United States District Court,
N.D. Ohio, Eastern Division.

EMERSON ELECTRIC CO., et al,
Plaintiffs.
v.
SPARTAN TOOL, LLC,
Defendant.

No. 1:00CV350

May 3, 2002.

Owner of three patents for drain cleaning apparatus sued competitor for infringement. Construing claims and on cross-motions for summary judgment, the District Court, Gaughan, J., held that: (1) first and third patents were literally infringed by original accused device; (2) first patent was equivalently infringed by modified version of accused device; (2) second patent was literally infringed by modified version of accused device; (3) third patent was not infringed by modified version of accused device; (4) fact issue existed as to whether first and second patents were infringed by second modification of accused device; (4) patents were not shown to be invalid as anticipated or obvious; and (5) patents were enforceable.

Claims construed; plaintiff's motion granted; defendant's motion granted in part and denied in part.

6,243,905. Construed; Infringed; Valid; Enforceable.

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Memorandum of Opinion and Order

GAUGHAN**, District Judge.**

INTRODUCTION

This matter is before the Court upon Plaintiffs' Motion for Claim Construction of Claims 29 and 35 of the '588 Patent and of Claims 1 and 22 of the '905 Patent, and Supporting Memorandum (Doc. 93); Plaintiffs' Motion for Claim Construction and for Summary Judgment of Infringement of Claim 24 of the '401 Patent, and Supporting Memorandum (Doc. 95); Spartan's Response and Cross Motion to Plaintiffs' Motion for Summary Judgment of Claim 24 of the '401 Patent (Doc. 103); Plaintiffs' Motion for Partial Summary

Judgment of Infringement of Claim 29 of the '588 Patent and of Claim 22 of the '905 Patent, and Supporting Memorandum (Doc. 94); Spartan's Response to Plaintiff's Motion for Summary Judgment of Infringement and Cross Motion as to Claim 29 of the '588 Patent and Claim 22 of the '905 Patent (Doc. 114); Spartan's Motion for Summary Judgment on Non-Infringement (Doc. 96); Spartan's Motion for Summary Judgment on Invalidity (Doc. 108); and Plaintiffs' Motion for Partial Summary Judgment of No Unenforceability and Supporting Memorandum (Doc. 92).

This case arises out of the manufacture and sale by defendant Spartan Tool, LLC of an Original Model 502 Cable Machine and Modified Model 502 Cable Machine (hereafter collectively "Model 502 Cable Machines"). Plaintiffs allege these machines infringe three patents owned by plaintiff Emerson Electric Co. (hereafter "Emerson") and licensed to plaintiff Ridge Tool Company (hereafter "Ridge"). Two of the patents-in-suit describe and claim a drain cleaning apparatus that drives a cleaning cable or snake in and out of drains and pipes to open blockages therein. The third patent-in-suit describes and claims a feed control device to be used with the drain cleaning apparatus to control the feed, i.e., inward and outward movement, of the cleaning cable.

For the following reasons, Plaintiffs' Motion for Claim Construction of Claims 29 and 35 of the '588 Patent and of Claims 1 and 22 of the '905 Patent is GRANTED as set forth below; Plaintiffs' Motion for Claim Construction and for Summary Judgment of Infringement of Claim 24 of the '401 Patent is GRANTED as set forth below; Spartan's Cross Motion for Summary Judgment of Claim 24 of the '401 Patent is GRANTED IN PART and DENIED IN PART; Plaintiffs' Motion for Partial Summary Judgment of Infringement of Claim 29 of the '588 Patent and of Claim 22 of the '905 Patent is GRANTED; Spartan's Cross Motion as to Claim 29 of the '588 Patent and Claim 22 of the '905 Patent is DENIED; Spartan's Motion for Summary Judgment on Non-Infringement is DENIED; Spartan's Motion for Summary Judgment on Invalidity is DENIED; and Plaintiffs' Motion for Partial Summary Judgment of No Unenforceability is GRANTED.

FACTS

Plaintiff Emerson is a Missouri corporation engaged in the manufacture and sale of industrial products, including electric motors, compressors, measuring instruments, power tools and plumbing equipment. (2d Am.Compl.para.para. 1, 6). Plaintiff Ridge is an Ohio corporation with its principal place of business in Elyria, Ohio. (2d Am.Compl.para. 2). Ridge is a subsidiary of Emerson and manufactures, develops, markets and sells tools to the professional pipeworking and plumbing industry. (2d Am.Compl.para. 7).

Defendant is a limited liability company existing under the laws of the State of Delaware. (2d Am. Compl. para. 3; Ans. para. 3).

Emerson is the owner by assignment of three patents invented by Michael Rutkowski FN1 and directed to a method of cleaning pipes:

FN1. Rutkowski is an engineer and has been employed by Ridge for over 30 years and is currently a Senior Development Engineer. (Rutkowski Invalidity Opp. Decl. para. 3; Rutkowski Aug. 20 Depo. 5). Rutkowski was deposed in connection with this litigation as an individual, a corporate representative and Ridge's technical expert. (Rutkowski Invalidity Opp. Decl. para. 4)

(1) U.S. Patent No. 6,009,588 entitled "Drain Cleaning Apparatus" (hereafter " '588 Patent");
(2) U.S. Patent No. 6,243,905 entitled "Drain Cleaning Apparatus" (hereafter " '905 Patent"); and

(3) U.S. Patent No. 5,901,401 entitled "Feed Control Device for Plumbing Tools" (hereafter " '401 Patent").

('588 Patent; '905 Patent; '401 Patent). Ridge is the exclusive licensee of all three patents. (2d Am.Compl.para.para. 10, 17, 26).
The '588 Patent was issued on January 4, 2000 and discloses an invention described as follows:

The inner end of a snake or drain cleaning cable coiled in a rotatable cable storage drum of drain cleaning apparatus is provided with a torque arm which frictionally engages the outer wall of the drum to restrain sliding of the cable relative thereto during a drain cleaning operation. The drain cleaning apparatus is motor driven, and a cable feed device for axially displacing the cable relative to the storage drum is provided on the outer end of a flexible guide tube detachably mounted on the apparatus to facilitate an operator guiding the outer end of the table [sic] into a drain to be cleaned and advancing or retracting the cable relative to the apparatus without having to physically contact the cable.

('588 Patent Abstract). The invention relates to the art of drain cleaning apparatus and, specifically, "to improvements in connection with transmitting torque to the drain cleaning cable in such apparatus and directing and feeding the cable into a drain or waste line to be cleaned." ('588 Patent col. 1, ll. 4-9). The invention seeks to provide improvements to the art by considerably increasing the torque transmitted from the cable storage drum to the cable over that previously available and providing the operator with a manually operable device for feeding the cable to and from the storage drum, thus precluding him from having to manually pull or push the cable relative to the drum. ('588 Patent col. 1, ll. 51 to col. 2, ll. 2). In addition, the flexibility of the guide tube enables the operator to direct the free end of the cable such that the cable can be fed or retracted without the operator having to touch it. ('588 Patent col. 2, ll. 2-8).

The '905 Patent was issued on June 12, 2001 and is a continuation of the application that issued as the '588 Patent. Thus, the '905 Patent has claims of different scope directed to the same invention covered by the '588 Patent.

The '401 Patent was issued on May 11, 1999 and discloses a feed control device for plumbing tools which is "particularly suited for mounting on a hand held, power driven drain cleaning apparatus" having a drain cleaning cable contained in a rotating drum, such as that covered by the '588 and '905 Patents. ('401 Patent Abstract). When operating such an apparatus, the operator holds the feed control device in one hand and depresses its lever when he desires to move the cable axially in or out of the drum. ('401 Patent col. 3, ll. 35-38, 51-54). Because the lever is biased outward of the housing by a spring, the cable rotates but does not travel axially in or out of the drum when the operator stops applying pressure to the lever. ('401 Patent col. 6, ll. 28-57).

Ridge sells the Model K-40 family of drain cleaners in several configurations. (Rutkowski Aug. 20 Depo. 34). The plain Model K-40 Drain Cleaner has no guide hose or power feed. (Rutkowski Aug. 20 Depo. 34). The Model K-40PF Drain Cleaner has a power feed attached directly to the drain cleaner without a guide tube. (Rutkowski Aug. 20 Depo. 34). The Model K-40GPF Drain Cleaner has a guide tube attached to the drain cleaner and a power feed attached to the end of the guide tube. (Rutkowski Aug. 20 Depo. 34).FN2 According to plaintiffs, the K-40GPF is the commercial embodiment of the '588 and '905 Patents, while the power feed used on the K-40PF and K-40GPF is covered by the claims of the '401 Patent.

FN2. Ridge also sells a battery-powered device referred to as the K-40B. (Rutkowski Aug. 20 Depo. 34).

Defendant sold the Original Model 502 Cable Machine from approximately October or November 1999 until October 19, 2000. (Sloter Depo. 65; Doc. 95 Ex. C). Rockwell Sloter FN3 testified that defendant obtained a K-40GPF sometime after a October 16, 1998 product development meeting during which the device was discussed in connection with replacing defendant's Model 81, a drain cleaning device that had been sold by defendant since 1981. (Sloter Depo. 18, 26-27). One of the agenda items for that meeting was to discuss putting a flexible tube or "cable safety guide" over the cable of the Model 81 "like Ridge has" on the K-40GPF. (Sloter Depo. 24-25).

FN3. Sloter is an employee of defendant. (Sloter Depo. 7). He recently gave up his previous title, Vice President of Manufacturing and Engineering, so that new people could be trained and he could begin the process of retiring. (Sloter Depo. 11-12). Sloter currently works directly for Tom Pranka, defendant's President, and gives manufacturing and engineering advice and direction to defendant's managers of production. (Sloter Depo. 7-8). Sloter was deposed both in his individual capacity and as defendant's representative. (Sloter Depo. 10).

A Memorandum from defendant's November 11, 1998 product development meeting lists reverse engineering the K-40GPF as a future project agenda item. (Sloter Depo. 29; Doc. 104 Ex. M). Sloter testified that the reasons for reverse engineering Ridge's device were to "look at it" and "develop a replacement for" the Model 81. (Sloter Depo. 29-30). According to Sloter, reverse engineering a product includes visually inspecting it, taking it apart, testing it and checking its performance. (Sloter Depo. 30-31). By January 18, 1999, defendant had decided to design a drum and frame for what would become the Model 502 Cable Machines to look similar in appearance to Ridge's K-40 line. (Sloter Depo. 39-40; Doc. 104 Ex. N). As noted above, defendant began selling its Original Model 502 Cable Machine in the fall of 1999.

Plaintiffs filed suit in this matter on February 4, 2000. (Doc. 1). In response to plaintiffs' allegations of infringement, defendant redesigned the Original Model 502 Cable Machine and replaced it with the Modified Model 502 Cable Machine in October 2000. (Doc. 95 Ex. C). Plaintiffs allege that defendant has been and is now infringing all three patents by making, selling and offering for sale the Model 502 Cable Machines. (2d Am.Compl.para.para. 11, 19, 27).

The Second Amended Complaint sets forth three causes of action. Count One alleges infringement of the '401 patent. Count Two alleges infringement of the '588 patent. Count Three alleges infringement of the '905 patent.

Defendant asserts eight Counterclaims.FN4 Count One seeks a declaratory judgment of non-infringement of the '588 Patent. Count Two seeks a declaratory judgment of non-infringement of the '401 Patent. Count Three seeks a declaratory judgment of invalidity of the '588 Patent. Count Four seeks a declaratory judgment of invalidity of the '401 Patent. Count Six seeks a declaratory judgment of non-infringement of the '905 Patent. Count Seven seeks a declaratory judgment of invalidity of the '905 Patent. Count Eight seeks a declaratory judgment of unenforceability of the '588 Patent. Count Nine seeks a declaratory judgment of unenforceability of the '905 Patent.

FN4. On November 14, 2001, this Court granted defendant's motion to voluntarily dismiss with prejudice Count Five of its Counterclaims, which alleged unfair competition. (Doc. 85).

STANDARD OF REVIEW

In accordance with Federal Rule of Civil Procedure 56(c), summary judgment is appropriate when there are no genuine issues of material fact exist and the moving party is entitled to judgment as a matter of law. Celotex Corp. v. Catrett, 477 U.S. 317, 322-23, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986) (citing); *see also* LaPointe v. United Autoworkers Local 600, 8 F.3d 376, 378 (6th Cir.1993). The burden of showing the absence of any such genuine issues of material facts rests with the moving party:

[A] party seeking summary judgment always bears the initial responsibility of informing the district court of the basis for its motion, and identifying those portions of "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any," which it believes demonstrates the absence of a genuine issue of material fact.

Celotex, 477 U.S. at 323, 106 S.Ct. 2548. A fact is material only if its resolution might affect the outcome of the lawsuit under the governing law. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986).

Once the moving party has satisfied its burden of proof, the burden then shifts to the nonmoving party pursuant to Federal Rule of Civil Procedure 56(c), which provides:

When a motion for summary judgment is made and supported as provided in this rule, an adverse party may not rest upon the mere allegations or denials of the adverse party's pleadings, but the adverse party's response, by affidavits or as otherwise provided in this rule, must set forth specific facts showing that there is a genuine issue for trial. If the adverse party does not so respond, summary judgment, if appropriate, shall be entered against the adverse party.

In ruling upon the motion, the court must afford all reasonable inferences and construe the evidence in the light most favorable to the nonmoving party. Cox v. Kentucky Dept. of Transp., 53 F.3d 146, 150 (6th Cir.1995) (citation omitted); *see also* United States v. Hodges X-Ray, Inc., 759 F.2d 557, 562 (6th Cir.1985). However, summary judgment should be granted if a party who bears the burden of proof at trial does not establish an essential element of his case. Tolton v. American Biodyne, Inc., 48 F.3d 937, 941 (6th Cir.1995) (citing Celotex, 477 U.S. at 322, 106 S.Ct. 2548).

DISCUSSION

Plaintiffs move for claim construction of Claims 29 and 35 of the '588 Patent, Claims 1 and 22 of the '905 Patent and Claims 24, 25 and 26 of the '401 Patent. In addition, plaintiffs move for partial summary judgment as to the infringement of Claim 29 of the '588 Patent and Claim 24 of the '401 Patent by the Original Model 502 Cable Machine and Claim 22 of the '905 Patent by the Modified Model 502 Cable Machine. Plaintiffs also move for summary judgment as to the enforceability of the '588 and '905 Patents.

Defendant moves for summary judgment as to the infringement of the '588 and '905 Patents by the Modified Model 502 Cable Machine. In response to two of plaintiffs' motions, defendant filed cross-motions for a finding of non-infringement as to Claim 29 of the '588 Patent and Claim 24 of the '401 Patent. Defendant

also moves for summary judgment as to the invalidity of all three patents.

[1] This Court will first address the issue of infringement of the asserted claims, which includes the construction of those claims, and then address the validity and enforceability of the patents-in-suit.FN5

FN5. Plaintiffs have filed three motions relating to claim construction and infringement, requesting that this Court separately (1) construe Claims 29 and 35 of the '588 Patent and Claims 1 and 22 of the '905 Patent; (2) determine whether Claim 29 of the '588 Patent and Claim 22 of the '905 Patent are infringed; and (3) construe Claims 24, 25 and 26 of the '401 Patent and determine if Claim 24 is infringed.

Defendant objects and asserts that plaintiffs have filed separate motions to avoid the page limitations set forth in Local Rule 7.1(g). In addition, defendant argues that claims should not be construed outside the context of a dispositive motion.

Defendant's argument that claim construction is improper in the absence of a dispositive ruling lacks merit. Claim construction is a matter of law which must be decided by this Court at some point during this litigation. The Federal Circuit has recognized the appropriateness of claim construction determinations independent of and prior to an examination of the issue of infringement. *See, e.g.,* Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1375 (Fed.Cir.2001); Mycogen Plant Science, Inc. v. Monsanto Co., 243 F.3d 1316, 1320-1321 (Fed.Cir.2001). This Court agrees that plaintiffs should not have submitted four piecemeal dispositive motions. However, in light of the fact that plaintiffs would presumably have been granted a page limitation extension if one had been requested and because defendant also filed two piecemeal motions and two cross-motions, this Court will consider the merits of all the pending dispositive motions together.

I. Infringement

"Patent infringement occurs when a device (or composition or method), that is literally covered by the claims or is equivalent to the claimed subject matter, is made, used, or sold, without the authorization of the patent holder, during the term of the patent." Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1476 (Fed.Cir.1998). *See also* 35 U.S.C. s. 271. A determination of infringement or non-infringement requires a two-step analysis:

First, the claims of the patent must be construed to determine their scope. Second, a determination must be made as to whether the properly construed claims read on the accused device. The first step of this analysis-claim construction-is a question of law. Accordingly, it falls upon the district court to discern the meaning of the claim language....The second step of this analysis-the determination of whether the properly construed claims read on the accused device-is a question of fact. Thus, summary judgment...can only be granted if, after viewing the alleged facts in the light most favorable to the non-movant, there is no genuine issue whether the accused device is encompassed by the claims.

Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1304 (Fed.Cir.1999) (citations omitted). *See also* Markman v. Westview Instruments, Inc., 517 U.S. 370, 384, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996); Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1341 (Fed.Cir.2001); Intermatic Inc. v. Lamson & Sessions Co., 273 F.3d 1355, 1363 (Fed.Cir.2001).

[2] Thus, in order to determine whether defendant's Model 502 Cable Machines infringe the '588, '905

and/or '401 Patents, this Court must construe the claims at issue and, in the absence of a genuine issue of material fact, determine whether those claims read on the Model 502 Cable Machines. *See* WMS Gaming, Inc. v. Int'l Game Tech., 184 F.3d 1339, 1346 (Fed.Cir.1999). "An infringement issue is properly decided upon summary judgment when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device either literally or under the doctrine of equivalents." Gart v. Logitech, Inc., 254 F.3d 1334, 1339 (Fed.Cir.2001). *See also* Telemac Cellular Corp. v. Topp Telecom, Inc., 247 F.3d 1316, 1323 (Fed.Cir.2001) ("Summary judgment is appropriate when it is apparent that only one conclusion as to infringement could be reached by a reasonable jury.").

A. Claim Construction

Proper claim construction requires an understanding of the purposes and functions of the patent document, the statutory requirements for which are set forth in 35 U.S.C. s. 112. The first two paragraphs of s. 112 provide,

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

As explained by the Supreme Court,

It has long been understood that a patent must describe the exact scope of an invention and its manufacture to "secure to [the patentee] all to which he is entitled, [and] to apprise the public of what is still open to them." Under the modern American system, these objectives are served by two distinct elements of a patent document. First, it contains a specification describing the invention "in such full, clear, concise, and exact terms as to enable any person skilled in the art... to make and use the same." Second, a patent includes one or more "claims," which "particularly poin[t] out and distinctly clai[m] the subject matter which the applicant regards as his invention."...The claim "define[s] the scope of a patent grant," and functions to forbidnot only exact copies of an invention, but products that go to "the heart of an invention but avoids the literal language of the claim by making a noncritical change."

Markman, 517 U.S. at 373-374, 116 S.Ct. 1384 (citations omitted).

Claim interpretation, commonly referred to as claim construction, "is the process of giving proper meaning to the claim language." Abtox, Inc. v. Exitron Corp., 122 F.3d 1019, 1023 (Fed.Cir.1997).

It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history. Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.

Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996) (citations omitted).

[3] [4] [5] Intrinsic evidence is comprised of "a hierarchy of analytical tools." Digital Biometrics, Inc. v. Identix, Inc., 149 F.3d 1335, 1344 (Fed.Cir.1998). According to this hierarchy, claim construction must begin with an examination of the language of the claims. Rexnord, 274 F.3d at 1341. *See also* Mycogen Plant Science v. Monsanto Co., 243 F.3d 1316, 1327 (Fed.Cir.2001) ("When defining a claim term, we look first to the words of the claim itself."). "The actual words of the claim are the controlling focus." Digital Biometrics, 149 F.3d at 1344. The general rule is that "all terms in a patent claim are to be given their plain, ordinary and accustomed meaning to one of ordinary skill in the relevant art." Rexnord, 274 F.3d at 1342. In addition, each term in a claim "should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent." *Id*. "Determining the limits of a patent claim requires understanding its terms in the context in which they were used by the inventor, considered by the examiner, and understood in the field of the invention." Toro Co. v. White Consol. Indus., Inc., 199 F.3d 1295, 1299 (Fed.Cir.1999).

[6] However, "if 'the term or terms chosen by the patentee so deprive the claim of clarity that there is no means by which the scope of the claim may be ascertained' by one of ordinary skill in the art from the language used, a court must look to the specification and file history to define the ambiguous term." Rexnord, 274 F.3d at 1343 (quoting Johnson Worldwide Assoc., Inc. v. Zebco Corp., 175 F.3d 985 (Fed.Cir.1999)). In addition, as explained by the Federal Circuit,

Once a disputed claim term is identified by the parties and its plain meaning to the ordinarily skilled artisan is ascertained by the court, the next step is to examine the written description and the drawings to confirm that the patentee's use of the disputed terms is consistent with the meaning given to it by the court. This confirmatory step is necessary for several reasons. First, patent law permits the patentee to choose to be his or her own lexicographer by clearly setting forth an explicit definition for a claim term that could differ in scope from that which would be afforded by its ordinary meaning. Second, because a claim construction that would exclude the preferred embodiment "is rarely, if ever, correct and would require highly persuasive evidentiary support," a court mindful of this canon of construction would need to examine the written description and the drawings to determine whether the preferred embodiment falls within the scope of a construed claim.

Furthermore, an examination of the written description and drawings is necessary to determine whether the patentee has disclaimed subject matter or has otherwise limited the scope of the claims.

Rexnord, 274 F.3d at 1342-1343.

[7] "The specification, of which the claims are part, teaches about the problems solved by the claimed invention, the way the claimed invention solves those problems, and the prior art that relates to the invention." Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1554 (Fed.Cir.1997). "The specification contains a written description of the invention which must be clear and complete enough to enable those of ordinary skill in the art to make and use it." Vitronics, 90 F.3d at 1582. Thus, it "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Id*. "When the meaning of a term used in a claim is sufficiently clear from its definition in the patent specification, that meaning shall apply." Intermatic, 273 F.3d at 1365. The specification must be considered as a whole, and all portions of the written description must be read, "if possible, in a manner that renders the patent internally consistent." Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1379-1380 (Fed.Cir.2001).

[8] However, a patent applicant "is not required to describe in the specification every conceivable and possible future embodiment of his invention." Rexnord, 274 F.3d at 1344. A claim is not rendered invalid "simply because it embraces subject matter that is not specifically illustrated." Wang Lab., Inc. v. Am. Online, Inc., 197 F.3d 1377, 1383 (Fed.Cir.1999). Although the claims are informed by the specifications, "it is the claims that measure the invention." Rexnord, 274 F.3d at 1344. If claims "were to be limited to devices operated precisely as a specification-described embodiment is operated, there would be no need for claims. Nor could an applicant, regardless of the prior art, claim more broadly than that embodiment." SRI Int'l. v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1121 (Fed.Cir.1985). As the Federal Circuit has repeatedly noted, "Specifications teach. Claims claim." Rexnord, 274 F.3d at 1344 (quoting SRI Int'l, 775 F.2d 1107).

[9] Thus, "it is generally impermissible to limit claim terms by a preferred embodiment or inferences drawn from the description of a preferred embodiment." Bell Atlantic Network Serv., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1273 (Fed.Cir.2001). While at times there is "a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification," Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186 (Fed.Cir.1998), that line must not be crossed. *See also* Gart, 254 F.3d at 1343 ("[B]road claims supported by the written description should not be limited in their interpretation to a preferred embodiment."); Burke, Inc. v. Bruno Indep. Living Aids, Inc., 183 F.3d 1334, 1341 (Fed.Cir.1999) ("[A]n attribute of the preferred embodiment cannot be read into the claim as a limitation."); Laitram Corp. v. Cambridge Wire Cloth Co., 863 F.2d 855, 865 (Fed.Cir.1988) ("References to a preferred embodiment, such as those often present in a specification, are not claim limitations.").

Whether an invention is fairly claimed more broadly than the "preferred embodiment" in the specification is a question specific to the content of the specification, the context in which the embodiment is described, the prosecution history, and if appropriate the prior art, for claims should be construed, when feasible, to sustain their validity.

Wang, 197 F.3d at 1383.

Finally, the prosecution history should be examined, if in evidence, "since statementsmade during the prosecution of a patent may affect the scope of the invention." Rexnord, 274 F.3d at 1343. The prosecution history, also referred to as the file wrapper, "contains the complete record of all the proceedings before the Patent and Trademark Office, including any express representations made by the applicant regarding the scope of the claims." Bell Atlantic, 262 F.3d at 1268. An examination of the prosecution history reveals "whether the patentee has relinquished a potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference." *Id*. *See* Standard Oil Co. v. Am. Cyanamid Co., 774 F.2d 448, 452 (Fed.Cir.1985) ("The prosecution history...limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution in order to obtain claim allowance."). However, "limitations cannot be read into the claims from the...prosecution history." Burke, 183 F.3d at 1340.

[10] A "comprehensive examination of the claims, the specification, and the prosecution history...serves to ensure that all pertinent intrinsic evidence is considered in the proper interpretation of a claim." Rexnord, 274 F.3d at 1343.

[I]f the meaning of the claim limitation is apparent from the intrinsic evidence alone, it is improper to rely

on extrinsic evidence other than that used to ascertain the ordinary meaning of the claim limitation. However, in the rare circumstance that the court is unable to determine the meaning of the asserted claims after assessing the intrinsic evidence, it may look to additional evidence that is extrinsic to the complete document record to help resolve any lack of clarity. This additional extrinsic evidence includes such evidence as expert testimony, articles, and inventor testimony. This 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.

Bell Atlantic, 262 F.3d at 1268-1269 (citations omitted). "Patents should be interpreted on the basis of their intrinsic record, not on the testimony of such after-the-fact 'experts' that played no part in the creation and prosecution of the patent." Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys., 132 F.3d 701, 706 (Fed.Cir.1997).

[11] While extrinsic evidence may be used to enhance the Court's general understanding of the technology at issue, it "cannot be used to contradict the established meaning of the claim language." Gart, 254 F.3d at 1340. *See also* Pitney Bowes, 182 F.3d at 1308 (stating district court's reliance on "expert testimony and other extrinsic evidence solely to help it understand the underlying technology" is not improper); Bell & Howell, 132 F.3d at 706.

The Federal Circuit has recognized that "the 'ordinary and accustomed' meaning of a claim term will often be in dispute, irrespective of the clarity of the terms used." *K-2 Corp.,* 191 F.3d at 1365. *See also* Senmed, Inc. v. Richard-Allan Med. Indus., Inc., 888 F.2d 815, 819 (Fed.Cir.1989) ("Lawyers may create a 'dispute' about any word.").

But a dispute over the ordinary and accustomed meaning does not imply that such a meaning does not exist....[C]laim construction is not philosophy; we need not wring our hands when considering the implications of a metaphysical analysis of claim terms. Instead, we need only recognize that claim construction is firmly anchored in reality by the understanding of those of ordinary skill in the art.

K-2 Corp., 191 F.3d at 1365.

Plaintiffs argue that each word and phrase contained in the asserted claims should be given its ordinary and accustomed meaning in light of the patents' claims, specifications and prosecution histories. Plaintiffs contend that none of the asserted claims contain specially-defined words and resort to extrinsic evidence is unnecessary.

Defendant does not directly address all of the words and phrases at issue in plaintiffs' asserted claims. In fact, defendant does not even mention several of the phrases discussed by plaintiffs.FN6 As to these phrases, this Court assumes that defendant accepts plaintiffs' construction.

FN6. This is particularly true with regard to the '401 Patent.

[12] As to the remaining phrases, defendant's argument essentially rests on its implied contention that the asserted claims must be construed to encompass only the preferred embodiments disclosed in the patents. According to defendant, there are only three words which must be construed to require a finding of non-infringement as a matter of law: "mounted," "supported" and "adjacent." Defendant claims that these three

words all have the same meaning, i.e., "directly attached to." FN7

FN7. On its face, defendant's argument contradicts the well-established rule of claim differentiation, which provides,
There is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims. To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation states the presumption that the difference between claims is significant.

Tandon Corp. v. United States Int'l Trade Comm'n, 831 F.2d 1017, 1023 (Fed.Cir.1987). While "the doctrine of claim differentiation is not a hard and fast rule of construction, it does create a presumption that each claim in a patent has a different scope." Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998).
1. The '588 Patent

Plaintiffs move this Court to construe several phrases contained in Claims 29 and 35 of the '588 Patent, each of which is set forth separately below.

a. Claim 29

Claim 29 of the '588 Patent claims,FN8

FN8. The specific phrases at issue are italicized in this and each of the following claims. With regard to several phrases, defendant asserts that more of the surrounding language is relevant. For each phrase, the most expansive wording is italicized and discussed.

Drain cleaning apparatus, comprising a frame, a cable drum supported on said frame for rotation about a drum axis, said drum having axially spaced front and rear ends and an opening through said front end, a drain cleaning cable coiled in said drum about said axis and having an end for extending through said opening and into a drain to be cleaned, a drive motor supported on said frame for rotating said drum and cable, *said frame including a frame portion outwardly adjacent said opening, a guide tube for receiving said end of said cable, said guide tube having an inner end mounted on said frame portion* and an outer end spaced from said frame portion, said guide tube being flexible between said inner and outer ends for directing said outer end toward a drain to be cleaned, and *a manually operable cable feed device on said outer end* of said guide tube *for selectively axially displacing said cable relative to said drum during rotation* of said drum and cable about said drum axis.
('588 Patent col. 11, ll. 30-46).
i. "said frame including a frame portion outwardly adjacent said opening"

[13] Plaintiffs argue that the word "outwardly" should be construed as meaning "on the outside" or "externally" such that Claim 29 requires the frame portion to be on the outside of or external to the drum opening.

Defendant argues that the words "outwardly adjacent" require that the frame portion be in front of the drum opening in the direction of the guide tube. According to defendant, the specification defines the opening of the drum to be the orifice at the extreme end of the hub and collar assembly. Because the figures show that

the frame extends "in front of" or "outward from" that opening, defendant contends that Claim 29 requires that the frame portion extend "forwardly of" or "in front of" the drum. Defendant argues that plaintiffs have failed to establish that a person skilled in the art would understand another location for the frame portion that would allow the guide tube to be mounted such that it could receive the cable from the drum.

This Court finds that the plain and ordinary meaning of the phrase "said frame including a frame portion outwardly adjacent said opening" requires that the frame portion be next to or in close proximity to and outside of or external to the drum opening. The plain and ordinary meaning of that phrase does not require that the frame portion be both next to and in front of the drum opening. None of the terms at issue are technical, nor have they been assigned a special meaning by the patentee. This Court will not read an additional requirement into the plain language of Claim 29 that the frame portion be in front of the drum opening. While the drawings of the '588 Patent show the frame portion 18a in front of, as well as outside of, the drum opening, the unmodified claim language can not be limited by a preferred embodiment or inferences drawn from its description.

An examination of other portions of the '588 Patent indicate that the patent applicant knew how to modify the word "outwardly" when it intended to do so. For example, Claim 31 provides that the "drive actuating means" is biased "radially outwardly of the passage." ('588 Patent col. 11, ll. 58-59).

The parties have pointed to nothing in the prosecution history which reflects on the construction of this phrase, and the use of extrinsic evidence would be improper. Thus, this Court will construe the phrase according to its plain meaning as set forth above.

ii. "a guide tube for receiving said end of said cable, said guide tube having an inner end mounted on said frame portion"

[14] Plaintiffs argue that the word "mounted" should be construed such that Claim 29 requires that the inner end of the guide tube be directly or indirectly mounted on the frame portion. In addition, according to plaintiffs' proposed construction, the inner guide tube is removable, i.e., it need not be permanently fixed to the frame portion.

Defendant argues that Claim 29 of the '588 Patent requires direct physical contact between the guide tube and the frame. Defendant's argument is based largely on its contention that the mounting bracket is part of the frame. Thus, according to defendant, the '588 Patent "teach[es] the use of a guide tube attached *directly* to a frame." Defendant claims that the embodiments in the '588 Patent show a direct connection between the guide hose and the frame.FN9 Defendant also argues that the prosecution history of the '588 Patent distinguishes prior art which teaches a guide tube attached directly to the drum. Finally, defendant argues that plaintiffs' proposed construction ignores the testimony of the sole inventor. Defendant does not address the issue of the detachability of the guide tube.

FN9. In connection with this claim, defendant repeatedly argues that, "when the preferred embodiment of a claim limitation is the *only* embodiment, the claims may be limited to that embodiment." However, the cases cited by defendant in support of this argument are clearly distinguishable from the one currently pending before this Court. In Toro Co. v. White Consolidated Industries, Inc., 199 F.3d 1295, 1301 (Fed.Cir.1999), the court repeated the well-established rule that "the preferred embodiment does not limit broader claims that are supported by the written description." In addition, the court made clear that its holding was consistent with the rule:

[T]he invention is described throughout the specification *as it is claimed,* whereby the cover "includes" the ring....There is no basis for construing "including" the ring to mean not including the ring.

Id. at 1302 (emphasis added). *See also* Wang Labs., Inc. v. Am. Online, Inc., 197 F.3d 1377, 1383 (Fed.Cir.1999) (rejecting patentee's claim that other protocols were covered by patent, despite fact that only character-based protocols were described, because "in order to be covered by the claims [the relevant] subject matter must be sufficiently described in the applicant's invention to meet the [statutory] requirements").
This Court finds that the plain and ordinary meaning of the phrase "said guide tube having an inner end mounted on said frame portion" does not require that the inner end of the guide tube be directly and permanently in contact with the frame. Rather, this Court finds that the word "mounted" requires that the inner end of the guide tube be directly or indirectly (and detachably) connected to the frame. If defendant's construction of the phrase were to be accepted, additional limitations would be added to the claim language which are not currently present. There is no requirement in the '588 Patent that the guide tube be in direct contact with the frame portion. To the contrary, the very nature of mounting requires intermediate mounting elements.FN10

FN10. This construction of "mounted" is supported by definitions contained in *The American Heritage Dictionary of the English Language,* 4th Ed. ("To fix securely to a support: mount an engine in a car.") and the *Oxford English Dictionary,* 2nd Ed. *http://oed.com* ("Set up or adjusted for use; placed on a stand or support; fitted.").

[15] In addition, under defendant's interpretation of Claim 29, the preferred embodiment of the '588 Patent would be excluded. Absent compelling evidence, such a construction cannot be accepted. In the specification, the guide tube is connected to the frame through several intermediate parts, including a mounting bracket 124 and a coupling arrangement 202. ('588 Patent col. 7, ll. 66 to col. 8, ll. 5). In addition, the Description of the Preferred Embodiments provides,

In accordance with yet another aspect of the invention, as shown in FIGS. 7 and 8 of the drawing, drain cleaning cable feed device 122 is mounted on the outer end of a flexible guide tube assembly 196 having *its inner end detachably connected to adaptor 188 of mounting bracket 124*.

('588 Patent col. 7, ll. 36-39) (emphasis added). Thus, in the preferred embodiment, the guide tube is removable and does not directly come in contact with the frame.

Contrary to defendant's argument, nothing in the '588 Patent indicates that mounting bracket 124 is part of the frame. As set forth below, Claim 35 claims "a mounting bracket *on* said frame portion." ('588 Patent col. 12, ll. 7) (emphasis added). In addition, the specifications and figures clearly indicate that the mounting bracket 124 and the frame portion 18a are separate elements. For example, the Description of the Preferred Embodiments states,

As mentioned above, cable feed device 122 is adapted to be mounted on frame portion 18a by means of a mounting bracket 124. As seen in FIGS. 5 and 6, mounting bracket 124 includes an L-shaped bracket plating having a vertical leg 180 and a horizontal leg 182 extending forwardly from the lower end thereof and secured to the frame portion 18a such as by a pair of bolts 184 extending upwardly through openings

therefore in frame portion 18a and into threaded engagement with nuts 185 welded on leg 182 of the bracket plate.

('588 Patent col. 6, ll. 61 to col. 7, ll. 2). *See also* Engel Indus., Inc. v. Lockformer Co., 96 F.3d 1398, 1405 (Fed.Cir.1996).FN11 Because the frame portion and the mounting bracket are not one and the same thing, defendant's arguments regarding the embodiments shown must fail. As noted above, the specification clearly teaches intermediate elements between the inner end of the guide tube and the frame portion.FN12

FN11. In *Engel Industries,* the patent stated, "A second portion 24 is bent rearwardly whereby this portion 24 extends opposite a portion of the duct wall. A return portion 26 is also provided...." 96 F.3d at 1405. The patentee argued that the second portion 24 included the return portion 26. *Id*. The court rejected this argument, stating, "Since a return portion is 'also provided,' they logically cannot be one and the same." *Id*.

FN12. Defendant claims that the deposition testimony of Rutkowski establishes that the mounting bracket is part of the frame. This Court disagrees. When questioned regarding support for the inner guide hose, Rutkowski testified that it was "supported on the mounting bracket of the frame." (Rutkowski Aug. 20 Depo. 118). In light of the patent document and Rutkowski's earlier deposition testimony, this statement is insufficient to show that the mounting bracket and the frame are all of a piece. Earlier, Rutkowski had testified,
Q: Is that bracket part of the frame?

A: It's attached to the frame.

Q: So you don't think it's part of the frame?

A: If you take it off, it's not part of the frame, but as it is now, it's attached to the frame.

Q: Is it part of the frame?

* * * * * *

A: It's a separate bracket that can be attached to the frame.

(Rutkowski Aug. 20 Depo. 71-72).
Defendant argues that plaintiffs distinguished the guide tube configurations in the prior art, which involved a direct connection between the guide tube and the drum, from its guide tube configuration, which involves a

direct connection between the guide tube and the frame. Thus, according to defendant, plaintiffs "disavowed what the prior art shows: direct connections between the drum and the guide tube."

An Information Disclosure Statement (hereafter "IDS") filed on July 16, 1998, states,

The patents identified on Form PTO-1449 attached hereto and which patents are discussed below, represent the most relevant prior art presently known to applicant in connection with the subject matter of the above-identified patent application.

* * * * * *

4,570,281 to Boelens discloses a motorized snake drum having a guide tube within the drum and a tubular operating sleeve coupled to the outlet end of the drum.FN13

FN13. Defendant focuses specifically on plaintiffs' description of U.S. Patent No. 4,570,281 to Boelens to support its argument.

(Doc. 96 Ex. F). A Supplemental IDS filed on December 13, 1999, lists additional relevant prior art and states,

None of the prior art submitted herewith discloses drain cleaning apparatus including a flexible guide tube for receiving a drain cleaning cable and having an inner end supported on the apparatus frame and a manually operable cable feed device on the outer end of the guide tube.

(Doc. 96 Ex. G).

[16] "An IDS is part of the prosecution history on which the examiner, the courts, and the public are entitled to rely." Ekchian v. Home Depot, Inc., 104 F.3d 1299, 1304 (Fed.Cir.1997). In an IDS, a patent applicant may distinguish "his invention from the submitted prior art as a kind of preemptive strike against a potential rejection." *Id*. Such distinctions "may affect the scope of the patent ultimately granted." *Id*. For this reason, "statements made in an IDS can be the basis for a court to interpret the scope of the claims of a granted patent." *Id*. "[B]y distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover, [and] he is by implication surrendering such protection." *Id*. FN14

FN14. Defendant does not make entirely clearly when its arguments concerning prosecution history relate to claim construction and when they relate to prosecution history estoppel. "Claim interpretation in view of the prosecution history is a preliminary step in determining literal infringement, while prosecution history estoppel applies as a limitation on the range of equivalents if, after the claims have been properly interpreted, no literal infringement has been found." Southwall Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1578 (Fed.Cir.1995). In either case, however, defendant's arguments are unpersuasive. *See* discussion *infra*.

Thus, the IDS and Supplemental IDS are relevant to the construction of Claim 29 of the '588 Patent. However, this Court finds that defendant's argument reads too much into those documents. As noted by plaintiffs, it is the very rare patent that does not recite at least one structure that existed in the prior art. One test for patentability is whether the claimed invention combines old structures in a new way. As noted by the

Federal Circuit, efforts to establish that each individual claim limitation "may be found somewhere in the prior art [are] unavailing." Rosemount, Inc. v. Beckman Instruments, Inc., 727 F.2d 1540, 1546 (Fed.Cir.1984). "[A] combination may be patentable whether it be composed of elements all new, partly new, or all old." *Id*. Nothing in the prosecution history establishes that plaintiffs distinguished the relevant prior art based on the fact that the guide hose was indirectly mounted on the frame. A valid distinction between the Boelens Patent (and other disclosed prior art) and the '588 Patent does not require the disavowment of a guide tube indirectly and detachably mounted on the frame. Thus, the evidence submitted fails to show that plaintiffs disavowed the construction of "mounted" they now seek.FN15 *Cf*. K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1369 (Fed.Cir.1999) (finding patentee disavowed detachable design where "patent would probably not have been (re)issued without the amendments" claiming permanent attachment).

FN15. Defendant also claims that plaintiffs distinguished U.S. Patent No. 3,159,861 to Sarcone on the grounds that Sarcone's guide tube was rotationally attached to the drum. However, defendant presents no evidence in support of this argument.

It is important to note that, contrary to defendant's implication, plaintiffs do not ask that Claim 29 be construed to literally cover devices with guide tubes having an inner end mounted on the drum. Plaintiffs merely move this Court for a construction of the word "mounted" such that Claim 29 requires that the inner end of the guide tube be directly or indirectly detachably connected to the frame portion.

Defendant's reliance on the testimony of Rutkowski is misplaced.FN16 The use of this extrinsic evidence would be improper because the meaning of the claim limitation is apparent from the intrinsic evidence alone. Inventor testimony may not be used to vary, contradict, expand or limit claim language from how it is defined in the specification or file history.

FN16. In addition, Rutkowski's deposition does not support the proposition for which defendant offers it. Rutkowski testified,
Q: Take a look at the disclosure of the '588, if you would, please and tell me what if any structure you see for supporting the guide tube on the frame other than the bracket mounting portion of the frame?

MR. DEAVER: You're asking him to look at the figures?

MR. GASEY: Look at whatever he wants to on the patent.

* * * * * *

A: We show the guide hose supported on the frame.

Q: Right. And it's supported on the frame by the bracket that is figure element 124, right? Take a look at, for

instance, if you like figure 6 or figure 8 or figure 9.

A: That's correct.

Q: Do you see anything else, any other, any other structure or any other disclosure in the patent that would cause the guide hose to be supported on the frame other than the mounting bracket portion of the frame?

* * * * * *

A: Looks like the bracket does it.

(Rutkowski Aug. 20 Depo. 117-118). This testimony merely establishes that, in the preferred embodiment of the '588 Patent, the guide tube is mounted on the frame via the mounting bracket, a fact which plaintiffs do not dispute and which is fully consistent with this Court's construction of Claim 29.
Thus, this Court will construe the phrase according to its plain meaning as set forth above.

iii. "a manually operable cable feed device on said outer end"

[17] Plaintiffs argue that the words "manually operable" should be construed as meaning "hand operable" as opposed to automatic or non-hand operable. According to plaintiffs, an operator of the '588 Patent is able to hand operate the device for feeding the cable instead of having to push or pull the cable with his hand.

Defendant does not present any argument regarding the construction of this phrase.

This Court finds that the plain and ordinary meaning of the phrase "a manually operable cable feed device" requires a cable feed device which is operated by hand and is not automatic. None of the terms at issue are technical, nor have they been assigned a special meaning by the patentee. In addition, plaintiffs' construction of the phrase is supported by the Summary of the Invention, which states in part,

In accordance with another aspect of the invention, the outer or free end of a drain cleaning cable extends through a flexible guide tube which is provided on its outer end with a manually operable device for feed the cable from and to the storage drum, thus to preclude an operator having to manually pull or push the cable relative to the drum.

('588 Patent col. 1, ll. 64 to col. 2, ll. 2).

The parties have pointed to nothing in the prosecution history which reflects on the construction of this phrase, and the use of extrinsic evidence would be improper. Thus, this Court will construe the phrase according to its plain meaning as set forth above.

iv. "for selectively axially displacing said cable relative to said drum during rotation"

[18] Plaintiffs argue that the words "selectively axially displacing said cable" should be construed as meaning that the operator may select between feeding the cable in or out of the drum or having the cable remain axially stationary or neutral. According to plaintiffs, the phrase indicates that the driving mechanism of the cable feed device is not always engaged.

Defendant does not present any argument regarding the construction of this phrase.

This Court finds that the plain and ordinary meaning of the phrase "for selectively axially displacing said cable relative to said drum during rotation" requires that, while the drum is rotating, the operator be able to feed the cable in or out of the drum or maintain the cable in a stationary position relative to the drum. Of course, the cable continues to turn on its axis while the drum is rotating.

The parties have pointed to nothing in the prosecution history which reflects on the construction of this phrase, and the use of extrinsic evidence would be improper. Thus, this Court will construe the phrase according to its plain meaning as set forth above.

b. Claim 35

[19] Claim 35 of the '588 Patent, which is dependant on Claim 29 FN17 and adds a limitation, claims,

FN17. "[A] a dependent claim includes all the limitations of the claim from which it depends." Wahpeton Canvas Co., Inc. v. Frontier, Inc., 870 F.2d 1546, 1553 (Fed.Cir.1989).

Drain cleaning apparatus according to claim 29, further including a mounting bracket on said frame portion, said guide tube including a hose of elastomeric material having opposite ends, *said inner end of said guide tube comprising coupling means on one of said ends of said hose for connecting said hose to said mounting bracket,* and *said outer end of said guide tube comprising means on the other end of said hose for connecting said hose to said feed device*.
('588 Patent col. 12, ll. 6-13).
Plaintiffs contend, and defendant does not dispute, that the two claim limitations at issue in Claim 35 are presented in means-plus-function format. Thus, according to plaintiffs, the limitations must be interpreted according to 35 U.S.C. s. 112 para. 6. For each phrase, plaintiffs ask that this Court identify the functions recited in the claim and then the corresponding structures described in the specification that perform those functions.

35 U.S.C. s. 112 para. 6 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 claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

A means-plus-function limitation "recites a function to be performed rather than definite structure or materials for performing that function. Such a limitation must be construed 'to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.' " Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1307-1308 (Fed.Cir.1998) (citations omitted).

"In construing means-plus-function claim limitations, a court must first define the particular function claimed." Budde, 250 F.3d at 1376. Next, "the court must identify 'the corresponding structure, material, or acts described in the specification.' " *Id*. The scope of the claim limitation cannot be measured "until the structure corresponding to the claimed function in a means-plus-function limitation is identified and considered." *Id*.

[20] "Determining the claimed function and the corresponding structure for a claim limitation written in means-plus-function format are both matters of claim construction." WMS Gaming, 184 F.3d at 1347.

i. "said inner end of said guide tube comprising coupling means on one of said ends of said hose for connecting said hose to said mounting bracket"

[21] Plaintiffs contend that the recited function in this phrase is "for connecting said hose to said mounting bracket" and the corresponding structure described in the specification is coupling arrangement 202 and all equivalents thereof. Plaintiffs further contend that the words "on one of said ends of said hose" merely provide the location of the coupling means and are not part of the recited function.

Defendant argues that Claim 35 makes clear that the frame can include a mounting bracket. As indicated above, defendant's argument on this point lacks merit. In fact, this Court is hard pressed to imagine how Claim 35 could be read in such a way.

Defendant does not, however, specifically dispute plaintiffs' construction of the function and corresponding structure of the phrase at issue. This Court agrees with plaintiffs' construction of this phrase.

ii. "said outer end of said guide tube comprising means on the other end of said hose for connecting said hose to said feed device"

[22] Plaintiffs contend that the recited function in this phrase is "for connecting said hose to said feed device" and the corresponding structure described in the specification is coupling arrangement 200 and all equivalents thereof. Plaintiffs further contend that the words "on the other end of said hose" merely provide the location of the coupling means and are not part of the recited function.

Defendant does not present any argument regarding the construction of this phrase.

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

2. The '905 Patent

Plaintiffs move this Court to construe several phrases contained in Claims 1 and 22 of the '905 Patent, each of which is set forth separately below. The '905 Patent is a continuation of the '588 Patent and, thus, relies on the same specification.

a. Claim 1

Claim 1 of the '905 Patent claims,

Drain cleaning apparatus comprising a frame, a cable drum supported on said frame for rotation about a

drum axis, said drum having axially spaced front and rear ends and an opening through said front end, a drain cleaning cable coiled in said drum about said axis and having an end for extending through said opening and into a drain to be cleaned, *drive means on said frame for rotating said drum and cable,* a flexible guide tube for receiving said end of said cable, *said guide tube having an inner end supported on said frame and an outer end spaced from said inner end,* and *a manually operable cable feed device* on said outer end of said guide tube *for selectively axially displacing said cable relative to said drum during rotation*of said drum and cable about said drum axis.

('905 Patent col. 9, ll. 2-15).

i. "drive means on said frame for rotating said drum and cable"

[23] Plaintiffs contend that this phrase is presented in means-plus-function format. According to plaintiffs, the recited function is "for rotating said drum and cable" and the corresponding structures described in the specification are a reversible motor 34, a pulley 36, a pulley 40 and an endless belt 42 and all equivalents thereof.

Defendant does not present any argument regarding the construction of this phrase.

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

ii. "said guide tube having an inner end supported on said frame and an outer end spaced from said inner end"

[24] Plaintiffs argue that the word "supported" should be construed such that Claim 1 requires that the frame provide support directly or indirectly for the inner end of the guide tube.

Defendant argues that Claim 1 requires that the guide tube have "some contact with the frame in order to provide support."

This Court finds that the plain and ordinary meaning of the phrase "said guide tube having an inner end supported on said frame portion" does not require that the inner end of the guide tube be directly in contact with the frame. If defendant's construction of the phrase were to be accepted, an additional limitation would be added to the claim language which is not currently present. In addition, as discussed above, defendant's construction excludes the preferred embodiment. Instead, this Court finds that the asserted claim language merely requires that the frame provide direct or indirect support for the inner end of the guide tube.

None of the terms at issue are technical, nor have they been assigned a special meaning by the patentee. Other than the evidence already rejected above, the parties have pointed to nothing in the prosecution history which reflects on the construction of this phrase, and the use of extrinsic evidence would be improper. Thus, this Court will construe the phrase according to its plain meaning as set forth above.

iii. "a manually operable cable feed device...for selectively axially displacing said cable relative to said drum during rotation"

Plaintiffs argue that the same construction of this phrase discussed above with respect to the '588 Patent is applicable to Claim 1 of the '905 Patent.

Defendant does not present any argument regarding the construction of this phrase.

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

b. Claim 22

Claim 22 of the '905 Patent claims,

Drain cleaning apparatus comprising:

a frame;

a cable drum supported by the frame for rotation about a drum axis, the drum having axially spaced front and rear ends and an opening through the front end;

a drain cleaning cable coiled in the drum about the axis and having an end extending through the drum;

a drive motor supported by the frame for rotating the drum and cable;

a guide tube for receiving the end of the cable, the guide tube having a first end [adjacent] FN18 *the drum opening and a second end spaced from the drum opening,* the guide tube being flexible between the first and second ends for directing the cable toward a drain to be cleaned; and,

FN18. The parties agree that the U.S. Patent and Trademark Office failed to include the word "adjacent" in Claim 22 of the '905 Patent, despite the fact that the word was included in the patent application.

a *manually operable cable feed device* coupled to the second end of the guide tube *for selectively axially displacing the cable relative to the guide tube during rotation of the drum* and cable about the drum axis, the cable having an end for extending through the drum opening, into the first end of the guide tube, out of the second end of the guide tube, and into a drain to be cleaned.
('905 Patent col. 11, ll. 10 to col 12, ll. 15).

i. "a guide tube for receiving the end of the cable, the guide tube having a first end [adjacent] the drum opening and a second end spaced from the drum opening"

[25] Plaintiffs argue that the phrase "adjacent the drum opening" should be construed as meaning that the first end of the guide tube is "in close proximity to" or "next to" the drum opening.

Defendant argues that Claim 22 "obviously requires some physical structure to make the guide tube 'adjacent the drum opening'-i.e., a frame for support."

This Court agrees with plaintiffs that the ordinary and accustomed meaning of the word "adjacent" is "in close proximity to" or "next to." As claimed, the cable has "an end for extending through the drum opening." The claimed purpose of the guide tube is "for receiving the end of the cable." Thus, the drum opening and the guide tube must be in close proximity to or next to each other.

The specification of the '905 Patent supports this conclusion. A comparison of the Drawing Sheets and Description of Preferred Embodiments reveals that when the term "adjacent" is used, the elements discussed

are in close proximity to or next to each other. *Compare* col. 4, ll. 40-41 ("[A]s best seen in Figs. 3 and 4 of the drawing, cable 70 has an inner end 98 disposed adjacent the juncture between outer wall 86 and rear wall 88.") *with* Figs. 3 and 4 *and* col. 5, ll. 5-9 ("As will be appreciated from Fig. 3, leg 104 of the torque arm is adjacent outer wall 86 of the cartridge housing and extends from the juncture between outer wall 86 and rear wall 88 to a point adjacent the juncture between the outer wall and front wall 94.") *with* Fig. 3.

Contrary to defendant's argument, Claim 22 does not obviously require that the frame directly support the guide tube. Claim 22 indicates that the cable drum and drive motor are supported by the frame. However, Claim 22 says nothing about support for the inner end of the guide tube which is adjacent the drum opening.

Other than the evidence already rejected above, the parties have pointed to nothing in the prosecution history which reflects on the construction of this phrase, and the use of extrinsic evidence would be improper. Thus, this Court will construe the phrase according to its plain meaning as set forth above.

ii. "a manually operable cable feed device...for selectively axially displacing the cable relative to the guide tube during rotation of the drum"

Plaintiffs argue that the same construction of this phrase discussed above with respect to the '588 Patent is applicable to Claim 22 of the '905 Patent.

Defendant does not present any argument regarding the construction of this phrase.

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

3. The '401 Patent

Plaintiffs move this Court to construe several phrases contained in Claims 24, 25 and 26 of the '401 Patent, each of which is set forth separately below. Defendant has failed to present argument concerning claim construction with regard to the '401 Patent.

a. Claim 24

Claim 24 of the '401 Patent claims,

A feed control device for use with a plumbing tool including an elongate flexible snake having a snake axis, and means for rotating the snake about said axis, comprising: a housing having a housing axis and *a passage axially therethrough* for receiving said snake, snake driving roll means supported on said housing, radially displaceable *drive actuating means removably supported on said housing for displacing said snake* against said snake driving roll means, said drive actuating means having a radially outer end, a lever pivotally mounted on said housing for engaging said outer end and radially displacing said drive actuating means against said snake, and said lever and said outer end including *means interengaging for said lever to releasably hold said drive actuating means on said housing* against removal therefrom.

('401 Patent col 10, ll. 42-56).

i. "a passage axially therethrough"

[26] Plaintiffs argue that the phrase "a passage axially therethrough" should be construed as meaning that

"the passage must be through the housing material and not merely on or near the housing, such as would occur with a surface groove." Plaintiffs contend that the ordinary and accustomed meaning of the claim language supports their construction, as does the specification. In addition, plaintiffs point to Figure 1 of the '401 Patent, which shows passage 22 extending axially through housing 12 to receive the snake.

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

ii. "removably supported on said housing"

[27] Plaintiffs argue that the phrase "removably supported on said housing" should be construed to require that the drive actuating means be capable of being readily removed from the housing. Plaintiffs contend that the ordinary and accustomed meaning of the claim language supports their construction, as does the specification. Specifically, plaintiffs compare the '401 Patent's discussion of prior art with its Description of a Preferred Embodiment:

In all of the feed control arrangements heretofore available for use in connection with power driven drain cleaning apparatus, including those specifically referenced above, the control arrangements are structurally complex, difficult to access with respect to cleaning and/or performing maintenance and replacement operations with respect to parts thereof, and require time-consuming adjustments or disassembly operations in connection with the initial feeding of the enlarged auger contoured end of the snake or an auger or blade attachment thereon through the feed device. In this respect, for example, the feed rolls are enclosed in a housing and cannot be accessed for cleaning, maintenance or replacement without at least partial disassembly of the housing, or removal of the rolls, whereby access in any event requires considerable time and effort. In all of the arrangements in which the feed rolls are radially adjustable relative to an opening through the housing which receives the snake, the supporting structures are complex, adjustment is time-consuming and displacement of the rolls radially outwardly of the opening to accommodate withdrawal or insertion of the auger tip of a snake is time-consuming, especially if it is necessary to remove one of the feed rolls.

* * * * * *

Housing 12 is provided inwardly adjacent front end 16 with a radially extending bore 38 having a bore axis 40 and an axially inner end which opens into snake passage 22. *A snake drive actuating unit 42 is slidably and removably received* in bore 38 and includes a drive actuating roll support member 44 having radially inner and outer ends 46 and 48, respectively, a drive actuating roll 50 mounted on inner end 46, and an operating member 52 mounted on outer end 48.

('401 Patent col 2, ll. 4-24; col 5, ll. 37-45) (emphasis added).

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

iii. "drive actuating means...for displacing said snake"

[28] Plaintiffs contend that the phrase "drive actuating means...for displacing said snake" is presented in means-plus-function format and must be interpreted according to 35 U.S.C. s. 112 para. 6. According to plaintiffs, the recited function in this phrase is "for displacing said snake against said snake driving roll means" and the corresponding structure described in the specification is the drive actuating unit 42 having a drive actuating roll 50 and a roll supporting member 44 and all equivalents thereof. Plaintiffs further

contend that the words "removably supported on said housing" merely provide the location of the drive actuating means and are not part of the recited function.

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

iv. "means interengaging for said lever to releasably hold said drive actuating means on said housing"

[29] Plaintiffs contend that the phrase "means interengaging for said lever to releasably hold said drive actuating means on said housing" is presented in means-plus-function format and must be interpreted according to 35 U.S.C. s. 112 para. 6. According to plaintiffs, the recited function in this phrase is "to releasably hold said drive actuating means on said housing" and the corresponding structure described in the specification is a latch or finger 88 that frictionally interferes with peripheral edge 65 of operating knob 52 and all equivalents thereof.

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

b. Claim 25

Claim 25 of the '401 Patent claims,

A feed control device for use with a plumbing tool including an elongate flexible snake having a snake axis and means for rotating the snake about said axis, comprising: a housing having a housing axis and a passage axially therethrough for receiving said snake, snake driving roll means supported on said housing, radially displaceable drive actuating means removably supported on said housing for displacing said snake against said snake driving roll means, said drive actuating means having a radially outer end, a lever pivotally mounted on said housing for engaging said outer end and radially displacing said drive actuating means against said snake, and said lever and said outer end including means interengaging for said lever to releasably hold said drive actuating means on said housing, *said means interengaging* to releasably hold said drive actuating means *including latch means on said lever frictionally engaging said outer end of said drive actuating means*.

('401 Patent col. 10, ll. 57 to col. 11, ll. 6).

Plaintiffs request that the limitations in Claim 25 which are identical to those contained in Claim 24 be construed in the same way. In addition, plaintiffs contend that the phrase "said means interengaging...including latch means on said lever frictionally engaging said outer end of said drive actuating means" is presented in means-plus-function format and must be interpreted according to 35 U.S.C. s. 112 para. 6. According to plaintiffs, the recited function in this phrase is to "frictionally engag[e] said outer end of said drive actuating means" and the corresponding structure described in the specification is a latch means structure comprised of finger 88 that frictionally interferes with peripheral edge 65 of operating knob 52 and all equivalents thereof. Plaintiffs further contend that the words "on said lever" merely provide the location of the latch means structure and are not part of the recited function.

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

c. Claim 26

[30] Claim 26 of the '401 Patent, which is dependent on Claim 25 and adds a limitation, claims,

A device according to claim 25, further including *spring means biasing said drive actuating means radially outwardly of said housing* for said outer end to engage against said lever.

('401 Patent col. 11, ll. 7-10).

Plaintiffs contend that the phrase "spring means biasing said drive actuating means radially outwardly of said housing" is not presented in means-plus-function format and should not be interpreted according to 35 U.S.C. s. 112 para. 6 because the phrase sets forth the structure to preform the biasing function, i.e., the spring. Plaintiffs argue that the phrase "spring means" should be construed to mean simply "spring." Plaintiffs contend that the ordinary and accustomed meaning of the claim language supports their construction, as does the specification. Specifically, plaintiffs cite the portion of the '401 Patent specification which states,

In the position of the feed device shown in FIG. 4, drive actuating roll 50 is out of engagement with snake 24, and *spring 68 biases lever 74 counterclockwise about pivot pin 84* so as to engage finger 88 radially inwardly against peripheral edge 62 of the operating knob.

('401 Patent col. 6, ll. 37-41) (emphasis added).

The mere "fact that a particular mechanism...is defined in functional terms is not sufficient to convert a claim element containing that term into a 'means for performing a specified function' within the meaning of" 35 U.S.C. s. 112 para. 6. Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed.Cir.1996). "To invoke this statute, the alleged means-plus-function claim element must not recite a definite structure which performs the described function." Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed.Cir.1996).

The "use of the word 'means' creates a presumption that s. 112, para. 6 applies." Personalized Media Communications, LLC v. Int'l Trade Comm'n, 161 F.3d 696, 703 (Fed.Cir.1998). However, this presumption "can be rebutted if the evidence intrinsic to the patent and any relevant extrinsicevidence so warrant. In deciding whether [the] presumption has been rebutted, the focus remains on whether the claim as properly construed recites sufficiently definite structure to avoid the ambit of s. 112, para. 6." *Id*. at 704 (citations omitted).

In *Cole,* the court held that the phrase "perforation means...for tearing" failed "to satisfy the statute because it describes the structure supporting the tearing function (i.e., perforations)." 102 F.3d at 531. Similarly, in Claim 26, the phrase "spring means biasing said drive actuating means" describes the structure supporting the biasing function, i.e., the spring.

This Court agrees with plaintiffs' construction of this phrase which defendant does not dispute.

B. Comparison to Model 502 Cable Machines

In their Motions currently pending before this Court, plaintiffs assert the following literal infringements:

-> (1) Claim 29 of the '588 Patent by the Original Model 502 Cable Machine;

-> (2) Claim 22 of the '905 Patent by the Modified Model 502 Cable Machine; and

-> (3) Claim 24 of the '401 Patent by the Original Model 502 Cable Machine.

In addition, in response to defendant's Motions, plaintiffs also assert that the Modified Model 502 Cable Machine infringes Claim 29 and 35 of the '588 Patent literally and under the doctrine of equivalents and infringes Claims 1, 2, 3, 10 and 22 of the '905 Patent literally.

[31] Defendant cross-moves for a finding of non-infringement of the '401 Patent by the Modified Model 502 Cable Machine. Defendant also separately moves and cross-moves for summary judgment of non-infringement of the '588 and '905 Patents by the Modified Model 502 Cable Machine. Defendant presents no evidence or argument concerning the Original Model 502 Cable Machine,FN19 instead stating,

FN19. On March 7, 20 and 31, 2001, plaintiffs brought this omission to defendant's attention, indicating that plaintiffs understood it to be an admission of infringement of the asserted claims of the '401 and '588 Patents by the Original Model 502 Cable Machine. (Doc. 94 Ex. I). Defendant apparently did not respond.

The plaintiffs' motion attempts to focus its infringement analysis (at least with respect to the '588 patent) on a device that is no longer made, used, sold, or offered for sale by Spartan. The plaintiffs' motive is apparently to get this Court to adopt its broader, improper claim construction for the '588 patent by making seemingly reasonable comparisons against the old design. However, once the proper claim construction analysis is made, the record dictates in favor of summary judgment of *noninfringement* with respect to the only device currently manufactured, used, or sold by Spartan-i.e., the so called "modified" 502 design.FN20
FN20. Defendant's implied argument that its decision to modify and discontinue use of the Original Model 502 Cable Machine relieves it of liability with regard to that device has been soundly rejected by the Federal Circuit in Intel Corp. v. United States International Trade Commission, 946 F.2d 821, 830 n. 14 (Fed.Cir.1991), and by the Supreme Court in United States v. Concentrated Phosphate Export Association, 393 U.S. 199, 203, 89 S.Ct. 361, 21 L.Ed.2d 344 (1968) ("Mere voluntary cessation of allegedly illegal conduct does not moot a case; if it did, the courts would be compelled to leave '(t)he defendant...free to return to his old ways.' ") (citation omitted). *See also* Amstar Corp. v. Envirotech Corp., 730 F.2d 1476, 1482 (Fed.Cir.1984) ("That products may have been modified after suit is brought, and may or may not be accused of infringement, does not remove the need for [comparison between the claims and accused device].").

According to defendant, the Modified Model 502 Cable Machine does not literally infringe the '588 or '905 Patents, nor does it infringe those patents under the doctrine of equivalents, because that device "does not use a guide hose which is mounted or supported, or adjacent (i.e., directly connected to) the frame," has a guide hose attached to the drum rather than the frame, has "a portion of the drum which extends outward (i.e., in front of) any portion of the frame" and "has structures (a metal guide pin and a hard plastic guide hose collar) which *prevent* the user from directly attaching the guide hose to the frame of the drain cleaner." In addition, defendant argues that there is no evidence that any user has actually altered the Modified device so as to enable it to operate in an infringing manner.

[32] "Literal infringement requires that every limitation of the patent claim be found in the accused device." Intermatic, 273 F.3d at 1363. Thus, if even a single claim limitation cannot be found in the accused device, the asserted claim is not literally infringed. *See* Key Mfg. Group, Inc. v. Microdot, Inc., 925 F.2d 1444, 1449

(Fed.Cir.1991).

[33] However, "[a]n accused device that does not literally infringe a claim may still infringe under the doctrine of equivalents if each limitation of the claim is met in the accused device either literally or equivalently." *Id*. (quoting Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448 (Fed.Cir.1998)). The doctrine of equivalents is designed to "temper unsparing logic and prevent an infringer from stealing the benefit of an invention" where the accused device does not literally infringe every claim limitation. Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 608, 70 S.Ct. 854, 94 L.Ed. 1097 (1950) (quoting Royal Typewriter Co. v. Remington Rand, 168 F.2d 691 (2d Cir.1948)). Thus, "[t]he essence of the doctrine is that one may not practice a fraud on a patent." Graver, 339 U.S. at 608, 70 S.Ct. 854. A "patentee should not be deprived of the benefits of his patent by competitors who appropriate the essence of an invention while barely avoiding the literal language of the claims." London v. Carson Pirie Scott & Co., 946 F.2d 1534, 1538 (Fed.Cir.1991).

In *Graver,* the Supreme Court set forth "the modern contours" of the doctrine of equivalents:

What constitutes equivalency must be determined against the context of the patent, the prior art, and the particular circumstances of the case. Equivalence, in the patent law, is not the prisoner of a formula and is not an absolute to be considered in a vacuum. It does not require complete identity for every purpose and in every respect. In determining equivalents, things equal to the same thing may not be equal to each other and, by the same token, things for most purposes different may sometimes be equivalents. Consideration must be given to the purpose for which an ingredient is used in a patent, the qualities it has when combined with the other ingredients, and the function which it is intended to perform.

* * * * * *

A finding of equivalence is a determination of fact. Proof can be made in any form: through testimony of experts or others versed in the technology; by documents, including texts and treatises; and, of course, by the disclosures of the prior art. Like any other issue of fact, final determination requires a balancing of credibility, persuasiveness and weight of evidence.

See Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17, 21, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997).

"The doctrine of equivalents allows infringement to be found in some cases where the elements of the accused device are substantially equivalent to the corresponding elements of the asserted claim." K-2 Corp., 191 F.3d at 1366.

Although designing or inventing around patents to make new inventions is encouraged, piracy is not. Thus, where an infringer, instead of inventing around a patent by making a substantial change, merely makes an insubstantial change, essentially misappropriating or even "stealing" the patented invention, infringement may lie under the doctrine of equivalents.

London, 946 F.2d at 1538.

[34] "One method for finding infringement under the doctrine of equivalents, with regard to each element not met literally, is to determine whether the accused device performs substantially the same function, in

substantially the same way, to achieve substantially the same result, as that of the invention claimed." Telemac, 247 F.3d at 1330. *See also* Union Paper-Bag Mach. Co. v. Murphy, 97 U.S. 120, 125, 24 L.Ed. 935 (1877) ("[I]f two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form, or shape."). However, "[w]here no equivalent element can be identified in the accused device, the district court is not at liberty to altogether ignore limitations of a claim." Telemac, 247 F.3d at 1331.

[35] The doctrine of equivalents is limited in scope and subject to prosecution history estoppel FN21 in light of competing interests, i.e., the patentee's burden to distinctly claim the subject matter regarded as the invention and the purpose of the claims to provide notice to competitors. K-2 Corp., 191 F.3d at 1366-1368. The purpose of the doctrine of equivalents is to balance "fairness to inventors lest the patent be unjustly circumvented, against the purpose of patent claims to state clear boundaries of the patent grant, in fair notice of its scope." Multiform, 133 F.3d at 1480.

FN21. In accordance with the concept of prosecution history estoppel, "the patentee may not use the doctrine [of equivalents] to recover subject matter that has been surrendered." K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1367 (Fed.Cir.1999).

Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.
Warner-Jenkinson, 520 U.S. at 29, 117 S.Ct. 1040. *See also* Intellicall, Inc. v. Phonometrics, Inc., 952 F.2d 1384, 1389 (Fed.Cir.1992) (rejecting argument that "accused devices are equivalent overall to the claimed invention").
[36] The "essential inquiry" in a claim of either literal infringement or infringement under doctrine of equivalents is whether "the accused product or process contain[s] elements identical or equivalent to each claimed element of the patent invention." Warner-Jenkinson, 520 U.S. at 40, 117 S.Ct. 1040.

An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element.

Id. Where the changes made to avoid literal infringement are "colorable only," the accused device infringes under the doctrine of equivalents. Graver, 339 U.S. at 612, 70 S.Ct. 854.

[37] As noted above, whether the accused devices infringe the properly-construed claims literally or under the doctrine of equivalents is a question of fact.

[38] Defendant argues that dependant claims cannot be found to be infringed unless the independent claim upon which they depend is first found to be infringed. Defendant is correct where the basis for finding that the accused product does not infringe an independent claim is that it does not include particular claim limitations or their substantial equivalents. *See* Wolverine World Wide, Inc. v. Nike, Inc., 38 F.3d 1192, 1199 (Fed.Cir.1994); Wilson Sporting Goods Co. v. David Geoffrey & Assoc., 904 F.2d 677, 686 (Fed.Cir.1990); Wahpeton Canvas Co., Inc. v. Frontier, Inc., 870 F.2d 1546, 1553 (Fed.Cir.1989). Thus, if this Court determines that asserted Claim 29 of the '588 Patent and Claims 1 and 22 of the '905 Patent are

not infringed because the accused devices do not include one or more of the claim limitations, this Court must find that none of the dependent claims are infringed and defendant is entitled to summary judgment.

According to plaintiffs, defendant failed to respond to discovery requests relating to infringement of the '588 and '401 Patents by the Original Model 502 Cable Machine. In addition, plaintiffs correctly point out that defendant's opinion of counsel and expert report discuss only the (non)infringement of the three patents by the Modified Model 502 Cable Machine.

In response to all the asserted claims, defendant argues that an invalid patent cannot be infringed. Defendant asserts that, at the very least, genuine issues of material fact exist as to the validity of the patents-in-suit. Therefore, defendant argues that summary judgment as to their infringement would be improper.

[39] Defendant's argument is entirely without merit. "Though an invalid claim cannot give rise to liability for infringement, whether it is infringed is an entirely separate question capable of determination without regard to its validity." Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F.2d 1563, 1583 (Fed.Cir.1983).FN22 Plaintiffs concede that defendant cannot be held liable for infringement of an invalid patent. However, a finding of infringement can and should be made independent of the issue of validity.

FN22. An appellate court need not address the issue of infringement if it affirms a finding of invalidity because a defendant "can incur no liability for 'infringement' of invalid claims." Shelcore, Inc. v. Durham Indus., Inc., 745 F.2d 621, 628 (Fed.Cir.1984). *See also* Richdel, Inc. v. Sunspool Corp., 714 F.2d 1573, 1580 (Fed.Cir.1983). However, a district court must resolve "both the issues of validity and infringement." Shelcore, 745 F.2d at 628. *See also* Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1540 (Fed.Cir.1983) ("When presented with patent validity and infringement issues, trial courts should ...decide both.").

With respect to the '588 and '905 Patents, defendant urges this Court to revisit the issue of claim construction. After eight pages of pictures and descriptions of the Modified Model 502 Cable Machine, defendant states,

Having set forth the relevant background facts involving the currently accused Spartan device, the Court now needs to go back and perform the analysis that the plaintiff's [sic] motion never did-i.e., properly interpreting the claims and then comparing them to the accused device.

(Doc. 114 at 10).

[40] Defendant's method of analysis is seriously flawed. As the Federal Circuit stated in *SRI International,*

A claim is construed in the light of the claim language, the other claims, the prior art, the prosecution history, and the specification, *not in light of the accused device*. Contrary to what [defense] counsel wrote the district court, claims are not construed "to cover" or "not to cover" the accused device. That procedure would make infringement a matter of judicial whim. It is only after the claims have been construed *without reference to the accused device* that the claims, as so construed, are applied to the accused device to determine infringement.

775 F.2d at 1118 (emphasis added). Having construed the asserted claims as set forth above, this Court must now apply those properly-construed claims to the Model 502 Cable Machines to determine if the accused

devices infringe as a matter of law.

1. The '588 Patent

a. The Original Model 502 Cable Machine

[41] Plaintiffs seek a determination that the Original Model 502 Cable Machine literally infringes Claim 29 of the '588 Patent. Other than the argument relating to mootness set forth and rejected above, defendant presents no evidence or argument to refute plaintiffs' contention.

With regard to the Original Model 502 Cable Machine, Sloter testified as follows:

Q: Mr. Sloter, does the 502 device utilize a frame?

A: Of course.

* * * * * *

Q: Does the 502 have a cable drum?

A: Yes, it does.

* * * * * *

Q: Does the cable or snake reside inside the drum?

A: Yes, it does.

* * * * * *

Q: The cable drum spins, is that right, rotates?

A: Yes, sir.

Q: So it rotates about a center line?

A: It rotates on this center line, yes.

Q: Okay. And there is an opening on the front of the drum, is that correct?

A: Yes, sir.

* * * * * *

Q: [A] snake is coiled inside the drum and extends through this drum opening?

A: Yes, sir.

Q: In use?

A: In use.

Q: And in use, that cable would be fed into the drain to be cleaned or the pipe that needed to be cleaned?

A: Yes, sir.

Q: Does the Model 502 have a drive motor?

A: Yes, sir.

* * * * * *

Q: And what about this part [of the frame including the mounting bracket] right up here, is this on the exterior of the drum opening?

A: Yes.

* * * * * *

Q: Is this portion of the frame adjacent the drum opening?

A: Define adjacent to me.

Q: Do you have a definition of adjacent we can use?

A: Next to one another. I'm adjacent to her.

Q: Okay. Using your definition, is it adjacent to the drum opening?

A: No, because it's-it could be. I guess, it could be conceived as that, yes.

Q: So you could conceive of that frame being adjacent to the drum opening?

A: It would be a stretch, but, yes.

Q: Is the frame that we've been talking about, this area in here, is that near the drum opening?

A: Yes.

* * * * * *

Q: Does the Model 502 use a guide hose?

A: Yes.

* * * * * *

Q: Does the guide hose have an end that will mount on some portion of the frame?

A: The cable-the guide hose could mount on the feed or on the bearing support.

Q: Okay. And identify the bearing support for me, please. That's the bearing support?

A: Or I don't know what the official name is. I call it a bearing support.

Q: You don't consider that a part of the frame?

A: It's an independent part.

* * * * * *

Q: Can you tell me why you don't consider that a part of the frame?

A: Well, to me when you talk about part of the frame, you're talking about the frame weldment. And this is something that bolts onto the frame, so it's an accessory that goes with the frame to make it into something else because the basic frame by itself will not support the drum and let it operate.

* * * * * *

Q: Now does the guide hose have an outer end?

A: Yes, sir.

* * * * * *

Q: Flexible between the outer end and the end that's attached here?

A: Yes, sir.

Q: And does the flexibility of the guide hose allow the user to direct the snake into the drain they want to clean?

* * * * * *

A: Yes.

* * * * * *

Q: Can you identify that device for us?

A: This is the original 502 power feed.

Q: Is that a manually operated device?

A: Yes, it is.

Q: [C]an it attach to the outer end of the guide tube?

A: Yes, it can.

* * * * * *

Q: And what is the purpose of that power feed...?

A: To advance the cable into the drain and retract it without reversing the motor.

Q: I believe you were going to show me another location where the power feed could be connected to the 502. And does it serve the same purpose when mounted in that location?

* * * * * *

A: Yes, sir.

(Sloter Depo. 85-103). *See also* Rutkowski '588 and '905 Decl. para. 10 ("Also mounted and supported on the frame is one end of a flexible guide hose."), para. 18 and Ex. 1.

Based on the evidence presented, this Court finds that the Original Model 502 Cable Machine literally infringes Claim 29 of the '588 Patent as that claim is properly construed. Every single limitation of Claim 29 can be found in the accused device, including a frame portion next to or in close proximity to and outside of or external to the drum opening and an inner end of a guide tube directly or indirectly detachably connected to the frame.

Therefore, plaintiffs are entitled to summary judgment as to the infringement of Claim 29 of the '588 Patent by the Original Model 502 Cable Machine.

b. The Modified Model 502 Cable Machine

Defendant seeks a determination that the Modified Model 502 Cable Machine does not infringe Claims 29 or 35 of the '588 Patent.

Plaintiffs concede that the Modified Model 502 Cable Machine in the "second configuration" FN23 does not literally infringe Claim 29 or 35 of the '588 Patent, but they argue that it infringes those claims under the doctrine of equivalents.

FN23. The parties agree that the "first configuration" of the Modified Model 502 Cable Machine, wherein the power feed device is directly connected to the drum, does not infringe any of plaintiffs' patents. In the "second configuration," the power feed device is connected to the outer end of the guide tube, the inner end of which is connected to the apparatus. The Modified device must be altered in order to obtain the "third configuration" according to instructions which plaintiffs claim defendant includes in the device's shipping

materials. *See* Rutkowski Aug. 20 Depo. 80-81.

In his expert report, Dr. Salvatore Malguarnera provides a general description of the Modified Model 502 Cable Machine:

The new or modified Spartan Model 502 Machine includes a motor-driven cable drum that normally contains a cleaning cable or "snake." The drum includes a cone-like enclosure and an elongate spindle that extends outwardly of the cone-like enclosure. The front opening of the drum is the front opening of the spindle. The snake moves in and out of the drum through the spindle and its front opening.

The back end of the drum lies mounted for rotation on the frame, as does the front end of the drum-the spindle. A front bearing assembly mounted on the front supports the spindle of the drum. The front bearing is reversible, allowing an operator to place it in two different orientations on the frame.

In a first orientation,FN24 the drum spindle extends through the bearing assembly and then through the frame portion that supports the bearing assembly. The part of the spindle that extends out of this supporting frame portion supports a dual-race roller bearing used to rotatably mount a flexible guide tube to the spindle. A plastic socket at one end of the flexible tube fits over the dual-race bearing, connecting the tube to the bearing. A cable feed device connected to the other, outer end of the guide tube feeds the snake in and out of the drains.

FN24. The "second configuration" according the parties' arguments.

In a second orientation,FN25 the drum spindle extends through the supporting frame portion and then through the bearing assembly. In this arrangement, the flexible guide tube cannot connect with any part of the bearing assembly or the frame. A manually operable feed device can however, connect with the bearing assembly at one end and with the guide tube at the other end. In this arrangement, the cable feed device lies at the front end of the guide tube, not at the outer, free end.
FN25. The "first configuration" when unaltered. This orientation is converted into the "third configuration" when and if altered according to plaintiffs' allegations.

(Doc. 95 Ex. F).

With regard to both claims, defendant argues that the Modified Model 502 Cable Machine cannot be found to infringe the '588 Patent because its drum spindle/bearing combination provides an added safety feature not required by the patent. According to defendant, the use of a rotating roller bearing that spins on a rotating spindle allows the guide tube to remain under the control of the operator if the cable encounters an obstruction and becomes locked, but the drive motor does not stall or slip. Without this added safety feature, defendant claims that the drain cleaner would counter-rotate uncontrollably because of the motor's torque.FN26

FN26. Sloter testified,
Q: What is the purpose of the bearing on the front drum support spindle in this [second] configuration?

A: [I]t's a safety device....[I]f the cable would become entangled as its [sic] coming out of the drain and locked up and the operator for some reason didn't stop the motor, he could turn the machine over if it didn't blow a fuse or stall the motor, and this allows the motor-this to turn over, the operator would be here and wouldn't get hurt.

(Sloter Depo. 133).
Plaintiffs dispute the efficacy of defendant's "hypothetical" safety function. In support of their position, plaintiffs point to the fact that defendant has done no testing to determine if the Modified device generates sufficient torque to knock it over if the cable were to become locked and the motor not stall or a safety device fail.FN27 In addition, plaintiffs claim that defendant had no valid reason to develop this added safety function since none of its customers ever complained about the lack of this function. FN28

FN27. Sloter confirmed that defendant did not conduct tests to determine whether flipping the Modified Model 502 Cable Machine was possible: "We didn't try to turn it over. We tried to make it as safe as possible. And it's one of the things that we talked about, that the cable could get caught because it could get caught in any machine." (Sloter Depo. 133).

FN28. Sloter testified, "I had heard and I don't know whether it was our machine, somebody else's machine, or somebody saying that their cable had got caught in their tube....It ruined the cable and the tube." (Sloter Depo. 133-134).

[42] Even assuming that the added safety feature is bona fide, however, its addition alone could not relieve defendant from liability for infringement. "Modification by mere *addition* of elements [or] functions, whenever made, cannot negate infringement." Amstar Corp. v. Envirotech Corp., 730 F.2d 1476, 1482 (Fed.Cir.1984). Merely "[a]dding features to an accused device will not result in noninfringement if all the limitations in the claims, or equivalents thereof, are present in the accused device." Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1057 (Fed.Cir.1988) (reversing finding of non-infringement despite fact that accused device was improved, i.e., designed to be adjustable). The reasoning behind this rule is "the long-established legal principle that non-infringement is shown when an element or step in the claims is missing from the accused product or process, not vice-versa." Amstar, 730 F.2d at 1484.

(1) Claim 29

[43] Defendant argues that the Modified Model 502 Cable Machine in the second configuration does not infringe Claim 29 of the '588 Patent because that claim recites a guide tube mounted on the frame, but the guide tube of the accused device is mounted on the drum. According to defendant, in the second configuration of the Modified device, the flexible guide tube is mounted onto a movable, rotatable bearing located on the spindle portion of the drum. Thus, defendant argues, there can be no literal infringement. In addition, defendant argues that there can be no infringement under the doctrine of equivalents because the structure of the Modified device, with respect to the front bearing assembly, is substantially different from the claimed structure. Defendant also argues that the Modified device achieves a substantially different result in a substantially different way.

Plaintiffs contend that the second configuration of the Modified Model 502 Cable Machine literally meets every limitation of Claim 29 of the '588 Patent with the exception of the requirement that the "guide tube hav[e] an inner end mounted on said frame portion." However, plaintiffs argue that the Modified device, in which the guide tube is attached to a bearing riding on the drum spindle, is equivalent to the claimed structure. According to plaintiffs, this equivalent element of defendant's device performs substantially the same function, in substantially the same way, to achieve substantially the same result, as that of the claimed invention. In addition, plaintiffs argue that, because the drum is mounted on the motor and the motor is mounted on the frame, the guide tube of the Modified Model 502 Cable Machine is indirectly mounted on the frame through the drum.

This Court agrees with plaintiffs that defendant's inclusion of a bearing on the drum spindle for the purpose of connecting the guide tube to the apparatus is an insubstantial and merely colorable change which does not avoid infringement under the doctrine of equivalents.

The function and result of the spindle/bearing connection between the guide hose and the drum are identical to the function and result of the mounting bracket connection between the guide hose and the frame. *See* Sloter Depo. 135-137 (testifying that bearing serves as mounting point for the guide tube, preventing the guide tube from falling off, allows the cable to feed in and out of the guide hose and allows the cable to move rotationally independent of the guide tube); Krause Depo. 107-110 (testifying that functions of both structures include allowing the relative axial displacement of the cable to the guide tube and allowing the cable to rotate relative to the guide tube). In addition, the way in which that function and result are achieved by the Modified Model 502 Cable Machine is equivalent to the way they are achieved in the asserted claims.

[44] Defendant argues that prosecution history estoppel, also referred to as file wrapper estoppel, bars any application of the doctrine of equivalents for any element about which plaintiffs made arguments to secure the issuance of the '588 Patent.

While this Court generally agrees with defendant's statement of the law, prosecution history estoppel does not bar plaintiffs from invoking the doctrine of equivalents in this case. In Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558, 574 (Fed.Cir.2000) (en banc), the court held that "prosecution history estoppel acts as a complete bar to the application of the doctrine of equivalents when an amendment has narrowed the scope of a claim for a reason related to patentability." FN29 However, as noted above, defendant has failed to present sufficient evidence that the IDS and Supplemental IDS served to narrow the scope of any of the asserted claims to devices in which the guide tube is directly connected to the frame in order to achieve patentability. Therefore, plaintiffs are not estopped from asserting that the Modified Model 502 Cable Machine infringes Claim 29 of the '588 Patent (or any other claim) under the doctrine of equivalents.

FN29. This Court notes that the IDS and Supplemental IDS do not constitute amendments to the patent application. However, the Federal Circuit has recognized that an IDS can serve the same purpose as an amendment by acting "as a kind of preemptive strike against a potential rejection." Ekchian v. Home Depot, Inc., 104 F.3d 1299, 1304 (Fed.Cir.1997). For that reasons, the court in *Ekchian* held that "arguments in an IDS can create an estoppel, and thus preclude a finding of infringement under the doctrine of equivalents." *Id*.

[45] Therefore, this Court finds that the second configuration of the Modified Model 502 Cable Machine infringes Claim 29 of the '588 Patent under the doctrine of equivalents.FN30

FN30. This Court may *sua sponte* grant summary judgment of infringement in favor of plaintiffs, the non-moving parties, where defendant, the moving party, cannot prove its case on the undisputed facts. *See* Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc., 145 F.3d 1303, 1311 (Fed.Cir.1998) citing Cool Fuel, Inc. v. Connett, 685 F.2d 309 (9th Cir.1982).

(2) Claim 35

[46] Defendant does not present any argument specifically relating to the issue of infringement of Claim 35 by the Modified Model 502 Cable Machine. Instead, defendant merely contends that none of the asserted claims can be read to cover the Modified device because none of the independent claims are infringed.

However, as set forth above, this Court finds that the Modified Model 502 Cable Machine in the second configuration literally infringes Claim 29 of the '588 Patent. In addition, this Court finds that the Modified Model 502 Cable Machine in the second configuration infringes dependant Claim 35. The Modified device has a front bearing support assembly mounted on the frame portion adjacent the drum opening and a flexible guide hose having two ends. The inner end of the guide hose has a plastic socket for connecting the hose to the front bearing support, and the outer end of the guide hose has a power feed collar for connection the hose to the cable feed device. *See* Malguarnera general description of the Modified Model 502 Cable Machine (Doc. 95 Ex. F); Malguarnera Depo. 141-154.

Therefore, this Court finds that the second configuration of the Modified Model 502 Cable Machine infringes Claim 35 of the '588 Patent under the doctrine of equivalents.

2. The '905 Patent

Plaintiffs seek a determination that the Modified Model 502 Cable Machine literally infringes Claim 22 of the '905 Patent. In response to defendant's Motion, plaintiffs contend that the Modified device also literally infringes Claims 1 and 2 of that patent in the second configuration and Claims 1, 2, 3 and 10 in the third configuration.

Defendant, on the other hand, seeks a determination that the Modified Model 502 Cable Machine does not infringe Claims 1, 2 or 22 of the '905 Patent.

a. Claim 22

With regard to the Modified Model 502 Cable Machine, Malguarnera testified as follows:

Q: Dr. Malguarnera, the Spartan Model 502 that you looked at, the new model, right?

A: Yes.

Q: You consider that to be a drain clean apparatus?

A: Yes, that is what it's-I think that is what its title. That is what it's purported to be.

Q: It has a frame?

A: Yes.

Q: And it has cable drum?

A: Yes.

Q: And the cable drum is supported on the frame?

A: Yes.

* * * * * *

Q: And this cable drum rotates about a drum axis, right?

A: Yes.

Q: And this drum has a front end and a rear end that are spaced apart from each other.

A: Yes.

Q: And this drum has an opening through the front end, doesn't it?

A: Yes.

Q: And a drain cleaning cable is coiled in the drum?

A: Yes....It's coiled inside of the drum.

Q: And it's coiled about the drum axis?

A: That is descriptive of generally how it's arranged.

* * * * * *

Q: One end of the drain cleaning cable extends through the opening.

A: Yes.

Q: And in fact it would extend into a drain to be cleaned.

A: Yes.

Q: The 502 has a drive motor that is supported on the frame, right?

A: Yes.

Q: And the drive motor is to rotate the drum and the cable?

A: Yes.

* * * * * *

Q: I'm referring to what Spartan calls its hose guide. That hose guide receives the end of the drain cleaning cable that extends from the cable drum, is that right?

A: Well, the cable-the snake goes through the hose guide.

* * * * * *

Q: The hose guide on the model 502 is flexible between its ends, isn't it?

A: Yes, it's a flexible tube.

Q: And that flexibility allows the operator to direct the outer end of the hose guide toward a drain to be cleaned.

A: It makes the hose-the hose guide can be moved, it can be twisted, it can be put in any orientation that would make it easiest for the operator to clean the drain.

Q: So he could direct the cable to the drain to be cleaned is one thing he could do.

A: Obviously he needs to do that.

Q: And the new model 502 has a power feed, right?

A: Yes.

Q: And that power feed-It's a cable feed device, is that right?

A: It moves the snake in and out.

Q: And the snake is the cable?

A: Yes, it can move the snake in and out.

Q: Is that power feed device manually operable?

A: The man or woman operator would be in control of it.

Q: Do they have to manually operate it?

A: I think the preferred embodiment is to use your hands, but you could use your teeth if you just decided to do that.

Q: Do you understand manually operated to refer only to the use of hands?

A: I would think that it may extend and mean it's under the control of an operator as opposed to being automatically controlled.

* * * * * *

Q: In Spartan's model 502...in one configuration the power feed is on the outer or free end of the hose guide, is that correct?

A: Yes, that is one way it can be set up.

* * * * * *

Q: Does the power feed on the model 502 have...selectability?

A: The power feed allows the operator to advance or retract the cable.

Q: Does it have a neutral condition?

A: I would believe it does, that is one can have the cable rotating....If you mean by neutral position, that the cable can rotate and it doesn't move in or out, yes.

* * * * * *

Q: Can the operator of the 502 cause the snake to advance with the power feed if the drum is not rotating?

* * * * * *

A: I don't believe so.

(Malguarnera Depo. 141-154).FN31

FN31. *See also* Sloter Depo. 107-111, 118-124, 143-144 (describing Modified Model 502 Cable Machine to include a frame, a rotating drum "eventually" supported on the frame through a bearing, a cable inside the drum which exits through an opening in the drum spindle, a drive motor supported by the frame, a guide tube "eventually" supported on the frame by a bearing and a power feed device).

Malguarnera also testified that, in his opinion, the inner end of the hose guide was not adjacent or next to the drum opening because "[i]t goes over the drum opening. It goes over the spindle, and the drum opening is inside the hose guide." (Malguarnera Depo. 154-155). Making reference to a drawing of the Modified Model 502 Cable Machine, Malguarnera continued, "So the guide tube, that is this 48 inch reference...that is not directly next to it, it's not adjacent to the opening. It's got this fitting that is in there between them."

(Malguarnera Depo. 158).

When questioned regarding the "adjacent" limitation, Sloter testified,

Q: In this modified 502, is the guide hose adjacent the drum opening?

MR. HOSTENY: That calls for a legal conclusion.

MR. DEAVER: Q: You may answer.

A: Terminology.

Q: How would you describe the location of the guide hose relative to the drum opening?

A: The guide hose support surrounds it.

Q: Is it near it?

A: Near being a distance, yes.

Q: Is it next to it?

A: It's close to it, yes.

Q: Is it adjacent?

A: If that's your terminology, yes.

(Sloter Depo. 144-145).

Thus, it is undisputed that the Modified Model 502 Cable Machine literally infringes every limitation of Claim 22 of the '905 Patent with the possible exception of "the guide tube having a first end [adjacent] the drum opening." This Court has construed this phrase to require that the first end of the guide tube be in close proximity to or next to the drum opening. Malguarnera contends that the guide tube cannot be adjacent the drum opening because it is not directly next to the opening. Sloter, on the other hand, testified that the guide tube is near, close to and adjacent the drum opening.

In describing the Modified Model 502 Cable Machine, defendant states that "the inner end of the guide tube is attached to a rotating roller bearing assembly that is rotatably connected to the spindle portion of the cable drum." At the far end of the spindle portion of the drum is the drum opening.

Plaintiffs argue that Malguarnera's testimony does not preclude summary judgment as to infringement in light of Sloter's testimony and the documentary evidence submitted. Defendant does not directly address this issue, instead continually repeating that any reasonable interpretation of the word adjacent requires that the guide hose be connected to or supported by the frame, not the drum. However, this argument does not create a genuine issue of material fact as to whether the inner end of the guide tube is adjacent the drum opening. As set forth above, Claim 22 does not require any specific connection between the guide tube and

the frame; it merely requires that the guide tube be adjacent the drum opening.

In accordance with the construction of the claim language set forth above, this Court finds that the Modified Model 502 Cable Machine in the second configuration literally infringes Claim 22 of the '905 Patent.

b. Claim 1

[47] The majority of the limitations in Claim 1 have already been discussed above and found to be infringed by the Modified Model 502 Patent. The two distinct limitations require a "drive means" and that the inner end of the guide be "supported on" the frame.

This Court has construed the phrase "drive means on said frame for rotating said drum and cable," which is presented in means-plus-function format, to claim a recited function of "rotating said drum and cable" and corresponding structures of a reversible motor 34, a pulley 36, a pulley 40 and an endless belt 42 and all equivalents thereof. It is undisputed that the Modified Model 502 Cable Machine has structures equivalent to those in the asserted claims for rotating the drum and cable, including a drive motor, two pulleys and a belt. *See* Rutkowski '588 and '905 Decl. para. 19.

This Court has determined that the "supported on" limitation does not require that the inner end of the guide tube be directly in contact with the frame. Rather, the claim language merely requires that the frame provide direct or indirect support for the inner end of the guide tube. Malguarnera's testimony establishes that the guide tube is indirectly supported by the frame through the spindle and bearing, despite his hesitation to admit it.FN32 Malguarnera testified,

FN32. It is interesting to note that, in an attempt to avoid infringement, defendant contends that plaintiffs' claimed mounting bracket is *a part of* their frame while defendant's similar bracket is merely *attached to* its frame.

Q: How does the frame support the front of the drum?
A: It's got a bracket that attaches-that the spindle-the drum spindle goes through.

Q: So the drum spindle goes through a bracket and the bracket is attached to the frame?

A: Yes.

* * * * * *

Q: Now, the bearing that rides on the drum spindle-

A: Yes.

Q: that is supported by the drum spindle.

A: Yes.

Q: And the drum spindle is supported by the frame?

A: The drum spindle is supported by the frame-the bracket, which attaches to the frame.

Q: So the bearing is ultimately supported by the frame?

A: No, I don't think that would be correct. The bearing is rested and supported by the drum spindle.

* * * * * *

Q: So you're saying that the frame offers absolutely no support to the bearing?

A: It doesn't support the bearing, no. The load from the bearing is transmitted to the spindle, and the spindle load is transmitted to that bracket in the frame.

(Malguarnera Depo. 159-161). In addition, the Infringement/Validity Study of U.S. Patent No. 6,009,588 prepared by Joseph Krause,FN33 for defendant states,

FN33. Joseph Krause was engaged by defendant to render opinions with regard to the devices and patents at issue in this case. (Krause Depo. 12).

The Model 502 Spartan tool drain cleaner uses a motor-driven cable drum with an axial, integral, forwardly-projecting spindle. The drum and attached spindle are both rotatably mounted to a tubular frame by both front and rear sleeve-type bearings....The front drum spindle shown in Figure 3 is supported by, and rotates within, a bronze sleeve installed in a reversible, front bearing assembly mounted on a support frame. (Doc. 105 Ex. O at 24).
Therefore, for the reasons set forth above and based on the proper construction of Claim 1, this Court finds that the Modified Model 502 Cable Machine in the second configuration literally infringes Claim 1 of the '905 Patent.

c. Claim 2

Claim 2 of the '905 Patent claims,

Drain cleaning apparatus according to claim 1, wherein said drive means includes a drive motor supported on said frame.

('905 Patent col. 9, ll. 16-18).

Defendant does not present any argument specifically relating to the issue of infringement of Claim 2 by the Modified Model 502 Cable Machine. Instead, defendant merely contends that none of the asserted claims can be read to cover the Modified device because none of the independent claims are infringed.

However, as set forth above, this Court finds that the Modified Model 502 Cable Machine in the second configuration literally infringes Claim 1 of the '905 Patent. In addition, Malguarnera testified that the Modified device "has a drive motor that is supported on the frame." (Malguarnera Depo. 158). Therefore, this Court finds that the Modified Model 502 Cable Machine in the second configuration also literally

infringes Claim 2 of the '905 Patent.

d. Claims 3 and 10

For the reasons set forth below, the existence of a third configuration of the Modified Model 502 Cable Machine and defendant's intent as to its use are disputed questions of fact. Therefore, this Court will not address plaintiffs' arguments with regard to Claims 3 and 10 of the '905 Patent, infringement of which is claimed solely by the third configuration.FN34

FN34. Similarly, this Court will not address plaintiffs' arguments that Claims 29 and 35 of the '588 Patent are literally infringed by the third configuration of the Modified Model 502 Cable Machine.

e. Third Configuration

Plaintiffs contend that the Modified Model 502 Cable Machine in the third configuration literally infringes Claims 1, 2, 3 and 10 of the '905 Patent. Plaintiffs claim that defendant altered the Original Model 502 Cable Machine in an attempt to avoid liability for infringement by, among other things, drilling a hole in the reversible front bearing support and inserting a guide pin. According to plaintiffs, in order the achieve the third configuration, an operator need only remove the easily-removable guide pin using a pair of pliers. Once the pin is removed, the front bearing support is attached with its collar or bearing boss facing away from the drum. The inner end of the guide tube is then attached directly to the bearing boss adjacent the drum opening.FN35

FN35. Sloter testified that the purpose of this guide pin, or spring pin is to act as "a guide for the feed and to stop...you from putting the guide tube assembly onto that configuration." (Sloter Depo. 137). Rutkowski testified that he simply removed this pin with a pair of pliers to orient the Modified Model 502 Cable Machine in the third configuration. (Rutkowski Aug. 20 Depo. 80-81).

Plaintiffs claim that defendant actively induces its customers to alter the Modified Model 502 Cable Machine to form the third configuration by providing an Owner's Manual which shows the pin removed from the reversible front bearing support. Plaintiffs further claim that defendant designed the Modified device to be easily altered to infringe and the third configuration will be the operators' preferred configuration of use.FN36 Thus, plaintiffs argue that defendant is liable for infringement because the Modified device is reasonably capable of satisfying the claimed limitations despite the fact that it is also capable of non-infringing modes of operation. According to plaintiffs, the diameters of the inner end of the guide tube and the bearing boss could be changed to prevent the Modified Model 502 Cable Machine from being altered to infringe, but defendant has failed to do so.

FN36. When asked why a customer would orient the Modified Model 502 Cable Machine in the third configuration, Rutkowski testified,
Because it's easier to mount [the guide tube] on the bracket than it would be [on] a bearing....Plus then you don't have to change the bracket around and lose all your shims to put the power feed on, if you ever wanted to do that. These guys are out to make money. They want, you know, fast and easy changeover. And putting shims in is not an easy thing to do. They're likely to take the pin out once and not have to worry about shims.

(Rutkowski Aug. 20 Depo. 168).
Defendant claims that there is, in actuality, no third configuration of the Modified Model 502 Cable Machine. Defendant argues that it cannot be held liable for infringement simply because consumers could alter the Modified Model 502 Cable Machine to infringe the '588 and '905 Patents by removing a part or cutting a notch in the guide tube's collar. Thus, according to defendant, the device currently used or sold by it cannot, without alteration, infringe. Defendant also points out that the Owner's Manual clearly states that any physical alteration of the Modified Model 502 Cable Machine voids its warranty. Thus, defendant argues it can not be held liable for inducing or encouraging its customers to alter the device so that it infringes.

[48] "A showing that a device is capable of being modified to operate in an infringing manner is not sufficient, by itself, to establish infringement." *Tegal Corp. v. Tokyo Electron Co.,* No. 01-1019, 2002 U.S.App. LEXIS 1992, (Fed.Cir. Feb. 1, 2002) (finding no infringement by product still in development which could be modified to operate at claimed frequency but which was designed to operate at more than twice claimed frequency). *See also* Telemac, 247 F.3d at 1330 (finding no infringement due to restriction built into software program that prevented product from performing task despite fact that software could be modified to perform task and, therefore, infringe). In addition, "tests of an accused device under unusual conditions are not necessarily relevant to an infringement analysis." Hilgraeve Corp. v. Symantec Corp., 265 F.3d 1336, 1343 (Fed.Cir.2001).

[49] On the other hand, "an accused device may be found to infringe if it is reasonably capable of satisfying the claim limitations, even though it may also be capable of non-infringing modes of operation." Hilgraeve, 265 F.3d at 1343. "The fact that a device may be used in a manner so as not to infringe the patent is not a defense to a claim of infringement against a manufacturer of the device if it is also reasonably capable of a use that infringes the patent." *Id.* (quoting Huck Mfg. Co. v. Textron, Inc., 187 U.S.P.Q. 388 (E.D.Mich.1975)). Evidence that the accused device is "presently capable" of meeting the claim limitations establishes infringement. Stryker Corp. v. Davol, Inc., 234 F.3d 1252, 1257 (Fed.Cir.2000).

[50] "The question is not what [an accused device] might have been made to do, but what it was intended to do and did do." Hap Corp. v. Heyman Mfg. Co., 311 F.2d 839, 843 (1st Cir.1962). "The fact that it is possible to alter an accused device so that it is covered by a patent is not enough, by itself, to justify a finding that its manufacture and sale infringes that patent." High Tech Med. Instrumentation, Inc. v. New Image Indus., Inc., 49 F.3d 1551, 1556 (Fed.Cir.1995). However, "if a device is designed to be altered or assembled before operation, the manufacturer may be held liable for infringement if the device, as altered or assembled, infringes a valid patent." *Id.*

Plaintiffs claim that the Modified Model 502 Cable Machine Owner's Manual shows the guide pin removed from the bearing boss on pages 9, 11, 12, 13 and 23. (Doc. 105 Ex. F). During his deposition, Sloter was shown a copy of a Modified Model 502 Owner's Manual and testified as follows:

Q: [On page 9 which illustrates] the situation when you wanted to use the guide hose and the power feed?

A: Correct.

Q: Or at least the guide hose. Can you see in this figure any indication of a pin?

A: No, I don't.

Q: On page 11, [Bates stamp] 1819, in any of those views do you see that press pin on the front bearing support?

A: I can't see it, no.

Q: On page 12, do you see the guide pin or the press pin shown anywhere?

A: No, it is not depicted in the drawing.

Q: What about on page 13?

A: It does not show it.

Q: On page 19 do you see the guide pin slot depicted for the guide pin?

A: No.

Q: How about on page 20?

A: No.

(Sloter Depo. 148-149). He testified similarly with regard to defendant's most recently-updated Owner's Manual. (Sloter Depo. 152-154).

However, the drawings and pictures are difficult to decipher, and their quality leaves much to be desired. In addition, defendant also refutes the reliability of these illustrations, claiming that the pictures in the Owner's Manual relied on by plaintiffs are not pictures of the Modified Model 502 Cable Machine.

Finally, the testimony of Krause, upon which plaintiffs rely, is equivocal at best. Krause testified,

Q: Do you have any doubt in your mind that Spartan gives an owner manual with their Model 502, Mr. Krause?

* * * * * *

A: I presume-I presume they give the people an owner's manual to know how to use it.

Q: And my question is then, the figure on page 12 of Plaintiff's Exhibit 63, that doesn't show the guide pin in the bearing boss-

A: Uh-huh.

Q: couldn't that be construed by a customer to allow the attachment of the guide tube to the bearing boss?

A: I suppose it could be construed that way. But if you look at the manufacturing drawings, and you look at

the dimensions of the opening and the dimensions of the pin, depending upon the interference of whether or not that pin is in there with an interference fit, for example, might make it virtually impossible for a customer, a plumber to extract that pin.

(Krause Depo. 183-184).

[51] This Court finds that questions of fact remain as to the ability of a customer to alter the Modified Model 502 Cable Machine into the third configuration and as to whether defendant designed the Modified device to be altered or assembled in such a way before operation.

3. The '401 Patent

a. The Original Model 502 Cable Machine

[52] Plaintiffs contend that the Original Model 502 Cable Machine, which includes the Original Feed Control Device, literally infringes Claim 24 of the '401 Patent. Other than the argument relating to mootness set forth and rejected above, defendant presents no evidence or argument to refute plaintiffs' contention.

Plaintiffs submit a Declaration of Rutkowski, which states,

The Original 502 Cable Machine included Spartan's Original Feed Control Device. I operated the Original 502 Cable Machine and the Original Feed Control Device on numerous occasions and am familiar with their operation. The Original Feed Control Device is comprised of the following basic components: a housing which contains an axial passage therethrough. In operation, the snake passes through the axial passage. Two driving rolls are supported on the lower end of the housing. A snake drive actuating unit is located in the upper part of the housing, is placed in a vertical bore in the housing and is removable. The snake drive actuating unit has an outer end which can engage a lever. The lever is pivotally mounted on the housing to engage the outer end of the snake drive actuating unit. The lever is capable of radially displacing the snake drive actuating unit against the snake when the snake is present. The lever includes a slot which contacts the outer end of the snake driving unit. The outer end of the snake driving actuating unit has a pin. The pin can enter the slot in the lever to releasably hold the snake driving actuating unit on the housing. Alternatively, the pin can be removed from the slot which will allow the lever to fully open and allow the snake drive actuating unit to be removed from the housing.

(Rutkowski '401 Decl. para. 10).FN37 In addition, Rutkowski enumerates, limitation by limitation, how the Original Feed Control Device infringes Claim 24 of the '401 Patent. (Rutkowski '401 Decl. para. 14-18). Attached to Rutkowski's declaration is an exhibit which visually corresponds each limitation in Claim 24 of the '401 Patent with an element of the Original Feed Control Device. (Rutkowski '401 Decl. Ex. 1).

FN37. Sloter described the Original Feed Control Device in a consistent manner. (Sloter Depo. 103-106).

Because defendant has failed to present any contrary evidence, plaintiffs are entitled to summary judgment as to the literal infringement of Claim 24 of the '401 Patent by the Original Model 502 Cable Machine.

b. The Modified Feed Control Device

As part of its brief in opposition to Plaintiffs' Motion for Claim Construction and for Summary Judgment of

Infringement of Claim 24 of the '401 Patent, defendant cross-moves for summary judgment of non-infringement of the '401 Patent by the Modified Model 502 Cable Machine.

Plaintiffs object to this cross-motion on the grounds that it is untimely. Plaintiffs also object to the cross-motion on the grounds that it is improper since plaintiffs never contended that the Modified Model 502 Cable Machine infringes the '401 Patent.

The dispositive motion deadline was January 15, 2002. Defendant's cross-motion was filed on February 14, 2002. However, in the interest of justice, this Court will consider and grant defendant's cross-motion.FN38 Judgment in favor of defendant on this issue does not damage plaintiffs since they have never alleged nor presented evidence that the Modified Model 502 Cable Machine, which includes the Modified Feed Control Device, infringes the '401 Patent. However, defendant did file a counterclaim for "Declaratory Judgment of Non-infringement ('401 Patent)" without limiting the declaration sought to the Original Model 502 Cable Machine.FN39 Thus, contrary to plaintiffs' argument, the issue is properly before the Court.

FN38. Plaintiffs' objection is disingenuous in light of the fact that, in their own briefs in opposition to defendant's motions, plaintiffs repeatedly ask this Court to deny defendant's motion and enter judgment in their favor *sua sponte*. Although, as noted above, this Court may *sua sponte* grant summary judgment in favor a non-moving party where the moving party cannot prove its case on the undisputed facts, plaintiffs' request that this Court do so is no different than the requests for judgment made by defendant.

FN39. The Count Two of the Counterclaim alleges,
10. An actual controversy exists between Spartan on the one hand and Emerson and Ridge over the alleged infringement of the '401 patent claims.

11. Spartan's Model 502 does not infringe any valid claims of the '401 patent.

(Doc. 77). Plaintiffs admit the allegations contained in paragraph 10 and deny the allegations contained in paragraph 11. (Doc. 78).
Therefore, defendant is entitled to summary judgment as to the non-infringement of the '401 Patent by the Modified Model 502 Cable Machine.

II. Validity

Defendant moves for summary judgment as to the validity of all three patents in light of 35 U.S.C. s.s. 102(b) and 103 and the following prior art: U.S. Patent No. 2,468,490 to DiJoseph (hereafter "DiJoseph Patent"), British Patent No. GB 2,2122,712A (hereafter "British Patent"), U.S. Patent No. 4,395,791 to Irwin (hereafter "Irwin '791 Patent"), U.S. Patent No. 2,600,707 to Turnbaugh (hereafter "Turnbaugh Patent"), U.S. Patent No. 4,686,732 to Irwin (hereafter "Irwin '732 Patent"), U.S. Patent No. 5,031,263 to Babb (hereafter "Babb Patent"), U.S. Patent No. 3,283,353 to Kirk (hereafter "Kirk Patent"), U.S. Patent No. 3,159,861 to Sarcone (hereafter "Sarcone Patent"), U.S. Patent No. 5,640,736 to Salecker (hereafter "Salecker Patent") and U.S. Patent No. 5,235,718 to Grimsley (hereafter "Grimsley Patent").

Specifically, defendant contends that

-> Claims 29-33 and 35-37 of the '588 Patent are invalid as obvious under s. 103;

-> Claims 1-3, 10, 18 FN40 and 22 of the '905 Patent are in invalid as anticipated unders. 102(b) and as obvious under s. 103; and

FN40. In its Motion for Summary Judgment on Invalidity, defendant attacks the validity of Claim 18 of the '905 Patent. However, plaintiffs indicated in their brief in opposition that they do not assert that Claim 18 of the '905 Patent is infringed. Thus, the validity of this claim need not be determined.

-> Claims 24-26, 39 and 41 of the '401 Patent are invalid as anticipated under s. 102(b) and as obvious under s. 103.

Defendant argues that the Irwin '791 Patent describes a functionally identical feed control device to the one claimed in the '401 Patent and the British Patent describes a functionally identical drain cleaning apparatus to the one claimed in the '905 Patent. In addition, defendant argues that the DiJoseph Patent, in combination with the British Patent and "any one of a number of other prior patents," describes all the asserted claims of the '588 and '905 Patents. According to defendant, the examiners at the U.S. Patent and Trademark Office (hereafter "PTO") did not perform a proper examination of the applications for the patents-in-suit, and those applications should not have been allowed to issue into patents.

Plaintiffs argue that defendant has failed to carry its burden of showing by clear and convincing evidence that prior art identically discloses each and every claim limitation it contends are invalid as anticipated. Plaintiffs also argue that defendant has failed to carry its burden of showing by clear and convincing evidence that combining multiple prior art references is suggested by the prior art and that the combinations actually render the asserted claims obvious to a person having ordinary skill in the art. Plaintiffs specifically contest defendant's version of what the prior art discloses, claiming that genuine issues of material fact exist as to this issue. In addition, plaintiffs argue that genuine issues of material fact exist concerning the commercial success of the claimed inventions, copying of the K-40GPF, industry recognition of the claimed inventions, acquiescence to asserted patents by a competitor and the accurate level of ordinary skill in the art.

35 U.S.C. s. 282 provides,

A patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim.... The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

[53] This presumption of validity "starts with acceptance of the patent claims as valid and [then] looks to the challenger for proof of the contrary." Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1534 (Fed.Cir.1983). The party challenging a patent's validity "not only has the procedural burden of proceeding first and establishing a prima-facie case, but the burden of persuasion on the merits remains with that party until final decision." *Id.* "The burden is on the party asserting invalidity to prove the invalidity of each claim...with facts supported by clear and convincing evidence." Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc., 807 F.2d 955, 961 (Fed.Cir.1986). One reason for the presumed validity of a patent is that

"the primary responsibility for sifting out unpatentable material lies in the Patent Office." Graham v. John Deere Co., 383 U.S. 1, 18, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966). *See also* Brooktree Corp. v. Advanced Micro Devices, Inc., 977 F.2d 1555, 1574 (Fed.Cir.1992) (stating presumption of validity "is based in part on the expertise of patent examiners presumed to have done their job").

A. Alleged Prior Art

1. The DiJoseph Patent

Defendant contends that the DiJoseph Patent discloses a cantilever-type pipe cleaning device with a frame F, a snake or cable C, a drum for supporting the cable, a motor M for driving the drum and a flexible tube 67 for covering the cable. In addition, defendant contends that the DiJoseph Patent discloses a frame portion 12 outwardly adjacent an opening 54 through which the cable extends out of the drum. Thus, according to defendant, the DiJoseph machine includes every element of the drain cleaning apparatus disclosed in the '588 and '905 Patents except a feed control device at the end of the flexible tube.

2. The British Patent

Defendant contends that a number of prior patents, including the British Patent, describe a cable feed device disposed at the outer end of a guide tube. Specifically, defendant contends that the British Patent discloses a pipe cleaning apparatus which includes a housing or frame 11, a drum 1, a motor 3, a snake or cable 7, a tubular casing 12 covering the cable and a reaction member 9 at the outward end of the casing. Defendant refers to the reaction member as a feed control device. Thus, according to defendant, the British Patent discloses a manually operable cable feed device for use at the outer end of a guide tube which axially displaces a cable relative to a drum during rotation of the cable and drum.

Plaintiffs, on the other hand, contend that the British Patent does not disclose "a flexible guide tube" in the context of a drain cleaning apparatus. In addition, plaintiffs contend that the British Patent does not disclose "a manually operable cable feed device...for selectively axially displacing said cable."

3. The Turnbaugh Patent

Defendant contends that the Turnbaugh Patent also discloses a feed control device at the outward end of a cable. Specifically, defendant contends that, when operating the device disclosed in the Turnbaugh Patent, the operator can grab the snake and move it longitudinally into and out of a drain while it rotates. Thus, according to defendant, the Turnbaugh Patent also discloses a manually operable cable feed device which axially displaces a cable relative to a drum during rotation of the cable and drum.

4. The Grimsley Patent

Defendant contends that the Grimsley Patent discloses a pipe cleaning device with a rotating cable and drive head at the outward end of the cable used to move the cable in and out of a pipe. Thus, according to defendant, the Grimsley Patent also discloses a manually operable cable feed device which axially displaces a cable relative to a drum during rotation of the cable and drum.

5. The Irwin '791 Patent

Defendant contends that the Irwin '791 patent discloses a functionally equivalent feed control device to that

disclosed in the '401 Patent. Specifically, defendant contends that the Irwin '791 Patent discloses a cable feeding mechanism that includes a housing 32 and 26 having a passageway for receiving a cable, a second 36 and third 38 feed roller assembly for driving the cable, a first feed roller assembly 34 removably carried by a movable jaw 30 and a handle 66 pivotally mounted on the housing for engaging a free end of the jaw and displacing the first feed roller assembly against the snake. While admitting the device disclosed in the Irwin '791 Patent does not look like the device of the patents-in-suit, defendant argues that fact is irrelevant in the context of the functional features of utility patents. Thus, according to defendant, the Irwin '791 Patent includes all the components disclosed in the patents-in-suit, and those components function in the same manner.

Plaintiffs, on the other hand, contend that the Irwin '791 Patent does not disclose a "housing" and a "passage axially therethrough for receiving said snake."

6. The Irwin '732 Patent

Defendant contends that the Irwin '732 Patent discloses conventional design features widely used in the drain cleaning apparatus field and available to a designer in that field at the time of the alleged invention of the patents-in-suit. Specifically, defendant contends that the Irwin '732 Patent discloses a feed control device which includes a housing 42 with three hollow casings 46a, 46b and 46c that receiver roller assembly 34 for driving a cable. In addition, defendant contends that the Irwin '732 Patent discloses actuating means, including a cam assembly 54, and lever arm 59 moves one of the roller assemblies in and out of contact with the cable.

7. The Babb Patent

Defendant contends that the Babb Patent also discloses conventional design features. Specifically, defendant contends that the Babb Patent discloses a feed control device with springs that bias roller assemblies away from a cable.

8. The Salecker Patent

Defendant contends that the Salecker Patent also discloses conventional design features. Specifically, defendant contends that the Salecker Patent describes a power feed device 32 rotatably mounted by a hub assembly 114 and a bearing 118 to a feed tube 37 which extends from a drum to the feed device. In addition, defendant contends that the Salecker Patent discloses a cable or snake 36 extending from the drum, through the feed tube and feed device.

9. The Kirk Patent

Defendant contends that the Kirk Patent also discloses conventional design features. Specifically, defendant contends that the Kirk Patent discloses a plumber's snake unit with a hose housing made of flexible, plastic material.

10. The Sarcone Patent

Defendant contends that the Sarcone Patent also discloses conventional design features. Specifically, defendant contends that the Sarcone Patent discloses a flexible plastic hose 37.

B. Anticipated-35 U.S.C. s. 102(b)

35 U.S.C.A. s. 102 provides,

A person shall be entitled to a patent unless-

* * * * * *

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

[54] A claim is invalid as anticipated "only if each and every element *as set forth in the claim* is found, either expressly or inherently described, in a single prior art reference." Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 1570 (Fed.Cir.1988). In other words,

[A]n invention is anticipated if the same device, including all the claim limitations, is shown in a single prior art reference. Every element of the claimed invention must be literally present, arranged as in the claim. The identical invention must be shown in as complete detail as is contained in the patent claim.

Richardson v. Suzuki Motor Co., Ltd., 868 F.2d 1226, 1236 (Fed.Cir.1989) (citations omitted). In addition to disclosing every element of the challenged claim, the single reference must "enable one skilled in the art to make the anticipating subject matter." PPG Indus., Inc. v. Guardian Indus. Corp., 75 F.3d 1558, 1566 (Fed.Cir.1996). *See also* Helifix Ltd. v. Blok-Lok, Ltd., 208 F.3d 1339, 1346 (Fed.Cir.2000).

[55] "If it is necessary to reach beyond the boundaries of a single reference to provide missing disclosure of the claimed invention," it is not anticipated under s. 102, although it may still be shown to be obvious under s. 103. Scripps Clinic & Research Found. v. Genentech, Inc., 927 F.2d 1565, 1578 (Fed.Cir.1991). The question of whether a patent is invalid as anticipated is one of fact that may be decided on summary judgment only if the record reveals no genuine dispute of material facts. Id. at 1577. *See also* Union Oil Co. of California v. Atl. Richfield Co., 208 F.3d 989, 994-995 (Fed.Cir.2000); Oney v. Ratliff, 182 F.3d 893, 895 (Fed.Cir.1999).

1. The '905 Patent

[56] Defendant contends that the British Patent discloses every feature of Claims 1, 2 and 22 of the '905 Patent.FN41 In the event this Court does not find that the British Patent expressly describes a flexible guide tube, defendant contends that these claims are invalid under s. 103, as discussed below.

FN41. Rather than discussing the majority of its disclosure contentions in the body of its brief, defendant merely makes reference to attached claim charts. Defense counsel may want to reconsider this tactic in the future, as it is inconvenient for the Court and appears to be yet another method of circumventing the page limitations set forth in the Local Rules. In addition, such charts do little to aid the Court in its analysis of a party's arguments.

Plaintiffs argue that there is no identity of structure between the British Patent and Claim 1. In addition, plaintiffs argue that the inventions of Claims 1, 2 and 22 are not enabled by the British Patent. Alternatively,

plaintiffs argue that there are genuine issues of material fact as to what the British Patent discloses.

This Court finds that defendant has not established by clear and convincing evidence that the British Patent discloses every feature of Claims 1, 2 and 22 of the '905 Patent.

The British Patent discloses a "fixed tubular casing 12," which defendant argues is identical to the flexible guide tube claimed in the '905 Patent. However, the fixed tubular casing 12 is shown only in Fig. 4, which plaintiffs correctly point out is a specific embodiment for descaling or cleaning boiler tubes. *See* British Patent col. 2, ll. 73-77 ("An application of the method and apparatus of the present invention to the descaling or cleaning of boiler tubes is illustrated in Fig. 4.").FN42 Thus, defendants have not established that the British Patent discloses the use of a guide tube with a drain cleaning apparatus as Claim 1 of the '905 Patent requires.

FN42. The British Patent is generically titled "Method and apparatus for axially feeding a flexible shaft along a pipe with simultaneous rotation of the shaft" and discloses that the "apparatus may be used for a descaling, deburring or grinding the inside of tubes or pipes by advancing a rotary grinding wheel 8 therethrough, or for clearing blocked drains etc. by advancement of an auger down the drain." (British Patent at title page).

To the contrary, it appears that the disclosed function of the casing is ill suited to the cleaning of drains. The casing "terminat[es] in a flange which abuts the ends of the tube 13 to be descaled, for example, one of an array of tubes in a conventional tubular boiler construction." (British Patent p. 2, ll. 82-85).

In a particular feature of this embodiment the drive shaft 2 of the drum 1 is hollow and is in open communication with the interior of the drum. In this way a vacuum can be applied by an evacuating means, not shown, to extract scales or other debris removed from the boiler tube by the descaling tool 8 via the tubular casing 12. In an alternative arrangement, the casing 12 may be provided with a sideline by means of which the casing can be directly evacuated, rather than through the drum 1.

(British Patent p. 2, ll. 96-106). This Court agrees with plaintiffs that it is hard to envision a situation wherein an operator of a drain cleaning apparatus would want to draw a vacuum to remove the debris associated with clearing a blocked drain.FN43

FN43. Defendant's technical expert apparently agrees as well. Malguarnera testified,
Q: Is it your opinion that you would use-you would want to use a vacuum when cleaning a drain line like in a sink or a tub?

A: I don't think I'd want to do that.

(Malguarnera Depo. 130-131).
In addition, there is some dispute as to whether the casing disclosed by the British Patent is flexible or rigid. Plaintiffs argue that "fixed" is the antithesis of flexible. Defendant, on the other hand, argues that the casing must be flexible because it is shown in a bent configuration in Fig. 4. It is, however, not possible to

determine from the face of the British Patent whether the casing is disclosed as always in that bent configuration or if it is disclosed as being bendable to that configuration. The fact that the casing is not described as bent in the patent provides some evidence that it is disclosed as being flexible.

When questioned regarding the flexibility of the casing, Malguarnera testified,

Q: What is your understanding of the word fixed in this context?

A: Attached.

* * * * * *

Q: Is this fixed tubular casing disclosed to be flexible?

A: That in the language here it's not described-in any detail either way. But I would expect after looking at the way you'd have to use this, even in the application of cleaning boiler tubes, you'd have to have 12 to be some type of flexible casing. I don't think that with say a rigid piece of pipe, you wouldn't be able, once you'd sighted the machine, to clean all the tubes that you wanted to clean.

Q: Why is that?

A: Let's just hypothesize that 12 is a rigid piece of pipe. A boiler tubes-There are a lot of boiler tubes in a typical commercial boiler. So you would-To reach all the boiler tubes, once you brought the apparatus into proximity of the boiler, the boiler tube banks, you would have to constantly be changing 12. That would be impractical. What you'd want to have is something that would be flexible, that you could bring up to one tube, the tubes that are further away and still use it with tubes that are close to the apparatus. That is why I think it would have to be in a practical sense flexible type tubing.

(Malguarnera Depo. 128-130). However, Malguarnera also admitted that he has never actually cleaned a boiler or even observed someone else do so. (Malguarnera Depo. 13).

Some evidence that the casing in the British Patent is not flexible can be found in the fact that the snake or cable is repeatedly referred to as a "flexible drive shaft," "flexible shaft" or "flexible drain cleaning rod." *See, e.g.,* British Patent p. 1, ll. 5, 12, 31. Presumably, if the casing were also intended to be flexible, the patent would disclose this fact. Thus, Malguarnera's testimony, at best, creates a genuine issue of material fact as to whether the British Patent discloses a flexible guide tube.

The British Patent discloses a "reaction member 9," which is described in a variety of configurations and which defendant argues is identical to the "manually operable cable feed device...for selectively axially displacing said cable" claimed in the '905 Patent. As pointed out by plaintiffs, the British Patent does not discuss the manual operation of the reaction member. Rather, the reaction member is described as "simultaneously" and "continuously" advancing the snake or cable as the drum rotates. In addition, it does not appear possible to selectively engage or disengage the reaction member as required by Claims 1 and 22 of the '905 Patent, as properly construed by this Court. This Court has determined that the asserted claims require that, while the drum is rotating, the operator be able to feed the snake in or out of the drum or maintain the snake in a stationary position. In addition, this Court has determined that Claims 1 and 22 require the feed control device be operable by hand and not automatic.

The British Patent, however, discloses,

Means are provided for driving the drum about said axis and for simultaneously withdrawing the flexible shafting from the drum along said axis as the drum rotates.

A variety of means may be used for withdrawing the shafting from the drum as the drum rotates. In one technique an axially movable clamping member may be used, which is clamped onto the shafting adjacent the drum as the drum rotates, thereby to withdraw the shaft from the drum. In an alternative arrangement, on exiting from the drum the shafting may be fed through a nip formed between a pair of squeeze rolls or wheels one or both of which are positively driven to draw the shafting from the drum as the drum rotates.

In a preferred embodiment, however,...a reaction member is mounted in a fixed position externally of the drum, said member frictionally engaging the surface of the shafting as it emerges from the drum so that as the shaft rotates about its axis, as a result of the rotation of the drum, the outer lay of wires forming the flexible shaft engage against the reaction member and act as continuous worm or thread to draw the shafting from the drum by frictional engagement with the reaction member.

* * * * * *

In all the embodiments described, the flexible shafting may be retracted into the drum after use simply by reversing the direction of rotation of the drum, and reversing the action of the withdrawing means to feed the shafting back into the drum. In the case of the preferred embodiment, however, simple reversal of the direction of rotation of the drum will act as its own continuous thread or worm to feed itself back into the drum, consequent upon the reversal of the direction of rotation.

(British Patent p. 1, ll. 44-78, 84-96). Further evidence that the British Patent does not disclose a manually operable feed device as required by the '905 Patent is that fact that it states, "Whatever the construction, the reaction member will be held by suitable fixing means, not shown, to prevent rotation of the reaction member with the shaft." (British Patent p. 2, ll. 40-44). It is not revealed how this fixed, continuous reaction member could be manually and selectively operated.

Defendant nonetheless argues that the reaction member is disclosed as manually operable because its elements are described as movable. The British Patent discloses, "In the arrangement shown in Figs. 1 and 2, the reaction member comprises two relatively movable jaws 9 *a* and 9 *b* which are biassed [sic] towards each other by a biassing [sic] means, not shown." (British Patent p. 2, ll. 23-27). However, the patent goes on to disclose the purpose for this relative movability: "The jaws thus resiliently grip the flexible shaft..." (British Patent p. 2, ll. 27-28). The patent does not disclose that the jaws are relatively movable so that they can be manually and selectively engaged.

Thus, neither Claim 1 nor Claim 22 are anticipated by the British Patent. Dependent Claim 2 cannot be invalid as anticipated by the British Patent if each and every element of Claim 1 is not found in the alleged prior art. Therefore, defendant has failed to establish that the British Patent invalidates the '905 Patent under s. 102.

2. The '401 Patent

[57] Defendant contends that the Irwin '791 Patent discloses every feature of Claims 24 and 25 of the '401 Patent.

Plaintiffs argue that the Irwin '791 Patent does not anticipate Claim 24 or 25 of the '401 Patent and request that this Court summarily adjudicate the issue in their favor. Alternatively, plaintiffs argue that there are genuine issues of material fact as to what the Irwin '791 Patent discloses.

This Court finds that defendant has not established by clear and convincing evidence that the Irwin '791 Patent discloses every feature of Claims 24 and 25 of the '401 Patent.

The Irwin '791 Patent discloses a "spring feeding mechanism" comprised of "hingeably interconnected jaw members." (Irwin '791 Patent Abstract). According to defendant, the lower jaw 32 and the bracket 26 to which it is attached constitute a housing through which the snake 16 passes. As an initial matter, this Court finds that the figures referred to by defendant simply do not disclose what defendant contends they disclose. The lower jaw and bracket to which it is attached do not house anything. Rather, the snake feeding mechanism as a whole is "affixed to bracket 26 on cart 20 by means of a threaded stud 28." (Irwin '791 Patent col 4, ll. 16-17). Essentially, the bracket connects the lower jaw to a wheeled cart. There is no space between the two elements to house anything, let alone the snake.FN44

FN44. If the snake passes "through" anything, it is between the upper 30 and lower 32 portions of the hinge, which constitutes the claimed "unique design" of the Irwin '791 Patent. (Irwin '791 Patent Abstract). However, as pointed out by plaintiffs, this interpretation of the Irwin '791 Patent poses other problems for defendant because the patent cannot then disclose a lever for engaging the outer end of the drive actuating means.

Further evidence that the jaw and bracket do not constitute a housing can be found in the fact that the Irwin '791 Patent uses the word "housing" when referring to elements which fully house or encase something. For example, what is referred to as the cable drum in the patents-in-suit is disclosed as a "housing 14 adapted *to house* a coiled plumber's snake 15....[A] reversible electric motor 18 is used for rotating the housing and the coiled spring or snake *encased therein*." (Irwin '791 Patent col. 3, ll. 67 to col 4, ll.4) (emphasis added).

In addition, it does not appear that the Irwin '791 Patent discloses "a passage axially therethrough for receiving said snake," as required by Claims 24 and 25 of the '401 Patent, as properly construed by this Court. The Irwin '791 Patent discloses a lower jaw shaped somewhat like a "V." The snake is disclosed as passing over the "notch" in the lower jaw. However, this Court has determined that the asserted claims require that the passage must be *through* the housing material and not merely on or near the housing, such as would occur with a surface groove.

Defendant now argues that the word "housing" is a broad term that means "a frame, a box, etc. for containing some part" and that the word "passageway" fully includes a V-type notch on the top portion of the lower jaw or any type of frame that contains a snake. These arguments would more appropriately have been brought in response to plaintiffs' Motion for Claim Construction and for Summary Judgment of Infringement of Claim 24 of the '401 Patent.FN45 Regardless of when raised, however, the arguments do not support a finding of invalidity. Even accepting defendant's definition of housing, the lower jaw and bracket do not frame, box in or contain the snake. In addition, defendant's proposed construction of "passageway" cannot be accepted. A notch or surface groove is not a passageway. The '401 Patent claims a

passageway through a housing, not a notch cut into a lower support element.

FN45. "The first step of an anticipation analysis is claim construction." Helifix Ltd. v. Blok-Lok, Ltd., 208 F.3d 1339, 1346 (Fed.Cir.2000).

Therefore, defendant has failed to establish that the Irwin '791 Patent invalidates the '401 Patent under s. 102.

For these reasons, defendant is not entitled to summary judgment as to the invalidity of the '905 and '401 Patents FN46

FN46. As discussed below, a genuine issue of material fact exists as to the level of ordinary skill in the art applicable to the patents-in-issue. This dispute provides an additional basis for finding summary judgment improper as to the invalidity of the '905 and '401 Patents as anticipated. *See* Helifix, 208 F.3d at 1346 (holding trial court should have considered relevant factors in constructing hypothetical person of ordinary skill during s. 102 analysis). For this reason, plaintiffs' request for summary judgment *sua sponte* is also denied.

C. Obvious-35 U.S.C. s. 103

35 U.S.C.A. s. 103 provides,

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

[58] Whether a patent is invalid under s. 103 as obvious is a question of law based on several underlying factual inquiries, including,

(1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the prior art and the claimed invention; and (4) extent of any objective indicia of non-obviousness.

Winner Int'l Royalty Corp. v. Wang, 202 F.3d 1340, 1348 (Fed.Cir.2000). *See also* Graham, 383 U.S. at 17-18, 86 S.Ct. 684.

1. Scope and Content of Prior Art

Defendant claims that the scope and content of the prior art includes the references identified and described above. Plaintiffs do not dispute this claim.

[59] The scope of the prior art is that "reasonably pertinent to the particular problem with which the inventor was involved." Stratoflex, 713 F.2d at 1535 (quoting In re Wood, 599 F.2d 1032 (Cust. & Pat.App.1979)). This Court agrees for the purposes of this Opinion that all of the references set forth above are within the scope of the relevant prior art.

2. Differences Between the Prior Art and the Claims

With regard to differences between the prior art and the asserted claims, the question is whether the claimed inventions, "each as a whole, would have been obvious to one of ordinary skill in the art when they were made, in view of the teachings of the prior art as a whole." Stratoflex, 713 F.2d at 1537.

a. The '905 Patent

Defendant argues that the prior art references described above disclose every feature of Claims 1-3, 10 and 22 of the '905 Patent. As to Claim 1, defendant contends that the DiJoseph Patent discloses all of its elements except the last one, which claims "a manually operable cable feed device on said outer end of said guide tube for selectively axially displacing said cable relative to said drum during rotation of said drum and cable about said drum axis." According to defendant, this last limitation is disclosed by the British Patent. As to the remaining asserted claims of the '588 Patent, defendant contends that the DiJoseph and British Patents invalidate Claims 2, 3 and 22 and the DiJoseph and British Patents, along with either the Kirk or Sarcone Patent, invalidate Claim 10.

b. The '401 Patent

Defendant argues that the prior art references described above disclose every feature of Claims 26, 32, 39 and 41 of the '401 Patent. Defendant contends that the Irwin '791 and Babb Patents invalidate Claim 26, the Irwin '791 and Irwin '732 Patents invalidate Claims 32 and 41 and the Irwin '791, Irwin '732 and Grimsley Patents invalidate Claim 39.

c. The '588 Patent

Defendant argues that the prior art references described above disclose every feature of Claims 29-33 and 35-37 of the '588 Patent. As to Claim 29, defendant contends that the DiJoseph Patent discloses all of its elements except the last one, which claims "a manually operable cable feed device on said outer end of said guide tube for selectively axially displacing said cable relative to said drum during rotation of said drum and cable about said drum axis." According to defendant, this last limitation is disclosed by the British, Grimsley and Turnbaugh Patents. As to the remaining asserted claims of the '588 Patent, defendant contends that the conventional details added to those dependent claims are disclosed in the Irwin '732, Babb, Kirk, Salecker and/or Sarcone Patents.

d. Teaching, Suggestion or Reason

Plaintiffs do not directly challenge defendant's contention that all the elements of each patent are found in the prior art.FN47 Rather, plaintiffs argue that defendant has failed to make even a threshold showing of the requisite teaching, suggestion or reason to combine the references it relies upon to show obviousness.

FN47. Plaintiffs apparently support their entire argument on this point with the Declaration of Rutkowski "concerning what the prior art references disclose and do not disclose to a person having ordinary skill in the drain cleaner art." Rutkowski's Declaration, in turn, purports to incorporate interrogatory answers which are not actually attached. Plaintiffs' Second Supplemental Responses to Defendant's First and Second Sets of Interrogatories list numerous references "which may or may not" be relevant and/or prior art. (Doc. 105 Ex. K). However, plaintiffs do not set forth the claimed differences between those references and the patents-in-

suit. During his deposition, Rutkowski testified,
Q: The use of a power feed was known before your patents, wasn't it?

A: That's correct.

* * * * * *

Q: Use of a guide hose before your patent was known, right?

A: That's correct.

Q: And the use of a sink-mounted machine was certainly known about [before] your patents, right?

A: That's correct....But not in the manner in which we do it.

(Rutkowski Aug. 20 Depo. 99-100).
[60] When a determination of obviousness is based on multiple prior art references, as it is in this case, "there must be a showing of some 'teaching, suggestion, or reason' to combine the references." Winner, 202 F.3d at 1348. It is a question of fact whether such motivation has been sufficiently established. *Id.See also N.* Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed.Cir.1990) ("It is insufficient that the prior art disclosed the components of the patented device, either separately or used in other combinations; there must be some teaching, suggestion, or incentive to make the combination made by the inventor.").

Evidence of a suggestion, teaching, or motivation to combine prior art references may flow, *inter alia,* from the references themselves, the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. Although a reference need not expressly teach that the disclosure contained therein should be combined with another, combinability, in whatever form, must nevertheless be "clear and particular."

Winner, 202 F.3d at 1348 (citations omitted). *See also* Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573 (Fed.Cir.1996).

The Federal Circuit has warned against describing a claimed invention as merely "a combination of old elements." Custom Accessories, 807 F.2d at 959. A finding that claims which combine several prior art references are invalid based merely upon the fact that those similar elements exist is "contrary to statute and would defeat the congressional purpose in enacting Title 35." SmithKline Diagnostics, Inc. v. Helena Labs. Corp., 859 F.2d 878, 887 (Fed.Cir.1988). In all cases, the critical inquiry remains whether "there is

something in the prior art as a whole *to suggest* the desirability, and thus the obviousness, of making the combination." Custom Accessories, 807 F.2d at 959 (quoting Fromson v. Advance Offset Plate, Inc., 755 F.2d 1549 (Fed.Cir.1985)).

"Hindsight reconstruction" cannot be used "to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." Ecolochem, Inc. v. S. California Edison Co., 227 F.3d 1361, 1371 (Fed.Cir.2000) (quoting In re Fine, 837 F.2d 1071 (Fed.Cir.1988)). Rather, "the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references." *Id*. "Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability-the essence of hindsight." *Id*. (quoting In re Dembiczak, 175 F.3d 994 (Fed.Cir.1999)).

Defendant argues that the prior art itself provides the motivation to combine the teachings of one patent with those of another. The case defendant cites for this proposition, however, is distinguishable from the one at bar.

The plaintiff in Ryko Manufacturing Co. v. Nu-Star, Inc., 950 F.2d 714, 715 (Fed.Cir.1991), alleged infringement of a patent disclosing a combination comprised of an automatic car wash system electronically activated by an electrical numerical keypad device. The defendant asserted the defense of obviousness. Id. at 716. The Federal Circuit stated,

The district court found that the prior art taught one to use an electrical keypad device to send a signal, which, if proper, would activate a powered system by closing a switch to enable electrical current to flow to the system (e.g. an electronic garage door opener). The prior art also taught that automatic car wash systems could be activated by mechanical insertion devices. The principal difference between the prior art and the claimed invention is the use of an electronic keypad device, instead of a mechanical insertion device, for the specific purpose of selectively activating an automatic car wash system. We agree with the district court that *the desirability of the claimed combination was suggested by the prior art*.

Id. at 719-720 (emphasis added). What defendant missed, however, is that the finding of obviousness was supported by evidence that "many attempts were made" in the art of automatic car washes to solve problems associated with mechanical assertion devices which required that a coin, token, credit card or receipt be inserted. *Id*. at 715. For example, such devices "required much maintenance because the mechanical hardware could cause problems or the device could become congested with too many inserted articles." *Id*. In light of the fact that the undisputed facts established "that the level of ordinary skill in the art [was] typified by an engineer of low to medium skill in the technology of powered system activation devices," the court affirmed the finding that "designing and assembling the claimed combination would have been obvious to" such a person. *Id*. at 720. Thus, it was the desirability of the claimed invention, in combination with the low to medium skill level required, which led the court in *Ryko* to make a finding of obviousness. *See also N*. Telecom, 908 F.2d at 934 ("[T]he nature of the problem 'which persisted in the art', and the inventor's solution, are factors to be considered in determining whether the invention would have been obvious to a person of ordinary skill in that art.").

No such evidence has been submitted in this case. As set forth above, defendant cannot simply rely on the existence of prior art references to suggest their combination. Defendant must point to some teaching or motivation. Without doing so, defendant cannot meet its burden of establishing by clear and convincing

evidence that the patents-in-suit are invalid as obvious. *See* Ecolochem, 227 F.3d at 1372 ("Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.' ") (quoting Dembiczak, 175 F.3d 994); Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579 (Fed.Cir.1997) ("The absence of such a suggestion to combine is dispositive in an obviousness determination."). FN48

FN48. Defendant attempts to persuade this Court with the same technique expressly rejected by the Federal Circuit in In re Dembiczak, 175 F.3d 994 (Fed.Cir.1999), *abrogated on other grounds*. Rather than pointing to specific information in the prior art references that suggests their combination, defendant instead describes in detail the similarities between those references and the claimed invention, noting that one reference or another, in combination, described all of the limitations of the asserted claims. Id. at 1000. This "reference-by-reference, limitation-by-limitation analysis" fails to establish how the prior art references teach or suggest their combination to yield the claimed invention. *Id*.

3. The Level of Ordinary Skill in the Art

Defendant argues that the level of ordinary skill in the art at the time of the patents-in-suit is that of a mechanical engineer or one with practical experience in the manufacture of drain cleaning machinery. Defendant presents no evidence in support of this argument.

Plaintiffs claim that genuine questions of material fact exist as to this issue.

"The person of ordinary skill is a hypothetical person who is presumed to be aware of all the pertinent prior art." Custom Accessories, 807 F.2d at 962. Factors probative of the required level of skill in the art include the educational level of the inventor, the educational level of those who work in the relevant industry, the sophistication of technology involved, the types of problems encountered in the art, the prior art solutions to those problems and the rapidity with which innovations are made. Ruiz v. A.B. Chance Co., 234 F.3d 654, 666-667 (Fed.Cir.2000); Ryko, 950 F.2d at 718.

Rutkowski has a Bachelor of Science in mechanical engineering technology and over 15 years of experience in design work. (Rutkowski Nov. 15 Depo. 89-90; Rutkowski Aug. 20 Depo. 6). He testified that two of his co-workers were engineers. (Rutkowski Nov. 15 Depo. 90). However, Rutkowski also opined that the level of skill in the art is a high school graduate with five or six years of experience in drain cleaning manufacturing. (Rutkowski Nov. 15 Depo. 89).

This Court finds that, in light of the evidence submitted, there is a genuine issue of material fact as to the level of ordinary skill in the art.

4. Objective Evidence

Plaintiffs argue that objective evidence of non-obviousness creates a genuine issue of material fact precluding summary judgment. Defendant, on the other hand, argues that plaintiffs' objective evidence should not be afforded any weight.

As noted by the court in *Stratoflex,*

It is jurisprudentially inappropriate to disregard any relevant evidence on any issue in any case, patent cases

included. Thus evidence rising out of the so-called "secondary considerations" must always when present be considered en route to a determination of obviousness. Indeed, evidence of secondary considerations may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not.... Enroute to a conclusion on obviousness, a court must not stop until all pieces of evidence on that issue have been fully considered and each has been given its appropriate weight. Along the way, some pieces will weigh more heavily than others, but decision should be held in abeyance, and doubt maintained, until all the evidence has had its say.

713 F.2d at 1538 (citations omitted). *See also* Ecolochem, 227 F.3d at 1376 (noting that evidence of secondary considerations guards against the danger "that a patented invention might appear to be obvious given the excellent vision accorded by hindsight"); Truswal Sys. Corp. v. Hydro-Air Eng'g, Inc., 813 F.2d 1207, 1212 (Fed.Cir.1987) ("That evidence is 'secondary' in time does not mean that it is secondary in importance."). Thus, this Court must consider and properly weigh all of the objective, or secondary, evidence submitted by plaintiffs.

Objective evidence of non-obviousness may include commercial success, a long-felt but unresolved need, failure of others to find a solution to the problem at hand, copying, praise of the invention, departure from expert-accepted principles and widespread recognition. *See* Graham, 383 U.S. at 17-18, 86 S.Ct. 684; Pro-Mold, 75 F.3d at 1572; Custom Accessories, 807 F.2d at 960; Rosemount, 727 F.2d at 1546. It is not enough, however, to present such objective evidence in a vacuum. "A nexus is required between the merits of the claimed invention and the evidence offered, if that evidence is to be given substantial weight enroute to conclusion on the obviousness issue." Stratoflex, 713 F.2d at 1539.

(a) Commercial Success

Eugene Revolinsky FN49 and Paul Gress FN50 both testified that the original sales expectations for the K-40 product line have been exceeded. (Revolinsky Depo. 202-203; Gress Depo. 165). Timothy Smith FN51 testified that approximately 98% of the 350 to 400 K-40 units that have been sold per month from 1999 to the present were K-40GPF units. (Smith Depo. 47). Similarly, Revolinsky testified that the "unit with a guide hose and power feed is by far the most popular unit and the unit that customers choose." (Revolinsky Depo. 90-91). Rutkowski agreed. (Rutkowski Aug. 20 Depo. 84-86).

FN49. Revolinsky has been employed by Ridge for almost 30 years and is currently the Director of Engineering Services and Product Safety. (Revolinsky Depo. 3-4).

FN50. Gress is the head of Ridge's product engineering department. (Rutkowski Aug. 20 Depo. 7-8).

FN51. Smith is the Manager of Kollmann Programs, a division of Ridge. (Smith Depo. 4).

In addition, plaintiffs argue that defendant's sales numbers also support a finding of commercial success of the claimed inventions. Sales figures for the years 1999-2001 indicate that at least 95% of the total number of Model 502 Cable Machines sold have included a guide hose and power feed. (Doc. 104 Ex. L).

According to plaintiffs, this evidence demonstrates the commercial success of the claimed inventions and

weighs in favor of non-obviousness.

Defendant argues that plaintiffs have done no more than present conclusory statements of commercial success without identifying a nexus between any of the alleged real-world events and the patents-in-suit.

Commercial success alone cannot counter a challenge of obviousness unless the patent holder "can show that the commercial success of the product results from the claimed invention." J.T. Eaton & Co. v. Atl. Paste & Glue Co., 106 F.3d 1563, 1571 (Fed.Cir.1997). Thus, the patent holder must present evidence of "a nexus between the merits of the invention and its commercial success" in order "to prove that the commercial success is not ascribable to other irrelevant commercial and economic factors." Ryko, 950 F.2d at 719.

"When a patentee can demonstrate commercial success, usually shown by significant sales in a relevant market, and that the successful product is the invention disclosed and claimed in the patent, it is presumed that the commercial success is due to the patented invention." J.T. Eaton, 106 F.3d at 1571. Such commercial success weighs against a finding of obviousness, as does evidence of the commercial success of allegedly infringing devices if "a sufficient nexus between this commercial success and the patented invention" is shown. Gambro Lundia, 110 F.3d at 1579.

Where evidence of commercial success consists solely of the number of units sold, a finding of non-obviousness is not required. *See* In re Huang, 100 F.3d 135, 140 (Fed.Cir.1996) (referring to such evidence as "very weak"); Kansas Jack, Inc. v. Kuhn, 719 F.2d 1144, 1151 (Fed.Cir.1983). However, plaintiffs have presented much more than this. Plaintiffs have presented evidence that the embodiment of the patents-in-suit, i.e., a drain cleaning apparatus with guide hose and power feed attached, is significantly more commercially successful than similar devices without all the features disclosed in the patents-in-suit and is preferred by customers. While precise evidence of sales numbers or market share was not submitted, the record does establish a nexus between commercial success and the merits of the claimed inventions.

(b) Copying

Plaintiffs argue that the fact that defendant reverse engineered the K-40GPF and designed the Original Model 502 Cable Machine to look like the K-40GPF constitutes evidence of copying and weighs in favor of non-obviousness.

Defendant argues that reverse-engineering a device is not the same as copying it. In addition, defendant claims that "by saying that it wanted a machine similar in appearance to plaintiffs' machine, [it] did not in any way mean that it wanted to copy the patents-in-suit," of which it was not even aware.

Whether defendant's explanations of its motivation for reverse engineering the K-40GPF and its desire to develop a device similar in appearance are credible is a question of fact not resolvable at the summary judgment stage. Even assuming that defendant did copy the K-40GPF, however, evidence of copying does not always constitute evidence of non-obviousness. "[A] showing of copying is only equivocal evidence of non-obviousness in the absence of more compelling objective indicia of other secondary considerations." Ecolochem, 227 F.3d at 1380.

In Cable Electric Products, Inc. v. Genmark, Inc., 770 F.2d 1015, 1027 (Fed.Cir.1985), *overruled on other grounds,* the court rejected the argument that the defendant's access to the plaintiff's product constituted

evidence of non-obviousness, noting that "[a]ccess to, and analysis of, other products in the market is hardly rare, even in the design stages of competing devices." In addition, the court held that "more than the mere fact of copying by an accused infringer is needed to make that action significant to a determination of the obviousness issue." Id. at 1028.

Rather than supporting a conclusion of obviousness, copying could have occurred out of a general lack of concern for patent property, in which case it weighs neither for nor against the nonobviousness of a specific patent. It may have occurred out of contempt for the specific patent in question, only arguably demonstrating obviousness, or for the ability or willingness of the patentee financially or otherwise to enforce the patent right, which would call for deeper inquiry. Even widespread copying could weigh toward opposite conclusions, depending on the attitudes existing toward patent property and the accepted practices in the industry in question. It is simplistic to assert that copying per se should bolster the validity of a patent.

Id.

(c) Recognition as Innovative Product

Plaintiffs argue that the fact that the K-40GPF won an award for innovation weighs in favor of non-obviousness.

Defendant contends that the magazine which granted the award is obscure and the award lacks probative value without an explanation of the number and identity of the people who voted for it.

In January 2000, Ridge received notification from the editor of *Plant Engineering* magazine FN52 congratulating the company on winning the Bronze Award in the Maintenance Products category of the magazine's Product of the Year Awards competition. (Doc. 104 Ex. O). The notification explains that initial entries for the award are screened by a panel of plant engineers and then voted on by readers. (Doc. 104 Ex. O).

FN52. *Plant Engineering* magazine is promoted as "The problem solving resource for plant engineers." (Doc. 104 Ex. P at 1).

An article in the *Plant Engineering* Product of the Year issue states,

The 47 winners in the 1999 "Product of the Year" contest combine necessity, technology, and simple ideas. These concepts, teamed with innovation, embody the winners in this year's contest. In our November 1999 issue, we presented the 150 finalists in this competition, and asked our readers to select the products that they found to be the most useful and innovative. The Grand Award, pictured below, was the overall choice for best new product of 1999. Gold, Silver, and Bronze winners in each of our 15 product categories are listed on the following pages.

Awards were presented March 13, 2000, at a black-tie reception during the National Plant Engineering Show in Chicago.

(Doc. 104 Ex. P at 59). A photo of the K-40 drain cleaner with guide hose and power feed attached appears

as the Bronze Award Winner in the Maintenance Products category, along with Ridge's name and website address. (Doc. 104 Ex. P at 64).

While more information concerning the popularity of *Plant Engineering* in the relevant field, the number and identity of its readers and the number of readers who voted might increase or decrease the weight to which this evidence is entitled, the evidence as presented nonetheless weighs in favor of a finding of non-obviousness. *See* Ecolochem, 227 F.3d at 1380 (noting the acclamation a product receives when it is released is "indicia of non-obviousness").

(d) Acquiescence

Prior to filing the instant suit, plaintiffs filed a complaint against General Wire and Spring Co. alleging infringement of the '401 and '588 Patents. *Emerson Electric Co, v. General Wire Spring Co.,* No. 00 CV 156 (N.D.Ohio). The parties in that case resolved their dispute through mediation prior to trial, with General Wire paying damages for infringement and agreeing to an injunction against further infringement.

Plaintiffs argue that the acquiescence to its patent rights by General Wire weighs in favor of non-obviousness.

Defendant claims that, because plaintiffs' settlement with General Wire involved such a small amount of money, one can easily conclude that it was reached merely to avoid the cost of litigation.

"Recognition and acceptance of the patent by competitors who take licenses under it to avail themselves of the merits of the invention is evidence of nonobviousness." Stratoflex, 713 F.2d at 1539. Similarly, recognition and acceptance of a patent by competitors who pay damages and agree to discontinue the manufacture, use, sale and importing of allegedly infringing products is evidence which weighs against a finding of obviousness. (Doc. 104 Ex. Q).

[61] Despite all defendant's arguments to the contrary, plaintiffs have presented sufficient objective evidence to create a genuine issue of material fact as to the obviousness of the '588, '905 and '401 Patents, particularly in light of the conflicting evidence concerning the differences between the prior art and the asserted claims and defendant's failure to present evidence of some teaching, suggestion or reason to combine the references upon which it relies. Therefore, defendant's request for summary judgment as to the validity of the patents-in-suit must be denied.

III. Enforceability

Plaintiffs move for summary judgment that the '588 and '905 Patents are not unenforceable because of inequitable conduct. Defendant argues that the evidence presented establishes a prima facie case of inequitable conduct and, alternatively, that genuine issues of material fact exist as to the materiality of the information plaintiffs withheld from the PTO and the intent with which they did so.

[62] [63] "Applicants for U.S. patents and their representatives before the PTO are subject to a duty of candor, good faith and honesty in their prosecution of patent applications." Union Oil, 208 F.3d at 1001. *See also* 37 C.F.R. s. 1.56. The breach of this duty gives rise to a finding of inequitable conduct which may, in turn, render a patent unenforceable. Union Oil, 208 F.3d at 1001; Elk Corp. of Dallas v. GAF Bldg. Materials Corp., 168 F.3d 28, 30 (Fed.Cir.1999). However, without a showing of inequitable conduct, "a breach of the disclosure duty alone does not render the patent unenforceable." Critikon, Inc. v. Becton

Dickinson Vascular Access, Inc., 120 F.3d 1253, 1256 (Fed.Cir.1997). "The courts have consistently rejected the notion of per se forfeiture based on non-fraudulent failure to comply with a rule of practice before the PTO." Seiko Epson Corp. v. Nu-Kote Int'l, Inc., 190 F.3d 1360, 1367 (Fed.Cir.1999).

[64] Thus, a finding of inequitable conduct for the purpose of establishing that a patent is unenforceable requires two steps:

First, the trial court must determine whether the conduct meets a threshold level of materiality. The trial court must then also determine whether the evidence shows a threshold level of intent to mislead the PTO.

PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc., 225 F.3d 1315, 1318-1319 (Fed.Cir.2000). *See also* Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp., 267 F.3d 1370, 1379 (Fed.Cir.2001). Materiality and intent to deceive must both be proven by clear and convincing evidence. Upjohn Co. v. Mova Pharm. Corp., 225 F.3d 1306, 1312 (Fed.Cir.2000). Both the patent holder's intent and the materiality of the conduct are questions of fact. GFI, Inc. v. Franklin Corp., 265 F.3d 1268, 1273 (Fed.Cir.2001). However, the ultimate question of whether the patent holder engaged in inequitable conduct "is entirely equitable in nature, and thus not an issue for a jury to decide." PerSeptive, 225 F.3d at 1318.

[65] [66] Information is material and must be disclosed if there is a substantial likelihood that a reasonable examiner would consider the information important when deciding whether to allow the patent application to issue. PerSeptive, 225 F.3d at 1321. An otherwise material reference need not be provided, however, "if it is merely cumulative to or less material than other references before the examiner." Upjohn, 225 F.3d at 1312. *See also* GFI, 265 F.3d at 1274.

[67] In addition, the inequitable conduct must be engaged in "with the specific intent to mislead, not merely from carelessness in the performance of a duty." Speedplay, Inc. v. Bebop, Inc., 211 F.3d 1245, 1259 (Fed.Cir.2000). "[M]ere gross negligence is insufficient to justify an inference of an intent to deceive the PTO." Baxter Int'l, Inc. v. McGaw, Inc., 149 F.3d 1321, 1329 (Fed.Cir.1998). *See also* Kingsdown Med. Consultants, Ltd. v. Hollister Inc., 863 F.2d 867, 876 (Fed.Cir.1988). "Rather, clear and convincing evidence must prove that an applicant had the specific intent to accomplish an act that the applicant ought not to have performed, *viz.,* misleading or deceiving the PTO." Molins PLC v. Textron, Inc., 48 F.3d 1172, 1181 (Fed.Cir.1995).

Direct evidence of an intent to deceive is rarely found. GFI, 265 F.3d at 1274. For this reason, the element of intent is general proven by inferences drawn from facts and circumstances surrounding the patent applicant's overall conduct which permit "a confident judgment that deceit has occurred." *Id.See also* Elk, 168 F.3d at 32. However, as noted above, materiality and intent are separate required elements. "Intent to deceive can not be inferred solely from the fact that information was not disclosed; there must be a factual basis for a finding of deceptive intent." Hebert v. Lisle Corp., 99 F.3d 1109, 1116 (Fed.Cir.1996). Therefore, without more, the omission of a material reference cannot establish an intent to deceive. GFI, 265 F.3d at 1274. *See also* Multiform, 133 F.3d at 1482 ("[I]nference without any probative evidence is insufficient to show culpable intent.").

[68] On the other hand, the "mere denial of intent to mislead (which would defeat every effort to establish inequitable conduct) will not suffice." GFI, 265 F.3d at 1275. This Court "must weigh all the evidence, including evidence of good faith," before making a determination of intent. GFI, 265 F.3d at 1274.

Once the threshold levels of materiality and intent have been established, the trial court is required to weigh materiality and intent. The more material the conduct, the less evidence of intent will be required in order to find that inequitable conduct has occurred. In light of all the circumstances, the court must then determine whether the applicant's conduct is so culpable that the patent should be held unenforceable.

PerSeptive, 225 F.3d at 1318. *See also* GFI, 265 F.3d at 1273. If such culpable inequitable conduct is found with respect to one claim, the entire patent is unenforceable. Baxter, 149 F.3d at 1332.

Examples of inequitable conduct include affirmative misrepresentations of material fact, the failure to disclose material information and submissions of false material information. PerSeptive, 225 F.3d at 1318.

As noted above, defendant filed counterclaims alleging that both the '588 and '905 Patents are unenforceable. Defendant contends that plaintiffs failed to disclose material prior art to the PTO during prosecution of the '588 and '905 Patents and engaged in other misconduct which supports an inference of their intent to deceive the PTO.

A. Patents Not Disclosed

[69] Defendant contends that plaintiffs engaged in inequitable conduct by failing to disclose the Irwin '791 and Turnbaugh Patents to the PTO during prosecution of the '588 Patent and failed to disclose the Turnbaugh Patent during the prosecution of the '905 Patent. To prevail on its defense of inequitable conduct, defendant must establish by clear and convincing evidence that plaintiffs withheld this information from the PTO, the information was material and plaintiffs acted with the intent to deceive. *See* GFI, 265 F.3d at 1273.

Inequitable conduct due to failure to disclose material information must be proven by clear and convincing evidence of: (1) prior art that was material; (2) knowledge chargeable to an applicant of that prior art and of its materiality; and (3) failure of the applicant to disclose the art resulting from an intent to mislead the PTO. Such proof of inequitable conduct may be rebutted by a showing that: (a) the prior art was not material; (b) if the prior art was material, a showing that the applicant did not know of that art; (c) if the applicant did know of that art, a showing that the applicant did not know of its materiality; or (d) a showing that the applicant's failure to disclose the art did not result from an intent to mislead the PTO

Elk, 168 F.3d at 30 (citations omitted). *See also* Hebert, 99 F.3d at 1115 ("An applicant can not be held to have acted inequitably for not providing the examiner with information that was not material and that was not culpably withheld."); Baxter, 149 F.3d at 1329 ("In a case involving an omission of a material reference to the PTO, there must be clear and convincing evidence that the applicant made a deliberate decision to withhold a known material reference.").

As evidence of the materiality of the Irwin '791 and Turnbaugh Patents, defendant points to the fact that the European Patent Office cited both these patents as relevant to the '401 Patent.

After filing the application which issued as the '401 Patent but before that patent was issued, plaintiffs filed an application with the European Patent Office seeking protection for the same device (hereafter "European '401 Application"). The '401 Patent issued on May 11, 1999. On August 3, 1999, the European Patent Office issued a Search Report relative to the European '401 Application. (Doc. 124 Ex. F). That Search Report cites the Turnbaugh Patent as relevant as "technological background" and the Irwin '791 Patent as "particularly relevant if taken alone." (Doc. 124 Ex. F). At the time the Search Report was issued, the '588 Patent

application was still pending and the application which issued as the '905 Patent had not yet been filed.

1. The Turnbaugh Patent

The Turnbaugh Patent is entitled "Flexible Rotary Reaming Apparatus." (Turnbaugh Patent at title page). It discloses "a mechanism whereby a rotary snake or the like can be gripped and moved longitudinally while the snake is rotated" during the drain cleaning process. (Turnbaugh Patent col. 1, ll. 3-5). The patent also discloses,

Having in mind the conditions of operation involved and the difficulties encountered, it is a prime object of this invention to provide a chuck for gripping rotary snakes to facilitate the application of manual force or produce longitudinal movement of the snake in either direction while the snake is rotating.

(Turnbaugh Patent col. 1, ll. 28-34). The preferred embodiment of the Turnbaugh Patent has a casing 10 having an axial passage 12 to accommodate a snake S, three bearing elements or rollers 16, 18 and 22, and an extensible presser pin 30 actuated by a handle 32. (Turnbaugh Patent col. 2, ll. 30-58). As disclosed by the patent,

In operation it is customary for snakes S to be rotated with considerable force by mechanical means (not shown), such as geared electric motors or comparable equipment. At the same time that the snake is rotated, it is fed in or pulled out of the conduit [drain] to accomplish a cleaning or reaming of the conduit to remove it after such an operation has been completed. It is with respect to the latter longitudinal movement of the snake while it is rotating that my invention particularly applies.

(Turnbaugh Patent col. 3, ll. 12-22).

Thus, the Turnbaugh Patent discloses a device to be used to feed a cable into and out of a drain to be cleaned. However, it does not disclose a cable feed device at the outer end of a flexible guide tube. Thus, this Court finds that the Turnbaugh Patent is not material to the '588 and '905 Patents, i.e., there is not a substantial likelihood that a reasonable examiner would consider the Turnbaugh Patent important when deciding whether to allow those patent applications to issue.FN53

FN53. This Court's conclusion is supported by the fact that the European Patent Office did not consider the Turnbaugh Patent relevant to the European counterpart to the '588 Patent. *See* Search Report dated March 21, 2000. (Doc. 92 Ex. J).

Even if the Turnbaugh Patent were material to the patents-in-suit, however, plaintiffs did not engage in inequitable conduct by failing to disclose it. Information is cumulative of disclosed references if it "teaches no more than what a reasonable examiner would consider to be taught by the prior art already before the PTO." Regents of the Univ. of California v. Eli Lilly & Co., 119 F.3d 1559, 1575 (Fed.Cir.1997). At best, the Turnbaugh Patent is merely cumulative to and certainly less material than other references plaintiffs disclosed to the examiner, such as the Irwin '732 and Babb Patents, which both disclose devices for feeding cables for use in conjunction with plumbing tools more similar to those disclosed in the patents-in-suit. *See* Halliburton Co. v. Schlumberger Tech. Corp., 925 F.2d 1435, 1440-1442 (Fed.Cir.1991) (finding defendant failed to establish inequitable conduct where the references found by the examiner were more closely related to the patent application than the uncited art).

In addition, defendant has presented absolutely no evidence that plaintiffs failed to disclose the Turnbaugh Patent with the intent to deceive the PTO. As noted above, the mere failure to disclose material information of which one is aware does not constitute inequitable conduct. According to defendant, plaintiffs' intent to deceive is evidenced by the fact that they argued "that the prior art did not include the very features taught by the Turnbaugh Patent." The argument referred to by defendant does not support its contention. As set forth above, in the Supplemental IDS submitted by plaintiffs in connection with the '588 Patent, plaintiffs stated,

None of the prior art submitted herewith discloses drain cleaning apparatus including a flexible guide tube for receiving a drain cleaning cable and having an inner end supported on the apparatus frame and a manually operable cable feed device on the outer end of the guide tube.

(Doc. 96 Ex. G). However, the Turnbaugh Patents also fails to disclose a drain cleaning apparatus with a manually operable cable feed device attached to the outer end of a flexible guide tube.

2. The Irwin '791 Patent FN54

FN54. Plaintiffs object to this Court's consideration of the Irwin '791 Patent on the grounds that defendant failed to timely supplement its discovery responses and provide notice of its intent to rely on that patent to establish unenforceability. In the interests of full consideration of all the relevant evidence, this Court will address defendant's arguments concerning the Irwin '791 Patent.

The Irwin '791 Patent was discussed at length above. While this Court has found that the Irwin '791 Patent does not disclose every element of the '401 Patent, it is likely that a reasonable examiner would consider the Irwin '791 Patent relevant to the '401 Patent. However, this Court finds that the Irwin '791 Patent is not material to the '588 Patent because it does not disclose a cable feed device at the outer end of a flexible guide tube and is, at best, merely cumulative to other references plaintiffs disclosed to the examiner. In addition, defendant has failed to present evidence that plaintiffs had actual knowledge of its materiality or that plaintiffs failed to disclose it with the intent to deceive the PTO.FN55

FN55. The Search Report issued by the European Patent Office relative to the European counterpart to the '588 Patent cites the Irwin '791 Patent as "particularly relevant," either taken alone or if combined with another document in the same category. (Doc. 92 Ex. J). At the time plaintiffs received this Search Report, the '588 Patent had already issued, but the '905 Patent was still pending. Plaintiffs disclosed every patent cited by the European Patent Office to the PTO on June 14, 2000 in connection with the prosecution of the '905 Patent.

B. Other Conduct

According to defendant, plaintiffs made other misrepresentations to the PTO which support an inference of an intent to deceive.

First, defendant argues that plaintiffs engaged in inequitable conduct by initially presenting a description of the claimed invention which required that the inner end of the guide tube be connected to the frame and then slipping Claim 22 of the '905 Patent past the examiner without pointing out that it does not require such

a connection. According to defendant, plaintiffs took this action to improve their infringement position against defendant because the Model 502 Cable Machines do not have a guide tube supported on the frame.

This argument has no merit. As an initial matter, it should be noted that a patent examiner is presumed to have done his job thoroughly. There is no evidence to suggest that plaintiffs acted surreptitiously in submitting what would become Claim 22 of the '905 Patent. This Court assumes that the patent examiner examined application claim 65 just as he examined all the other proposed claims. This assumption is supported by the fact that the examiner's initials and notations appear on the Amendment requesting that application claim 65 be added to the '905 Patent, including the correction of a typographical error in the last line of the proposed claim language. (Doc. 92 Ex. E).

In addition, as the Federal Circuit stated in *Kingsdown,*

[T]here is nothing improper, illegal or inequitable in filing a patent application for the purpose of obtaining a right to exclude a known competitor's product from the market; nor is it in any manner improper to amend or insert claims intended to cover a competitor's product the applicant's attorney has learned about during the prosecution of a patent application. Any such amendment or insertion must comply with all statutes and regulations, of course, but, if it does, its genesis in the marketplace is simply irrelevant and cannot of itself evidence deceitful intent.

863 F.2d at 874. Thus, an inference of deceit cannot be drawn from plaintiffs' attempts to broaden their patent rights or cover defendant's devices.

Second, defendant argues that plaintiffs' mischaracterization of the Boelens Patent constitutes an intentional misrepresentation to the PTO. As noted above, the IDS states,

The patents identified on Form PTO-1449 attached hereto and which patents are discussed below, represent the most relevant prior art presently known to applicant in connection with the subject matter of the above-identified patent application.

* * * * * *

4,570,281 to Boelens discloses a motorized snake drum having a guide tube within the drum and a tubular operating sleeve coupled to the outlet end of the drum.

(Doc. 96 Ex. F). The Boelens Patent discloses a snake guide segment 54 inside the drum 74 "for the purpose of guiding the plumber's snake as it is operated by the apparatus" and an external operating sleeve 82 fitted to the bearing unit 42 of the drum. (Boelens Patent col. 2, ll. 62-65 and col. 3, ll. 40-42). This Court finds that plaintiffs' description of the Boelens Patent does not misrepresent the actual disclosures of the patent.

Even if plaintiffs' description was inaccurate, however, it cannot constitute inequitable conduct. In Akzo N.V. v. U.S. International Trade Commission, 808 F.2d 1471, 1482 (Fed.Cir.1986), the defendant claimed that Du Pont had engaged in inequitable conduct during its arguments to the patent examiner. In particular, Du Pont had attempted to distinguish its process, referred to as the Blades process, from the closest prior art processes. Id. at 1481. The Federal Circuit affirmed the district court's finding that such arguments did not constitute material misrepresentations. Id. at 1482. The court stated,

As [defendant] concedes, the examiner had both the Morgan '645 patent and the Kwolek '542 patents before him throughout the examination process. It was on the basis of these two patents that Du Pont's first three applications were rejected. The mere fact that Du Pont attempted to distinguish the Blades process from the prior art does not constitute a material omission or misrepresentation. The examiner was free to reach his own conclusion regarding the Blades process based on the art in front of him. Nor does Du Pont's affidavit, advocating a particular interpretation of the Morgan '645 and Kwolek '542 patents (albeit favorable to Du Pont's position), show any intent to mislead the PTO. Du Pont's intent was not to mislead, but rather to distinguish prior art from the Blades process and demonstrate to the examiner that the Blades process would not have been obvious in light of Morgan '645 and Kwolek '542.

Id. Similarly, plaintiffs provided the examiner with a copy of the Boelens Patent which he was free to examine himself. No intent to deceive is evidenced by plaintiffs' attempt to distinguish the Boelens Patent from the claimed inventions.

Finally, defendant argues that plaintiffs have demonstrated bad faith in that the testimony of plaintiffs' patent attorneys "was a complete evasion, supporting an inference of an intent to deceive." Defendant cites the deposition testimony of Kent Daniels and Robert Vickers in support of its claim that plaintiffs failed to provide a good faith explanation for the failure to cite the Irwin '791 and Turnbaugh Patents.

After being handed a copy of the Turnbaugh Patent, Daniels testified,

Q: Do you recognize that document?

A: No, I do not.

Q: Never seen it before?

A: I won't say I have never seen it, but I do not recognize it at this time.

(Daniels Depo. 84). Daniels's failure to recall the Turnbaugh Patent is not evidence of an intent to deceive. In addition, defendant leaves out the fact that Daniels also testified that his firm did not file the foreign patent applications which correspond to the patents-in-suit. (Daniels Depo. 11-12, 84).

With regard to a "Request for Reconsideration" filed in connection with the '905 Patent, Daniels testified,

Q: And whose signature-well, it is your signature, but who wrote it in there?

A: I don't know.

Q: I'm sorry. Let me rephrase it. It is somebody that tried to mimic your signature?

A: No. It is not an effort to mimic my signature. It just simply is my signature-or my name.

Q: Your name?

A: Yes. And I have in the past authorized my secretary to sign something if I had prepared it and I'm not going to be there to sign it.

Q: Is that your secretary's handwriting there?

A: I don't know.

Q: Does it look like hers?

Q: I don't know.

* * * * * *

Q: So that's not your signature on the terminal disclaimer either?

A: No, it is not.

Q: Is there any other marks there that would identify that it is somebody else signing on your behalf?

A: No.

(Daniels Depo. 33-35). Daniels did not attempt to disclaim the contents of the Request for Reconsideration, nor does defendant contend that document contains misrepresentations. This Court simply cannot make a finding of an intent to deceive from the fact that Daniels allows authorized persons to sign his name on certain documents or that he could not state definitively who had signed his name on the Request for Reconsideration.

Finally, with regard to what became Claim 22 of the '905 Patent, Vickers testified,

Q: Now, let me ask you to take a look at that [application] claim 65 again. Did you draft that claim?

A: No.

Q: Who did?

A: I don't know.

Q: Is that your signature on page two of that amendment?

A: Yes.

Q: Okay. So you signed it without drafting this?

A: Yes.

(Vickers Depo. 18). Again, defendant leaves out important relevant facts. Daniels is the attorney at Vickers Daniel & Young who drafted and prosecuted all three patents-in-suit. (Daniels Depo. 59-63). Every other attorney in the firm, with the possible exception of one, helped Daniels with the prosecution of the '905 Patent while he was ill and recovering from surgery. (Daniels Depo. 26, 31, 62-63; Vickers Depo. 36-37).

Plaintiffs do not disclaim the contents of application claim 65 and, as set forth above, that claim was thoroughly reviewed by the examiner. Thus, the fact that Vickers could not identify who drafted application claim 65 has no bearing on defendant's claims of inequitable conduct.

In addition, plaintiffs do not bear the burden of presenting evidence of a good faith explanation for the failure to cite the Irwin '791 and Turnbaugh Patents. Rather, defendant must establish by clear and convincing evidence that those patents were material to the prosecution of the '588 and '905 Patents, that plaintiffs were aware of them and their materiality and that plaintiffs purposely chose not to disclose them to the PTO with the intent to deceive. As set forth above, defendant has failed to present any such evidence. *See* Nordberg, Inc. v. Telsmith, Inc., 82 F.3d 394, 398 (Fed.Cir.1996) ("Furthermore, because [defendant] did not make a threshold showing of intent by [plaintiff] to mislead the PTO, [plaintiff] had no burden to produce evidence of good faith and the court properly declined to balance materiality and intent.").

The Federal Circuit has recognized the recent proliferation of baseless allegations of inequitable conduct:

One who has engaged in inequitable conduct has inflicted damage on the patent examining system, obtaining a statutory period of exclusivity by improper means, and on the public, which must face an unlawfully-granted patent. Loss of one's patent and damage to reputation are justified penalties for such conduct. On the other hand, unjustified accusations of inequitable conduct are offensive and unprofessional. They have been called a "plague" on the patent system. Unjustified accusations may deprive patentees of their earned property rights and impugn fellow professionals. They should be condemned.

Molins, 48 F.3d at 1182 (citation omitted). *See also* Burlington Indus., Inc. v. Dayco Corp., 849 F.2d 1418, 1422 (Fed.Cir.1988) (noting that baseless charges of inequitableconduct by attorneys against other attorneys "destroy the respect for one another's integrity"). Unfortunately, in this case, defendant's allegations of inequitable conduct fall into the category of unjustified accusations.FN56 Plaintiffs have established that no genuine issues of material fact exist by showing that there is absolutely no evidence to support a claim of inequitable conduct. Therefore, plaintiffs are entitled to summary judgment as to the enforceability of the '588 and '905 Patents.

FN56. The arguments and allegations contained in defendant's brief in opposition to plaintiffs' Motion for Summary Judgment as to the enforceability of the '588 and '905 Patents are specious at best. In fact, this Court agrees wholeheartedly with plaintiffs' statement that, "[i]nstead of producing evidence of a genuine issue of fact, Spartan resorts to disparaging reputable attorneys and hiding behind its lack of discovery to imply a sinister intent."

CONCLUSION

As set forth above, this Court finds as follows:

-> the Original Model 502 Cable Machine literally infringes Claim 29 of the '588 Patent as a matter of law;

-> the Modified Model 502 Cable Machine in the second configuration does not literally infringe Claim 29 or 35 of the '588 Patent but does infringe those claims under the doctrine of equivalents as a matter of law;

-> genuine issues of material fact preclude summary judgment as to the existence of the third configuration

of the Modified Model 502 Cable Machine and the literal infringement of Claims 29 and 35 of the '588 Patent by that configuration;

-> the Modified Model 502 Cable Machine in the second configuration literally infringes Claims 1, 2 and 22 of the '905 Patent as a matter of law;

-> genuine issues of material fact preclude summary judgment as to the existence of the third configuration of the Modified Model 502 Cable Machine and the literal infringement of Claims 1, 2, 3, 10 and 22 of the '905 Patent by that configuration;

-> the Original Model 502 Cable Machine literally infringes Claim 24 of the '401 Patent as a matter of law;

-> the Modified Model 502 Cable Machine does not literally infringe Claim 24 of the '401 Patent as a matter of law;

-> defendant did not bear its burden of proving Claims 1, 2 and 22 of the '905 Patent invalid as anticipated by British Patent;

-> defendant did not bear its burden of proving Claims 24 and 25 of the '401 Patent invalid as anticipated by Irwin '791 Patent;

-> defendant did not bear its burden of proving the '588, '905 and '401 Patents invalid as obvious; and

-> the '588 and '905 Patents are not unenforceable as a matter of law.

For these reasons, Plaintiffs' Motion for Claim Construction of Claims 29 and 35 of the '588 Patent and of Claims 1 and 22 of the '905 Patent is granted as set forth above; Plaintiffs' Motion for Claim Construction and for Summary Judgment of Infringement of Claim 24 of the '401 Patent is granted as set forth above; Spartan's Cross Motion for Summary Judgment of Claim 24 of the '401 Patent is granted in part and denied in part; Plaintiffs' Motion for Partial Summary Judgment of Infringement of Claim 29 of the '588 Patent and of Claim 22 of the '905 Patent is granted; Spartan's Cross Motion as to Claim 29 of the '588 Patent and Claim 22 of the '905 Patent is denied; Spartan's Motion for Summary Judgment on Non-Infringement is denied; Spartan's Motion for Summary Judgment on Invalidity is denied; and Plaintiffs' Motion for Partial Summary Judgment of No Unenforceability is granted.

In addition, this Court hereby *sua sponte* grants summary judgment in favor of plaintiffs as to infringement under the doctrine of equivalents of Claims 29 and 35 of the '588 Patent by the Modified Model 502 Cable Machine in the second configuration and as to literal infringement of Claims 1 and 2 of the '905 Patent by the Modified Model 502 Cable Machine in the second configuration.

IT IS SO ORDERED.

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