Vertical Doors, Inc. v. JT Bonn](#), No. SACV 05-905 JVS(ANX), 2006 WL 6223700, at *3 (C.D. Cal. Oct. 30, 2006) ("applying an interpretation that the slash mark means equivalence leads to the absurd result that the patentee meant 'opening' and 'closing' to be equivalent"). Unlike the party offering its proposed construction in those cases, Davies offers no intrinsic evidence to support its interpretation.

For those reasons, the court construes the term "passage of the piston/pushrod assembly" as "passage of the piston and pushrod assembly."²⁰

CONCLUSION

For the reasons set forth above, the court adopts the following constructions of the disputed claim terms.

CLAIM TERM	CONSTRUCTION
a piston moveable between a retracted position and an extended position within the cylinder	a piston moveable between two positions at opposite ends within the cylinder
an end plug removably closing the open forward end of the cylinder	an end plug that closes the open forward end of the cylinder and that can be removed
tubular handguard encircling the barrel	tubular handguard composed of one or more pieces encircling the barrel
channel providing clearance for the operating system	channel extending to the forward portion of the handguard and providing clearance for the operating system
passage of the piston/pushrod assembly	passage of the piston and pushrod assembly

SO ORDERED.



 Landya McCafferty
 United States District Judge

August 29, 2017

²⁰ As mentioned, Ruger and SIG propose: "removal of the piston and push rod assembly resulting from movement through the forward (front) end of the cylinder." In light of the rest of the language of claim 8, the court does not view the remainder of the claim term as requiring further clarification.

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