United States District Court,
D. New Jersey.

SDS USA, INC,
Plaintiff.
v.
KEN SPECIALTIES, INC,
Defendant.

No. CIV.A. 99-133

Aug. 3, 2000.

Owner of patent for method of mass producing cardboard boxes sued competitor for infringement. Defendant counterclaimed that patent was invalid for indefiniteness and failure to satisfy written description requirement. On defendant's motion for summary judgment on counterclaims, the District Court, Walls, J., held that: (1) patent was not invalid for indefiniteness, and (2) patent satisfied written description requirement.

Motion denied.

5,870,919. Construed.

Keith Gilman, Roy Wepner, Jason Garbell, Lerner, David, Littenberg, Krumholz & Mentlik, Westfield, NJ, Frank Chau, Frank DeRosa, F. Chau & Associates, East Meadow, NY, for Plaintiff SDS USA, Inc.

Peter Cobrin, David Denenberg, Orwen Warshavsky, Cobrin & Gittes, New York City, Marvin Gittes, North Bergen, NJ, for Defendant Ken Specialties, Inc.

OPINION

WALLS**, District Judge.**

INTRODUCTION

U.S. Patent No. 5,870,919 (" '919 patent") issued to plaintiff SDS USA as assignee on February 16, 1999. This patent teaches an "apparatus" (claims 1-7), "method" (claims 8-11) and "system" (claim 12) to aid the mass production of cardboard boxes and similar items. The claimed machine shapes a die from metal rule. The die, later placed in a diecutting machine, is used to stamp out box blanks from sheet material such as cardboard. The '919 patent issued from U.S. Patent Application No. 49,391 (" '391 application"), which had been filed in March 1998. The '391 application was a continuation of U.S. Patent Application No. 668,379 (" '379 application"), filed June 1996, which claimed the priority date of a Korean patent application filed in

June 1995. The inventor of the '919 patent is Byung-Jun ("Brian") Song, President of SDS.

Defendant Ken Specialties moves for summary judgment that the '919 patent is invalid for indefiniteness, 35 U.S.C. s. 112, para. 2, and for failure to satisfy the written description requirement, 35 U.S.C. s. 112, para. 1. Each party requests that the court make a *Markman* ruling to construct the '919 patent claims.

The court conducted hearings and heard oral argument on July 21 and July 31, 2000. At the outset, the court denied Ken's motion for leave to file a sur-reply memorandum. Ken had also moved in limine to preclude testimony by plaintiff's expert; after a *Daubert* hearing, the court concluded that SDS' proffered expert Stephen Tricamo was not skilled in the art of diecutting and diemaking, and granted Ken's motion to preclude his testimony concerning issues unique to that field. However, the court reserved the right to draw upon Dr. Tricamo's expertise in general, reguarding universal principles of engineering.

ANALYSIS

1. Summary Judgment Standard

Summary judgment is appropriate where the moving party establishes that "there is no genuine issue as to any material fact and that [it] is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c). A factual dispute between the parties will not defeat a motion for summary judgment unless it is both genuine and material. *See* Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 247-48, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). A factual dispute is genuine if a reasonable jury could return a verdict for the non-movant and it is material if, under the substantive law, it would affect the outcome of the suit. *See* Anderson, 477 U.S. at 248, 106 S.Ct. 2505. The moving party must show that if the evidentiary material of record were reduced to admissible evidence in court, it would be insufficient to permit the non-moving party to carry its burden of proof. *See* Celotex v. Catrett, 477 U.S. 317, 318, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986).

Once the moving party has carried its burden under Rule 56, "its opponent must do more than simply show that there is some metaphysical doubt as to the material facts in question." Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586, 106 S.Ct. 1348, 89 L.Ed.2d 538 (1986). The opposing party must set forth specific facts showing a genuine issue for trial and may not rest upon the mere allegations or denials of its pleadings. See Sound Ship Building Corp. v. Bethlehem Steel Co., 533 F.2d 96, 99 (3rd Cir.1976), *cert. denied,* 429 U.S. 860, 97 S.Ct. 161, 50 L.Ed.2d 137 (1976). At the summary judgment stage the court's function is not to weigh the evidence and determine the truth of the matter, but rather to determine whether there is a genuine issue for trial. *See* Anderson, 477 U.S. at 249, 106 S.Ct. 2505. In doing so, the court must construe the facts and inferences in the light most favorable to the non-moving party. *See* Wahl v. Rexnord, Inc. 624 F.2d 1169, 1181 (3rd Cir.1980).

2. Indefiniteness

[1] [2] [3] Ken initially proceeds under 35 U.S.C. s. 112, para. 2: "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." The purpose of the definiteness requirement is to notify potential competitors whether their inventions infringe the patent. Morton Int'l, Inc., v. Cardinal Chemical Co., 5 F.3d 1464, 1470 (Fed.Cir.1993). Satisfaction of this requirement is a question of law. Exxon Research and Eng'g Co. v. United States, 46 Fed. Cl. 278, 281 (Fed.Cl.2000). Of course, a patent is presumed valid, *see* 35 U.S.C. s. 282, and any challenger must produce clear and convincing evidence to overcome that presumption.

[4] "The test for definiteness is whether one skilled in the art would understand the bounds of the claim when read in light of the specification.... If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, s. 112 demands no more." Miles Laboratories, Inc. v. Shandon Inc., 997 F.2d 870, 874-75 (Fed.Cir.1993) (citations omitted). The degree of precision needed to meet the definiteness requirement varies with the nature of the subject matter. Id. at 875.

Though a court usually seeks the conventional definitions of terms, a patentee is free to act as his or her own lexicographer. Beachcombers v. WildeWood Creative Products, Inc., 31 F.3d 1154, 1158 (Fed.Cir.1994). Accordingly, this court must scrutinize "the way one of skill in the art would interpret the claims in view of the written description portion of the specification"-and usually limit the inquiry to such evidence. Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 2000 WL 867589, at *3-4 and n. 4 (Fed.Cir.2000). As in a *Markman* analysis, the court first examines the intrinsic evidence (the language in the patent claim and specification), then turns to extrinsic evidence only if the intrinsic evidence "is insufficient to enable the court to construe disputed claim terms." Exxon, 46 Fed. Cl. at 280-84 (citation omitted).

Ken makes indefiniteness arguments based on three phrases found in the '919 patent claims: "ribbon stock," "elongate member" and "transferring unit."

A. Ribbon Stock

[5] Defendant's first argument concerns the term "ribbon stock," found in each of the 12 claims of the '919 patent. *See* claims 1-7 (describing a "metallic ribbon stock folding apparatus"), claims 8-11 ("method of folding metallic ribbon stock") and claim 12 (a "system for folding metallic ribbon stock"). Ken argues that ribbon stock constitutes a limitation on each patent claim. Ken Br. at 5. Should the court disagree, Ken nevertheless advances in the alternative that the term must be understood to construct the patent claims. It concludes: "The term 'ribbon stock' does not have an understandable meaning, and as such, ***all*** of the claims of the '919 patent must be held invalid for indefiniteness." Ken Br. at 5 (emphasis in original).

In its related motion for claim construction, SDS remarks that while the apparatus described in the '919 patent is novel, "there is no suggestion that ribbon stock *per se* is novel. On the contrary, the '919 patent makes clear that at least one form of ribbon stock (i.e., cutting blade) existed in the prior art, as did other devices for folding ribbon stock." SDS Markman Br. at 20. SDS relies on dictionary definitions of the terms "ribbon" and "stock" FN1; descriptions of "steel rule stock," "stock," "metal ribbon" and "metal ribbon stock" in purported prior art patents; and the patent examiner's references to "ribbon" in the prosecution history. Plaintiff concludes: "[T]he only reasonable and appropriate construction of 'ribbon stock' is to include within its scope a supply of continuous metallic material, such as flat cutting blade or even wire ..." SDS Br. at 27.

FN1. "[T]he dictionary definition of 'ribbon stock' would simply be a narrow strip or band of material as the raw material for something being made." SDS Br. at 23.

Ken counters that the term "ribbon stock" is not defined by the '919 patent claims, and that the '919 specification nowhere uses that phrase. It concludes that the phrase is not defined by the intrinsic evidence. It also insists that SDS' proffered "ordinary meaning" of the phrase is unsupported: Ken claims that "ribbon stock" has no plain meaning within the diecutting and diemaking industry,FN2 referring to testimony of

SDS' President Simon Song, a glossary published by the International Association of Diecutting and Diemaking (I.A.D.D.), and its own reading of the purported prior art patents. Ken further objects that, according to the dictionary cited by SDS, "ribbon" is first defined as "[a] narrow strip or band of fine fabric, such as satin or velvet, finished at the edges and used for trimming or tying." Ken Br. at 13. FN3 "Thus, SDS is apparently implying that the invention could also cover a unit that folds and cuts clothing, gift wrapping, etc. Such a result is absurd ... [and] well beyond what the '919 patent was intended to cover." Id. Next, Ken cites the I.A.D.D. definition of "stock": "Paper or other material to be die cut or printed." Warshavsky Decl. Exh. N. "Thus, when someone in the diecutting and diemaking industry uses the term 'stock,' [she is] referring to the product which will eventually be made by the diecutter." Ken Br. at 14. Finally, defendant distinguishes plaintiff's proffered prior art patents as either irrelevant to the precise term "ribbon stock," or describing a field other than diecutting or diemaking. Id. at 15. Defendant concludes that a person with skill in the art could not determine the bounds of the claims using the words "ribbon stock" and that the claims must be invalidated as indefinite.

FN2. SDS seeks to define the relevant field more broadly as that of "metal forming art, in the context of diemaking." SDS Statement of Disputed Facts para. 3.

FN3. Though SDS did rely upon the American Heritage Dictionary definition of the term "ribbon," it quoted a *different* dictionary definition as "most appropriate": "Anything resembling a ribbon, as a measuring tape." SDS Markman Br. at 23.

In reply, SDS submits the declaration of Dr. Tricamo:

I am familiar with the level of knowledge of one of ordinary skill in the metal forming arts, including within the diemaking field, at least as early as June 1995 and to the present. (para. 4).

The claims of the '919 patent use the words "metallic ribbon stock" and "ribbon stock" to describe the metal material being worked upon by the apparatus and method stated in the claims. In my opinion, Claim 1 uses the words "ribbon stock" as a shorthand expression for "metallic ribbon stock," which identifies a material intended to be acted upon by the components of the claimed apparatus. (para. 6).

When I reviewed the claims of the '919 patent, I had no trouble understanding what was referred to by the terms "metallic ribbon stock" and "ribbon stock" even without the benefit of the specification of the '919 patent, and I do not believe that one skilled in the art would have any trouble understanding them.... "*Ribbon stock" is a common term used and understood not only by engineers and other technical individuals in the metal forming arts, but is also, in my opinion, one used and understood by non-technical people. In essence, "ribbon stock" defines a flat strip of metal having edges that are generally parallel, as exemplified by a ribbon. "Ribbon stock" can be of any length. The use of "metallic" ribbon stock makes it clear that the material must be metallic, as contrasted with, for example, decorative fabric ribbon.* (para. 7) (Emphasis added).

I understand that terms commonly used in the diemaking industry include "rule," "steel rule," "metal rule," "cutting rule" and "knife." In my opinion, the term "metallic ribbon stock" is consistent with the above terms. (para. 15).

Finally, SDS argues that as a matter of law, the use of the phrase "ribbon stock" in the claims, though not in the specification, does not defeat definiteness. SDS Br. at 25.

Ken's argument lacks merit. Beginning with the specification, *see* Miles Laboratories, Inc., 997 F.2d at 875, and Exxon, 46 Fed. Cl. at 283, the court notes that the abstract describes the invention as a "unified folding system for processing in one work line all working processes needed in cutting and folding a cutting blade in a shape suitable to sheet matter molding." The specification is replete with references to said "cutting blade," which is used to "press[ ] a folding or a cutting line on plate matters such as paper, canvas, leather, plastic, etc." *See* '919 Patent, col. 1, lns. 21-23; Figure 2 (showing cutting blade 500 in preferred embodiment). It is clear from the specification that such "cutting blade," initially "wound in a roll shape," *see* col. 4, ln. 61, is fed through the claimed invention, which folds the blade "in [a] shape suitable to a molding of the sheet material," *see* col. 5, lns. 25-27. In turn, a representative claim describes a " *metallic ribbon stock* folding apparatus" comprising a transferring unit, a rotary assembly, at least one retractable elongate member, "said rotary assembly configured for arcuate motion ... to fold a portion of *said ribbon stock* by said elongate member." *See* Claim 1 (emphasis added).

The court finds from this review that the disputed "ribbon stock" described in the claims refers to the material from which the preferred-embodiment "cutting blade" is constructed.FN4 According to the specification, the preferred embodiment uses a supply of metal rule, which it calls a "cutting blade" once it enters the machine, cuts and folds it to produce a die later used to cut predetermined shapes into sheet material such as cardboard. The specification, by its distinction between the terms "cutting blade," and "plate matters"/ "sheet material," refutes the defendant's argument that the claimed "ribbon stock" refers to cardboard or other sheet material which will eventually be stamped out in the diecutting process. And the claims themselves, referring to " *metallic* ribbon stock," refute Ken's assertion that the invention concerns fabric, clothing, or gift wrap.

FN4. Though not dispositive, defendant's repeated references to "steel rule" and "rule" provide some guidance to the court as well. *See, e.g.,* Ken Br. at 13 n. 3 ("The common term used in the industry for the material used to make cutting blades is 'steel rule' or 'rule.' "); Kengott Decl. para. 28 ("From reading and reviewing the '919 patent, I understand the '919 patent to cover a device that processes steel rule such that the end product can be effectively used by a diecutter.").

The court recognizes that the patentee failed to "match" the terms of the claims to the phrases used in the patent specification. Yet, as noted by SDS, such is legally irrelevant: other courts have rejected the indefiniteness defense,

even though the precise words used in the patent's specification are not necessarily used in the [patent's] claims. Inasmuch as the statute does not require an inventor to use the exact same words in both the specification and the claims, the court must determine whether the language used by the inventors in the patent's claims clearly and adequately set forth what is claimed in the invention, whether the language is consistent with the language used in the patent's specification, and whether the language is reasonably clear in its meaning.

Pennwalt Corp. v. Durand-Wayland, Inc., 225 U.S.P.Q. 558, 565 (N.D.Ga.1984), *aff'd in part and vacated in part,* 833 F.2d 931 (Fed.Cir.1987) (addressing only infringement). *See also* Aqua-Aerobic Systems Inc. v. Richards of Rockford Inc., 1 U.S.P.Q.2d 1945, 1954 (N.D.Ill.1986) (rejecting definiteness challenge based

on patentee's failure to use the word "member" in both patent claims and specification: "While the patent may not be perfectly drafted, it is clear from an overall reading of the patent that the 'member' referred to in claim 8 is the casting."), *aff'd in part and vacated in part,* 835 F.2d 871, 1987 WL 4672 (Fed.Cir.1987). Finally, though expert testimony proffered by litigants tends to differ as to the understanding of a person with ordinary skill in the art, and despite this court's ruling that Dr. Tricamo may not testify as to the niche field of diecutting and diemaking, the court finds Dr. Tricamo's declaration to be useful guidance as to the background technology and terminology in the metal forming arts. *See* Exxon, 46 Fed. Cl. at 282, 284.

This court's determination is enforced by contrast to *Morton Intern., Inc. v. Cardinal Chemical Co.,* in which the Federal Circuit approved a district court's determination of indefiniteness because the claimed chemical compounds could not be proved to exist even with the use of "sophisticated analytical instrumentation and ... model systems." 5 F.3d 1464, 1469-70 (Fed.Cir.1993). The level of imprecision here, even as alleged by defendant, does not rise to that level; plaintiff survives summary judgment of indefiniteness on the "ribbon stock" terminology.

B. Elongate Member

[6] Ken also alleges indefiniteness based on the term "elongate member," found or incorporated in each of the '919 patent claims, as for example:

[Claim] 1. A metallic ribbon stock folding apparatus comprising:

a transferring unit ...

a rotary assembly having first and second rotary bodies ...

at least one *retractable elongate member,* said *elongate member* mounted for movement between a retracted position where said *elongate member* is disengaged from at least one of said rotary bodies and an extended position where said *elongate member* engages both said first and second rotary bodies; and said rotary assembly configured for arcuate motion ...

[Claim] 3. The metallic ribbon stock folding apparatus as recited in claim 1 comprising two *elongate members*.

[Claim] 5. The metallic ribbon stock folding apparatus as recited in claim 4 [which is dependent on claim 1] wherein the at least one *retractable elongate member* has a stock engaging edge formed by the intersection of at least two sides of the substantially trapezoidal cross-section.

(Emphasis added).

See generally Claims 1-12, '919 Patent, col. 6-8. Ken argues that the "elongate member" term is not defined in the patent; not used in the patent specification; and not found in the I.A.D.D. glossary. Ken Br. at 18-20. Ken and its experts assert that the phrase is wholly unfamiliar to the diecutting and diemaking industry, that "[t]hose with skill in the art cannot determine the bounds of the claims that include 'elongate member,' " and that "It is not possible to understand the term 'elongate member' as it is used in the '919 patent." Kengott Decl. para. 26; Therrien Decl. para.para. 24-29.

SDS' response to Ken's contentions is foreshadowed by Ken's own brief: "The term 'bending pin,' however, *is* one that is used in the prior art." Ken Br. at 20 n. 6.FN5 Plaintiff's reply focuses on the patent's prosecution history, particularly a preliminary amendment filed July 29, 1998 which mentioned the elusive "elongate member." Gilman Decl. Exh. 4 at 44-48. The patent examiner responded by rejecting two claims as indefinite, not on any basis mentioned by defendant. *See* August 26, 1998 action by Examiner Daniel Crane, id. at 52-59 (rejecting claim 11 as indefinite for failure to define the phrase "opposite sides," and claim 17 for not describing the movement of the elongate member. Notably, Examiner Crane used the phrase "elongate member" without comment.) And in October 1998, Examiner Crane himself offered proposed redrafted claims, "to clarify what constitutes an extended and retracted position and to specify that the elongated member is the active work bending implement. It is believed that the claims as now amended overcome any indefiniteness and define [ ] the art of record." Id. at 76-81. In short, plaintiff argues that the patent examiner, presumably skilled in the art, had no difficulty understanding the disputed term.

FN5. Ken's brief further cites the I.A.D.D. glossary, which defines "bending pins" as: "Male and female tools or pins used to bend die steel. Clicker and high die male bending pins are generally custom made by the bender to suit each height, thickness and shape of die steel to be bent. Steel rule male and female bending pins are readily available by number depending upon desired bends to be made and the height of stock." Warshavsky Decl. Exh. N.

Once again, the specification provides crucial guidance. Anticipating conclusions, this court finds that the "elongate member" of the patent claims is identical to the folding member, labeled as part 330 in the diagrams of the invention's preferred embodiment. The folding member (or members), part of "folding unit," "folding device" or "folding means" 300, serves to fold the cutting blade at a pre-set angle.

The following excerpts from the specification provide a flavor of the use of "folding means 300":

[From Abstract]: "[T]he cutting blade transferred to the folding device is folded in a predetermined shape by a *folding member* which performs a going-straight movement and a rotating movement...." *See* '919 Patent Abstract.

[From "Summary of the Invention": the claimed invention includes, *inter alia*]: a "folding means including at least two *folding members* ".... *See* col. 2, lns. 3-8.

[From "Detailed Description of the Preferred Embodiment"]: "The guide holes 323a and 323b are provided to insertably receive a *folding member 330,* to facilitate movement thereof" ... *See* col. 3, lns. 47-49.

[Again,] "the *folding member 330* is inserted through guide hole 323a of rotary body 320a, [passes through other parts of the invention, including rotary body 320b] and is capable of being moved upwards and downwards. The *folding member 330* inserted for mutual connection of rotary bodies 320a and 320b is provided for the folding work of the cutting blade 500, revolving together with the rotary bodies 320a and 320b. When the folding work is not being performed, the *folding member 330* is completely apart from folding body 313 and is moved towards an upper side." *See* col. 3, ln. 58-col. 4, ln. 1.

[And,] " *Folding member 330* has a substantially triangular shape, which enables the cutting blade 500 to be folded easily even without applying an immoderate force. To fold the cutting blade easily, an application of any other shape excepting the triangulate shape doesn't matter." *See* col. 4, lns. 27-32.

[Finally, in the "operation embodiment of the folding system"]: "When the revolving bodies 320a and 320b are rotated, the *folding member 330* is also rotated. That is, the *folding member 330* is rotated and moved around ... for the folding operation as shown in FIG. 5. At this time, the moved *folding member* contacts with the cutting blade 500 ... thereby the cutting blade 500 is naturally folded by a rotating force of the *folding member 330* " ... *See* col. 5, lns. 52-61.

(Emphasis added.) Simple comparison of the specification and the above-quoted claims demonstrates that the "elongate member" of the claims has been described and described again in the patent specification-only there it was called a "folding member". This court has no difficulty determiningthe bounds of an invention involving such a term. Nor did patentee's Dr. Tricamo:

Upon reviewing the '919 patent claims, I had no trouble at all understanding what was intended by the words 'elongate member,' and it is my opinion that one of ordinary skill in the metal forming art would also have no trouble understanding what is meant by these words. Such words are common to describe mechanical terms. They mean a member or element which is longer than it is wide. In the context, it is this element that 'folds' or 'bends' the ribbon stock.

See Tricamo Decl. para. 16. Ken defined the challenged part as a "bending pin," and SDS was likewise free to act as its own lexicographer. *See* Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Inc., 2000 WL 1035753 (Fed.Cir.2000). Summary judgment on this issue is denied.

C. Transferring Unit

[7] Finally, Ken challenges SDS' use of the phrase "transferring unit" in the patent claims, such as:

[Claim] 1. A metallic ribbon stock folding apparatus comprising [inter alia]:

a *transferring unit* for transfer of ribbon stock through a passage formed by a guide, said passage defining a longitudinal axis....

[Claim] 12. A system for folding metallic ribbon stock comprising [inter alia]:

a *transferring unit* for controlled transfer of said ribbon stock through said passage in said guide....

In its motion for claim construction, SDS argues that the '919 patent is not subject to means-plus-function analysis under 35 U.S.C. s. 112, para. 6. SDS Markman Br. at 28. During that discussion, addressed more fully below (*see* Section 3.F.), plaintiff asserts that the specification equates "transferring unit" to a "transfer roller," referring to both as part 10 of the preferred embodiment. *See* id. at 29, referring to '919 Patent col. 4, lns. 61-64 ("The cutting blade 500 ... is transferred to the folding unit 300 ... by the *transferring unit 10, having a transfer roller,* through the cutting molding unit 100 and the guide nozzle 201"); col. 2, lns. 42-44 ("the folding system of the cutting blade comprises a *transferring unit 10* for transferring the cutting blade of a roll shape ..."); col. 5, lns. 25-31 ("The cutting blade 500 passed through the guiding entrance 300 is then folded in the shape suitable to a molding of the sheet material. In folding the cutting blade 500, the *transfer roller 10* stops and the transferring work of the cutting blade 500 is temporarily in a stopped state. At the same time as the stop of the *transfer roller 10,* the second driving unit ... operates ..."); col. 6, lns. 6-7 and 11 (emphasis added).

Ken counters that such references are inadequate: "Reviewing all of the citations by SDS, we come to the conclusion that the transferring unit has a transfer roller, that the transfer roller can stop (suddenly or otherwise), and that the transfer roller can start again after it stops.... Therefore, even accepting each portion of SDS's argument as accurate, there is no explanation of what the transferring unit is. Rather, the specification identifies one element of the transferring unit, and informs us that the element can stop and go." Ken Br. at 21. Defendant concludes by rejecting any explanation by extrinsic evidence: here again Ken notes the absence of the phrase "transferring unit" in the I.A.D.D. glossary. Id. at 22.

Ken's challenge is rejected. SDS' review of the specification (together with Ken's concession at oral argument) demonstrates that the terms "transferring unit" and "transfer roller" are interchangeable. The patentee uses both terms to describe the mechanism that moves the ribbon stock, from a roll at the beginning of the assembly line, through a longitudinal passage formed by a "guide." FN6 Such interpretationis fully consistent with the use of the phrase "transferring unit" in the patent claims.

FN6. In the preferred embodiment, SDS describes the "guide" as part 200, itself composed of the elements "guide nozzle 201" and "guiding passage 203." *See* col. 3, lns. 7-12, and Figures 2 and 4.

The court is further persuaded by the extrinsic evidence of record. *See* Exxon, 46 Fed. Cl. at 280-84. SDS notes a comment by Patent Examiner Crane when he rejected claims of the parent '379 application over a prior art patent:

[Certain claims] are rejected ... as being anticipated by Tuit (3,420,279). While Tuit does not show a transfer unit, this provision is inherently included since *such mechanism which guides the ribbon into the bending machine* would be required so as *to position the ribbon for bending within the retractable elongate members* ...

Gilman Decl. Exh. 4 at 55 (emphasis added). SDS accurately surmises from that comment that the "transfer unit" was readily recognizable to Examiner Crane, and presumably to other skilled professionals, based on mechanisms found in the prior art.FN7 And again, though not dispositive, the court takes into account the general engineering experience of Dr. Tricamo, who opines:

FN7. At oral argument, SDS suggested that the Tyler patent, No. 5,461,893, disclosed examples of the transferring unit. *See* Tyler patent, description of "Rule Feeder" at col. 6, ln. 45 *et seq*. That contention was disputed; the court does not consider it dispositive.

The claims clearly convey that the transferring unit is a mechanism for moving ribbon stock through a passage in a guide so that processing of the material can take place. This can be accomplished by any number of devices known in the 1995 time frame, including cam drive, linkage drive, feed rollers or gear drives ...
Tricamo Decl. para. 17.
The patentee has satisfied the definiteness standard; Ken's motion for summary judgment is denied.

3. Written Description

In the alternative, Ken requests a judgment of invalidity based on SDS' failure to satisfy the written description requirement, 35 U.S.C. s. 112, para. 1:

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 ...

[8] The Federal Circuit describes the purpose of this rule: "Satisfaction of the description requirement insures that subject matter presented in the form of a claim subsequent to the filing date of an application was sufficiently disclosed at the time of filing so that the prima facie date of invention can fairly be held to be the filing date of the application." In re Smith, 481 F.2d 910, 914 (C.C.P.A.1973), quoted in Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1562 (Fed.Cir.1991). *See also* Rengo Co. Ltd. v. Molins Machine Co., 657 F.2d 535, 551 (3rd Cir.1981) ("The purpose of the description requirement is 'to buttress the original filing date of the application as the prima facie date of invention.' ").

As relevant to this case, "If an inventor applies for a patent in a foreign country, and files an application in the United States within one year, the American application 'shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country,' " provided that the written description requirement is satisfied. Rengo, 657 F.2d at 547-48 (quoting 35 U.S.C. s. 119(a)).

Our own Circuit explains:

[T]here is a subtle relationship between the policies underlying the description and definiteness requirements, as the two standards, while complementary, approach a similar problem from different directions. Adequate description of the invention guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation. The definiteness requirement shapes the future conduct of persons other than the inventor, by insisting that they receive notice of the scope of the patented device.

Rengo, id. at 551, quoted in Vas-Cath, 935 F.2d at 1561.

[9] [10] [11] The test for compliance with the written description requirement is well settled: "Although [the applicant] does not have to describe exactly the subject matter claimed, ... the description must clearly allow persons of ordinary skill in the art to realize that [the applicant] invented what is claimed." Vas-Cath, 935 F.2d at 1563 (quoting In re Gosteli, 872 F.2d 1008, 1012 (Fed.Cir.1989)). "A disclosure in a parent application that merely renders the later-claimed invention obvious is not sufficient to meet the written description requirement; the disclosure must describe the claimed invention with all its limitations." Tronzo v. Biomet, Inc., 156 F.3d 1154, 1158 (Fed.Cir.1998). Such compliance is a question of fact. Vas-Cath, 935 F.2d at 1563; Union Oil Co. of California v. Atlantic Richfield Co., 208 F.3d 989, 996 (Fed.Cir.2000).

Ken summarizes its position: "[T]he claims of the '919 patent were filed several years after the written description was drafted-apparently to cover Ken's products. As such, at the time the specification was filed, SDS did not actually know of the invention it is now claiming (it was only after SDS became aware of Ken's products that it filed its new claims)." Ken Br. at 23.

Once again, defendant's argument is linguistic. It springs from the premise that the terms "ribbon stock" and

"elongate member" "were never used in the original application, and as such, were never defined by the patent." Ken Br. at 2. Ken frames the issue: "When the written description does not use precisely the same terms used in a claim, the question is then whether the specification directs or guides one skilled in the art to the subject matter claimed." Id. at 24.

A. Ribbon Stock

[12] The court again reviews the specification to determine whether the claimed "ribbon stock" has been adequately disclosed. Tracking the earlier analysis of definiteness, *see* Section 2.A. above, it is clear that the specification's repeated references to a "cutting blade" describe the "ribbon stock" named in the patent claims. Even Ken takes the position that the patent "clearly explains" the following flow chart:

1. the steel rule which is used for making the cutting blade is transferred (for example, from a spool of wound steel) to the cutting molding unit

2. at the cutting molding unit, a piece of the steel rule is cut;

3. the cut steel rule is then transferred to a bending pin; and

4. the cut steel rule is bent by the bending pin.

Ken Br. at 26. That explanation supports this court's finding that a person of ordinary skill in the art would readily recognize that SDS' invention involved steel rule/ribbon stock.

This case is distinguishable from Tronzo v. Biomet, Inc., 156 F.3d 1154, 1159 (Fed.Cir.1998), where a patentee had described only a single, conical shape of "cup" (part of an artificial hip implant) in its parent application, yet sought to claim generically-shaped cups in a patent that issued from a later continuation-in-part application. Unlike Tronzo, SDS described the challengedpart in its original disclosure-albeit by a different name. *See* Fujikawa v. Wattanasin, 93 F.3d 1559, 1570 (Fed.Cir.1996) ("[I]psis verbis disclosure is not necessary to satisfy the written description requirement of section 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question."); Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1572 (Fed.Cir.1997) ("Although the exact terms need not be used in haec verba ... the specification must contain an equivalent description of the claimed subject matter."). Summary judgment is denied.

B. Elongate Member

Ken's objection to the adequacy of written description of the claimed "elongate member" is similarly resolved. To iterate, the court must determine whether the '919 specification "provides adequate direction which reasonably would lead persons skilled in the art" to the disputed part. Fujikawa, 93 F.3d at 1570 (citation omitted).

As noted above, the defendant itself has identified the elongate member as a "bending pin." The specification describes the element as "folding member 330," and SDS' witness Dr. Tricamo avows that one of ordinary skill in the metal forming art would have no difficulty understanding such a common term. *See* Tricamo Decl. para. 16. This evidence satisfies the written description requirement. Ken's semantic arguments are unpersuasive. Summary judgment is denied on the written description issue.

4. Claim Construction

A. *Markman* Standard

As said, SDS and Ken each requests that the court construe the '919 claims in its favor. The construction of patent claims is a matter of law exclusively for the court. Markman v. Westview Instruments, 52 F.3d 967 (Fed.Cir.1995).

This court recently discussed the standards for claim construction:

The court must look first to the "intrinsic evidence," which consists of the patent claims, the specification, and the prosecution history if in evidence. "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). The court should presume that the terms in the claim mean what they say, and, unless otherwise compelled, give full effect to the ordinary and accustomed meaning of claim terms. Johnson Worldwide Associates, Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed.Cir.1999). Of course, "claim construction is not philosophy ... [it] is firmly anchored in reality by the understanding of those of ordinary skill in the art." K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1360 (Fed.Cir.1999). And though the prosecution history can and should be used to understand the language used in the claims, it may not be used to "enlarge, diminish, or vary" the limitations in the claims. Markman, 52 F.3d at 979 (citation omitted).

"In most situations, an analysis of intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence" such as expert testimony, treatises and dictionaries, and articles. Vitronics, 90 F.3d at 1583. Accordingly, where the patent documents are unambiguous, expert testimony is entitled to no weight. *Id*. Prior art may serve as a guide to the meaning of a disputed term, and particularly as a time-saving demonstration of how a disputed term is used by those skilled in the art. *Id*. at 1584. Finally, "opinion testimony on claim construction should be treated with the utmost caution," because such testimony "amounts to no more than legal opinion-it is precisely the process of construction that the court must undertake." *Id*. at 1585 (citation omitted).

Bristol-Myers Squibb Co. v. Immunex Corp., 86 F.Supp.2d 447, 448-49 (D.N.J.2000).

B. "At least one" retractable elongate member

i. Plain Language

[13] Initially, SDS asserts that the "at least one retractable elongate member" described in independent claims 1, 8 and 12, and some of the dependent claims, refers to an invention with *one or more* such elongate members. "Use of the phrase 'at least one' means that there could be only one or more than one." Rhine v. Casio, Inc., 183 F.3d 1342, 1345 (Fed.Cir.1999) (also quoting Kistler Instrumente AG. v. United States, 224 Ct.Cl. 370, 628 F.2d 1303, 1318 (1980) ("Anyone with even the most rudimentary understanding of the English language understands that 'at least one piezo-electric crystal means lodged within said component means,' to mean one or more crystals. Certainly, if the patentees intended that claim 1 was to cover one and only one piezoelectric crystal, they would have changed the above-quoted language to read 'one piezoelectric crystal means lodged within said component means.' ")). In the definiteness analysis above, this court concluded that the "retractable elongate member" of the claims is the same part as the "folding member 330" named in the patent specification.

The patentee acknowledges that portions of the specification appear to describe an invention with *two* elongate members. Figure 3 shows two sets of guide holes 323a and 323b set in the rotary bodies 320a and 320b to accommodate elongate members, and Figure 2 portrays two folding members 330. Yet SDS notes that the specification describes only a preferred embodiment of the invention-and "particular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments .... [a] limitation should not be read from the specification into the claims" Rhine, 183 F.3d at 1346; *see also* Specialty Composites v. Cabot Corp., 845 F.2d 981, 987 (Fed.Cir.1988). Patentee explains that "if a need exists," two elongate members can be employed, but such is not required by the claims. *See* col. 6, ln. 8.

Further, SDS quotes from the specification at col. 3, lns. 47-58: "The guide holes ... are provided to insertably receive a folding member 330, to facilitate movement thereof ... Although an example of the guide holes ... is shown in the figures wherein each guide hole has a folding member set therein, *it is preferable that only one folding member is set at a given time during operation*." (Emphasis added.) And, at col. 4, lns. 4-5: "Although two folding members 330 are shown in the drawings, for exemplary purposes, *only one can be set*." (Emphasis added.) Finally, Figure 5 shows only one folding member and maps its arc as it bends the cutting blade. SDS claims that, were a second folding member used while a first folding member was in operation, "one would interfere with the other." SDS Br. at 11.

Ken responds that the elongate member should be understood as a means-plus-function element under 35 U.S.C. s. 112 para. 6, a contention which the court will address below. Defendant continues: "The structure that performs [named] functions in the specification are the *two* folding members identified as item 330. The specification, along with Figs. 2, 4 and 6 indicate that retractable elongate member refers to *each* folding member.... [T]he only structure taught by the specification is a unit that includes *two* folding units." Ken Br. at 27.

At this point, the court is persuaded by two maxims of patent construction to accept SDS' interpretation. First, the patentee follows clear authority that "the language of the claim frames and ultimately resolves all issues of claim interpretation." Abtox, Inc. v. Exitron Corp., 122 F.3d 1019, 1023 (Fed.Cir.1997), and that claim language may not be narrowed to preferred embodiments disclosed in the specification. *See* Rhine, 183 F.3d at 1346; *see also* Transmatic, Inc. v. Gulton Industries, Inc., 53 F.3d 1270, 1277 (Fed.Cir.1995). Second, "[i]n construing a claim, claim terms are given their ordinary and accustomed meaning unless examination of the specification, prosecution history, and other claims indicates that the inventor intended otherwise." Transmatic, 53 F.3d at 1277. Following those guidelines, the court will call the disputed "rose" a "rose" unless persuaded otherwise by the prosecution history or the other claims (via the doctrine of claim differentiation).

ii. Claim Differentiation

As another clue, SDS looks to the dependent patent claims. Claim 1 describes a "metallic ribbon stock folding apparatus" comprising, *inter alia,*

at least one retractable elongate member, said elongate member mounted for movement between a retracted position where said elongate member is disengaged from at least one of said rotary bodies and an extended position where said elongate member engages both said first and second rotary bodies....

(Emphasis added.) In turn, dependent claim 3 reads in full: "The metallic ribbon stock folding apparatus as recited in claim 1 comprising *two* elongate members."

[14] [15] Dependent claims, which add limitations, are presumed narrower than the independent claims from which they spring. *See, e.g.,* Wilson Sporting Goods Co. v. David Geoffrey & Assoc., 904 F.2d 677, 686 (Fed.Cir.1990); Specialty Composites, 845 F.2d at 987-88 (holding that a limitation recited in dependent claims does not imply such limitation in independent claims: to the contrary, such is evidence that the broader independent claims do not contain the limitation). And, "[w]here some claims are broad and others narrow, the narrow claim limitations cannot be read into the broad." D.M.I., Inc. v. Deere & Co., 755 F.2d 1570, 1574 (Fed.Cir.1985) (citation omitted).FN8 Finally, the doctrine of claim differentiation teaches that "[t]here 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 the meaning and scope would make a claim superfluous, the doctrine of claim differentiation states the presumption that the difference between claims is significant." United States v. Telectronics, 857 F.2d 778, 783-84 (Fed.Cir.1988) (citation omitted).

FN8. The *D.M.I.* Court described such rule as "far more than 'general.' It is fixed. It is long and well established. It enjoys an immutable and universally applicable status comparatively rare among rules of law. Without it, the entire statutory and regulatory structure governing the drafting, submission, examination, allowance, and enforceability of claims would crumble." 755 F.2d at 1575.

The court accepts SDS' claim differentiation argument. Dependent claim 3 tracks independent claim 1 in all respects, except that claim 3 describes exactly two elongate members. Because claim 1 is presumed both different from and broader than dependent claim 3, the court concludes that claim 1 must recite some number of elongate members other than, or in addition to, exactly two. This interpretation supports a reading of the "at least one" language to include an invention with only one elongate member.

iii. Prosecution History

Finally, the parties focus on the prosecution history of the '919 patent in suit, as well as of the parent '391 application which issued as the '750 patent.FN9

FN9. Though SDS initially asserted infringement of the '750 patent, it later dismissed that infringement claim with prejudice. Only the '919 patent remains at issue in this suit.

Ken's argument stems from two events that occurred during SDS' prosecution of the *parent* '391 application. Claims submitted to the PTO in June 1996 included claim 2, describing a single "folding member," and dependent claim 3, "wherein said folding member is at least set with plural numbers." Gilman Decl. Exh. 2 at 35-36. On July 9, 1997, the patent examiner rejected all pending claims (claims 1-11) for various reasons, including:

Claims 1 and 9 are rejected under 35 U.S.C. 102(a), (b), (e) as being anticipated by Tyler (5,461,893). See Figure 5 where the first and second driving means is shown for revolving the folding means and moving the folding means in a straight line direction, i.e., in an "isolated position".

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paine (3,584,660) in view of Tyler

(5,461,893). Paine illustrates the basic claimed invention wherein a folding means 32 can be revolved and moved in a straight line so as to effect bending of the workpiece and permit movement of the folding means to be retracted and extended by moving the folding means along its axis. The two movements, i.e., in a revolving direction and in a straight line direction, are effected by first and second driving means [shown in accompanying diagrams]. Paine indicates that a cutting means is provided to cut the workpiece to a desired length but does not indicate where the cutting means may be positioned. Tyler shows that a cutting means may be positioned between the transferring unit and a guide nozzle. Accordingly, it would have been obvious to the skilled artisan to have modified Paine's cutting means by situating the cutting means upstream of the nozzle which feeds the workpiece into the bending unit as taught by Tyler so as to sever the workpiece to a desired length prior to being fed into the bending unit.

Warshavsky Decl. Exh. S at 82-83. In response, on October 16, 1997, the inventor amended claim 1 to recite, *inter alia,* a folding means, "the folding means including *at least two folding members*." Warshavsky Decl. Exh. T at 90 (emphasis added). That amendment also referenced "a pair of rotary bodies, rotatably connected to the ends of the fixing body for revolving the folding member *s,* said pair of rotary bodies having a pair of guide holes formed therein for revolving the folding member *s*." Id. (Emphasis added). And in that submission, the inventor represented:

Applicant respectfully submits that the present invention as claimed is patentably distinguishable from Tyler '893 and is therefore allowable thereover. *For example, with regard to independent claim 1, nowhere does Tyler '893 teach or suggest applicant's, inter alia, 'folding means including at least two folding members ...'*. In contrast thereto, with the Tyler '893 device, as discussed above, the bending bars and the single bending tool must be withdrawn and disengaged completely from the metal rule so that the bending tool may be rotated to a second position. *Advantageously in the present invention, two folding members are provided which may be alternatively positioned adjacent the cutting blade by the second driving means*. Therefore, the cutting blade of the present invention remains within its guide member throughout the bending process.

Warshavsky Decl. Exh. T at 8-9 (emphasis added). In response to the inventor's October 1997 amendments, the examiner allowed the '750 patent to issue. *See* Notice of Allowability, Gilman Decl. Exh. 2 at 117. It is undisputed that the '750 patent includes the limitation "the folding means including at least two folding members." *See* '750 Patent, Gilman Decl. Exh. 2 at 14, claim 1; *see also* dependent claim 2 ("... wherein the at least two folding members having [*sic*] a substantially triangular cross-section.").

From these events, Ken argues: "As used in the '919 patent specification, and the prosecution history of its parents, 'at least one retractable member' must be interpreted as two or more folding members. Otherwise, Tyler '893 anticipates the invention by disclosing one bending pin." Ken Br. at 30. The defendant charges that SDS is, by this motion, now attempting to reclaim subject matter that it expressly disclaimed in the prosecution history: an invention involving only one bending pin. Id. Ken thus relies on a variant of prosecution history estoppel: FN10

FN10. The doctrine of "prosecution history estoppel," sometimes called "file-wrapper estoppel," "precludes a patentee from obtaining in an infringement suit protection for subject matter which it relinquished during prosecution in order to obtain allowance of the claims." Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1574 (Fed.Cir.1997). It is typically invoked to bar or limit a patentee's assertions of infringement under the doctrine of equivalents. *Id.; see also* K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1367 (Fed.Cir.1999). The doctrine is not squarely applicable to the claim construction context, but has a close variant: "Interpreting claims in view of the prosecution history applies as a preliminary step in determining

literal infringement. Prosecution history estoppel applies as a limitation to the doctrine of equivalents after the claims have been properly interpreted and no literal infringement is found." General Elect. Co. v. Nintendo Co., 179 F.3d 1350, 1362 (Fed.Cir.1999) (citation omitted).

"[A]rguments made during the prosecution history are relevant in determining the meaning of the terms at issue." ... [T]he prosecution history of a patent contains: all express representations made by or on behalf of the applicant to the examiner to induce a patent grant.... Such representations include amendments to the claims and arguments made to convince the examiner that the claimed invention meets the statutory requirements of novelty, utility, and nonobviousness. Thus, the prosecution history (or file wrapper) 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.
Jonsson v. Stanley Works, 903 F.2d 812, 818 (Fed.Cir.1990) (citations omitted).
SDS disputes Ken's estoppel argument (which, as said, is based solely upon comments made during prosecution of the parent application) by reference to the prosecution history of the '391 application, which issued as the '919 patent in suit. The patentee cites claims submitted in its July 1998 preliminary amendment: One claim required two retractable elongate members, *see* dependent claim 12 ("The metallic ribbon stock folding apparatus as recited in claim 10 comprising two elongate members."), but several others were limited to "at least one," *see, e.g.,* claim 10 (including "at least one retractable elongate member mounted for movement between a retracted position and an extended position"). *See* '391 Application, Gilman Decl. Exh. 4 at 44-48. In August 1998, the patent examiner issued his only official action which, in addition to formal matters, rejected certain claims as unpatentable over prior art references Tuit (3,420,279) and Ritter (3,823,749). Id. at 53-59. The examiner did *not* cite to the Tyler patent as an invalidating prior art reference. Id.

SDS concludes that what made the '750 claims patentable was not, as Ken says, the presence of two elongate members. Instead, "[i]t was the structure whereby the elongate member engages both the first and second rotary bodies [parts 320a and 320b of the preferred embodiment]." SDS Br. at 17. The crux of SDS' argument is that while the claims of the '750 patent, issued from the parent application, admittedly limited the invention to include two retractable elongate members, the claims of the '919 patent are not likewise narrowed.

The record supports the patentee's argument. The '919 patent claims that issued were closely modeled on claims suggested by the examiner in October 1998. *See* Gilman Decl. Exh. 4 at 77-82. The examiner's comments focused heavily on the physical relationship between a single elongate member and the two rotary bodies, but not on the number of elongate members. For example, he suggested the phrasing " *a rotary assembly having first and second rotary bodies spaced to receive ribbon stock therebetween, said elongate member engaging both first and second rotary bodies when in the extended position;* " and "at least one retractable elongate member, said elongate member mounted for movement between a retracted position *where said elongate member is disengaged from said rotary bodies* and an extended position *where said elongate member engages both first and second bodies*." Id. at 77-79, claim 10 (examiner's additions underlined). The prosecution history also contains an "interview summary" by the patent examiner, recording a telephone conversation discussing with the inventor the positioning of the elongate member. Id. at 70. Finally, the court finds compelling SDS' remark that the examiner failed to even mention the Tyler reference as prior art in his August 1998 rejection of the '919 claims. *See* '391 Application, Gilman Decl. Exh. 4 at 53-59. Such omission would be startling if, as Ken suggests, the Tyler prior art reference invalidated every diemaking machine equipped with only one elongate member/bending pin.

Ken's argument that SDS deliberately relinquished rights to an invention with only one elongate member fails.FN11 Estoppel or limitation of the '919 claims to that effect would be inappropriate. The prosecution history leading to the '919 patent supports the court's initial finding that "at least one retractable elongate member" means *one or more*. *See* '919 Patent, independent claims 1, 8 and 12, and some dependent claims.

FN11. During the *Markman* hearing, Ken advanced for the first time the argument that the claimed invention would be inoperative if it used only one elongate member: it analogized such machine to a car that could turn in only one direction. The court finds that argument unpersuasive in light of the specification, which directs that "it is preferable that only one folding member is set at a given time during operation." *See* col. 3, lns. 53-54. Moreover, determinations of operability involve a separate inquiry from the *Markman* analysis.

C. Elongate Member: "Means-Plus-Function"

[16] As said, Ken makes one remaining argument concerning the elongate member: the defendant asserts that it must be understood as a means-plus-function element under 35 U.S.C. s. 112, para. 6, which states:

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.

Broadly stated, "a claim deserves means-plus-function treatment when 'expressed as a means ... for performing a specified function without the recital of structure [or] material ... in support thereof.' " Seal-Flex, Inc. v. Athletic Track and Court Constr., 172 F.3d 836, 848 (Fed.Cir.1999) (Rader, J., concurring) (citations omitted); *see also* O.I. Corp. v. Tekmar Co. Inc., 115 F.3d 1576, 1583 (Fed.Cir.1997) (paragraph 6 is implicated "only when means plus function without definite structure are present"). If defendant is correct, the statute acts to limit the elongate member claims to the structure disclosed in the patent specification or their structural equivalents. The Federal Circuit describes the *quid pro quo* encompassed in this means-plusfunction provision:

[Paragraph 6] language permits a patent applicant to express an element in a combination claim as a means for performing a function. The applicant need not recite structure, material, or acts in the claim's means-plus-function limitation.... The second clause of the [ ] paragraph, however, places a limiting condition on an applicant's use of means-plus-function language. A claim limitation described as a means for performing a function, if read literally, could encompass any conceivable means for performing the function. This second clause confines the breadth of the protection otherwise permitted by the first clause. The applicant must describe in the patent specification some structure which performs the specified function.... [Paragraph 6] limits the applicant to the structure, material, or acts in the specification and their equivalents.

Valmont Indus. v. Reinke Mfg. Co., 983 F.2d 1039, 1042 (Fed.Cir.1993) (citations omitted). SDS strenuously objects that the '919 patent contains no means-plus-function language; the court therefore addresses the issue.

Patent drafters conventionally invoke Section 112, Paragraph 6 "by using only the words 'means for'

followed by a recitation of the function performed." Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed.Cir.1996). Thus, use of the word "means" in claims triggers a presumption that the inventor sought to invoke means-plus-function analysis. York Products, Inc. v. Central Tractor Farm & Family, 99 F.3d 1568, at 1574 (Fed.Cir.1996). And, "when an element of a claim does not use the term 'means,' treatment as a means-plus-function claim element is generally not appropriate." *Al-* Site Corp. v. VSI Intern., Inc., 174 F.3d 1308, 1318 (Fed.Cir.1999).

However, that analysis is deceptively simple: the dispositive issue is whether the claims recite structure. "[M]ere incantation of the word 'means' in a clause reciting predominantly structure cannot evoke section 112, para. 6. Conversely, '[t]he recitation of some structure in a means plus function element does not preclude the applicability of section 112(6).' " York Products, Inc., 99 F.3d at 1574 (citation omitted). Therefore, even if "means" language is present, "the presumption that s. 112, para. 6 applies is overcome if the claim itself recites sufficient structure or material for performing the claimed function." *Al-* Site Corp., 174 F.3d at 1318.

Ken argues that the '919 patent claims do not define the structure of the elongate member. Ken Br. at 25. "Indeed, there is no structure at all in this claim element." Id. Further, the defendant asserts that the elongate member is not defined either in the patent specification or in the prosecution history. Id. at 26.

SDS responds that the element is described as "elongate" and "retractable." And, plaintiff asserts, Ken's argument fails: "under Ken's analysis, the 'at least one retractable elongate member' is a means-plus-function element *without a function!* " SDS Reply Br. at 4. *See generally* Rodime PLC v. Seagate Technology, Inc., 174 F.3d 1294, 1302 (3rd Cir.1999) (Paragraph 6 not invoked if claim either recites sufficient structure for performing stated function, or if it recites no function corresponding to stated means).

Initially, the court notes that the elongate member phrase nowhere includes the operative "means for" language-all claims of the '919 patent are devoid of that phrase. Therefore, the court presumes that Paragraph 6 does not apply. And dictionary definitions, not to mention common sense, point to the word "member" (descriptive modifier notwithstanding) as a structural term. *See Webster's New International Dictionary* (2d ed.1956) defining "member" as, *inter alia,* "... 5. A part of a whole; an independent constituent of a body, structure, or any organized thing, or a unit in a series ... 12. *Engin.* Any essential part of a framed structure." Analogously, the Federal Circuit, reviewing the phrase "detent mechanism," stated:

It is true that the term "detent" does not call to mind a single well-defined structure, but the same could be said of other commonplace structural terms such as "clamp" or "container." What is important is not simply that a "detent" or "detent mechanism" is defined in terms of what it does, but that the term, as the name for structure, has a reasonably well understood meaning in the art.

Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed.Cir.1996).

Following that reasoning, this court invokes its earlier analyses of the "elongate member," its equivalence to "folding unit," "folding device," or "folding means" 300 of the patent specification, and to Ken's proffered "bending pin." *See also* Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360, 1365 (Fed.Cir.2000) (interpreting "second baffle means" element: "The term 'baffle' itself is a structural term. The dictionary definition of the word 'baffle' is 'a device (as a plate, wall or screen) to deflect, check, or regulate flow.' *Because the term 'baffle' itself imparts structure,* meaning a surface which deflects air, its use in the claims rebuts the presumption that s. 112, para. 6 applies.") (emphasis added and citation omitted). The court finds

no support for Ken's proposition that the claimed elongate member connotes function without structure. Means-plus-function treatment of this element is inappropriate and denied.

D. Ribbon Stock

i. Claim Limitation or Statement of Intended Use?

[17] The parties dispute the effect of the words "ribbon stock" in the claims. Their arguments concerning this element often reiterate those made in the definiteness/written description context; the court simply affirms its finding that the ribbon stock described in the claims refers to the material from which the cutting blade is constructed. *See* Section 2.A., above. The ribbon stock is identical to what Ken itself has identified as "steel rule." *See* Ken Invalidity Br. at 13 n. 3.

SDS contends that the preamble phrase "[A/The] metallic ribbon stock folding apparatus" introducing claims 1-6 describes only the intended use of the apparatus, and is thus not a claim limitation. SDS Br. at 20. Ken disagrees, contending that in this case, the preamble "defines the entire operation of the device." Ken Br. at 8. The defendant suggests that SDS' proposed interpretation would have dire effects: "Simply put, the non-meaningful term 'widget' could replace 'ribbon stock,' throughout the claim, and *all* of the limitations would maintain the same meaning." Ken Br. at 9.

[18] The Federal Circuit teaches:

"[A] claim preamble has the import that the claim as a whole suggests for it." Where a patentee uses the claim preamble to recite structural limitations of his claimed invention, the PTO and courts give effect to that usage. Conversely, where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation.

Rowe v. Dror, 112 F.3d 473, 478 (Fed.Cir.1997) (citations omitted). To decide whether a preamble recites structural limitations or merely describes the intended use of the invention, courts look to the phrasing of the claim, the specification and drawings. Id. at 478-79. "The inquiry involves examination of the entire patent record to determine what invention the patentee intended to define and protect." Id. at 478.

Vaupel Textilmaschinen KG v. Meccanica Euro Italia SPA, 944 F.2d 870, 879-80 (Fed.Cir.1991), provides useful guidance. There the Federal Circuit approved the district court's conclusion that language referring to parts of a broadloom in claim preambles did not limit the claims: " 'Breast beam' and 'breast plate' are not structural limitations ...; as used in [the disputed claims], they indicate a reference point to fix the direction of movement of the woven fabric from the loom."

In the '919 patent, the ribbon stock functions as such a "reference point," or as SDS calls it, a "workpiece" of the apparatus defined by claims 1-6. The patentee offers this analogy, which the court finds persuasive: "[I]f one were to invent a new paper hole puncher, the claims would necessarilydescribe a location for positioning the paper, a punching die adapted to pierce the paper, and the like. But that would not make paper an element of the claim, such that one could freely knock off the hole puncher and sell it without liability for infringement as long as no actual piece of paper is packaged with the hole puncher." SDS Reply Br. at 12; *see also* Robert C. Faber, *Landis on Mechanics of Patent Claim Drafting* (4th ed.1999), Gilman Suppl. Markman Decl. Exh. 41, s. 15, at III-2 ("The article to be worked on, the workpiece, need not be defined in detail, unless such a description is important to the functioning of the apparatus or made

necessary by the prior art."), and s. 16, at III-5 ("The workpiece ... should be identified in the preamble of the claim, but not made an element of the claimed combination. The workpiece appears in the body of the claim, *as it interacts with a claim element*.") (Emphasis added).

The patent specification demonstrates that the disputed ribbon stock is the element worked on by the patented machine: ribbon stock is necessary to describe the invention, but is not a necessary element of claims 1-6. The specification repeatedly discusses the workings of various machine parts upon the cutting blade. The very title, "Folding System for a Cutting Blade," is one example, as are phrases such as "transferring unit for transferring the cutting blade," "cutting means ... for cutting the cutting blade," "guide member ... for guiding the cutting blade" and "folding means ... for folding the cutting blade." *See* '919 Patent, col. 1, ln. 58-col. 2, ln. 8.

This conclusion is enforced by the doctrine of claim differentiation. As said, claim 1 recites a "metallic ribbon stock folding apparatus comprising" numerous parts, not including ribbon stock. In contrast, claim 7 is directed to "[t]he metallic ribbon stock folding apparatus as recited in claim 1 *further comprising a supply of metallic ribbon stock*." (Emphasis added). And claim 12 recites a "system for folding metallic ribbon stock comprising," *inter alia,* "a supply of ribbon stock." The presence of ribbon stock is a limitation on dependent claim 7 and claim 12; by the established rules of claim construction, it does not so narrow independent claim 1. *See* Specialty Composites, 845 F.2d at 987-88; Telectronics, 857 F.2d at 783-84.

The court finds that "ribbon stock" is a claim limitation of only claims 7 and 12 of the '919 patent. Ken's arguments notwithstanding, the reference to ribbon stock in the claim preambles is a mere statement of "purpose or intended use." Rowe, 112 F.3d at 478.

ii. Precut Segments

[19] Ken next contends that the term "ribbon stock" must be construed as precut segments of a cutting blade. Ken Br. at 10. SDS responds that the ribbon stock "need not be-but can be-a series of precut segments." SDS Br. at 27.

Primarily, the defendant relies on diagrams and passages in the specification which direct that the cutting blade be first transferred, then cut, then folded, each in due succession. *See, e.g.,* col. 2, lns. 41-54 (explaining Figure 1); col. 3, lns. 2-6. The court rejects that argument, again because such passages describe only a preferred embodiment of the invention. To repeat, "[P]articular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments." Rhine, 183 F.3d at 1346.

Once again, the doctrine of claim differentiation dictates the result. Most claims make no mention of the cutting process. *See, e.g.,* claims 1-8. In contrast, dependent claim 9 teaches "[t]he method of folding metallic ribbon stock as recited in claim 8, further comprising the step of: cutting ribbon stock at a predetermined length." *See also* claim 12, which recites a "cutter" and the components that fold (rotary assemblies and at least one elongate member), but dictates no order of operations. These distinctions support SDS' contention that cutting, when claimed, can take place either upstream or downstream from folding.

So too this passage from the specification:

[T]wo discrete functions are required, namely after a cutting work in separated [*sic*] places, then moving it

into a folding device individually, and then the folding work is performed, *or* after the folding work, then moving it into a cutting device one by one, and then the cutting work is performed....

See col. 1, lns. 41-48 (emphasis added). A stated purpose of the invention is to improve work efficiency and productivity, "by continuously performing all work elements needed in the cutting and folding works of the cutting blade provided in a sheet matter molding, in one work line ..." Col. 1, lns. 51-57. The primary benefit of the invention appears to be efficiency, not the order of operations.

The defendant has produced no cognizable evidence that the order of the cutting and folding operations is specified in the '919 patent. The court therefore rejects Ken's argument that ribbon stock should be construed to mean precut segments of cutting blade.

E. Means-Plus-Function Revisited: "Cutter"

[20] Ken identifies the "cutter" of claim 12 as a means-plus-function claim. That claim is directed to a "system for folding metallic ribbon stock comprising," *inter alia,* "a cutter for cutting said ribbon stock at a predetermined location." Here Ken seeks to limit the claimed cutter to that disclosed in the '919 patent and its structural equivalents. 35 U.S.C. s. 112, para. 6. Again Ken points to the specification: "The above [referring to Figure 1] cutting molding unit 100 is applied from [Korean] FN12 Patent No. 80607 entitled 'Multi-purpose Cutter of a Cutting Blade for Die Cutter' ... incorporated by reference herein. A detailed explanation for the cutting molding unit is therefore omitted below."

FN12. The original specification, erroneously referring to "Japan Patent No. 80607" (instead of " *Korean* Patent No. 80607"), was later amended by a Certificate of Correction. Gilman Decl. Exh. 4 at 127. This discrepancy, already the subject of a summary judgment motion and extensive oral argument, will not be further discussed. *See* March 28, 2000 Order denying Ken's motion for summary judgment concerning inequitable conduct.

SDS again objects that the absence of "means" language precludes application of the means-plus-function statute. SDS Br. at 32. And, it argues, the word "cutter" is "about as structural as one can get." SDS Br. at 32.

Once again, the court must determine whether the "cutter" is "expressed as a means ... for performing a specified function without the recital of structure, material, or acts in support thereof." 35 U.S.C. s. 112, para. 6. The court first notes the Federal Circuit's comment that the mere coincidence that a device takes its name from its function should not convert a claim into the means-plus-function format. Greenberg, 91 F.3d at 1583 (listing "filter," "screwdriver," "suture applicators" *and* " *cutters* ") (emphasis added). The court next turns to the dictionary relied upon by defendant, the International Association of Diecutting and Diemaking "Glossary of Terms," which stipulates: "CUTTER-A term used to describe a bench tool used to cut steel rule stock in the manufacture of steel rule dies." SDS Exh. 46. This definition, evidently familiar to those skilled in the diemaking and diecutting art, supports the legal presumption that the cutter, with no reference to "means," should not be analyzed under Paragraph 6. Like the elongate member, it is structure. *See* Envirco, 209 F.3d at 1365 ("The term 'baffle' itself is a structural term.").

The court adopts the I.A.D.D.'s definition of the disputed "cutter" in claim 12. That device is not expressed in means-plus-function terms; Ken's contention to that effect is rejected.

F. Transferring Unit

[21] Finally, Ken calls for means-plus-function treatment of the "transferring unit" referenced in apparatus claim 1 and system claim 12, and for steps-plus-function analysis of the phrase "transferring ribbon stock through a passage formed by a guide ..." in method claim 8. SDS disputes the applicability of Section 112, Paragraph 6 to these phrases.

SDS again relies on the absence of the word "means" in the disputed claims. And, as discussed in the court's indefiniteness analysis, *see* Section 2.C. above, the patentee argues that the structure girding the "transferring unit" phrase is equivalent to the part named in the specification as "transferring unit 10," sometimes called "transfer roller 10." *See, e.g.,* col. 4, ln. 63; col. 2, lns. 42-44. Ken responds that, "despite hinting at a possible element of the transferring unit, namely a roller, none of [the patent specification's] language describes the ***structure*** of the unit itself."

[22] The court turns to Federal Circuit precedent for guidance. That Court has made clear that a patentee may disclose structure, and thus avoid means-plus-function treatment, by including in the patent claims language describing structural limitations. For example, the *Al-Site* Court refused to apply Paragraph 6 to "an eyeglass hanger member for mounting a pair of eyeglasses," where such was described as "made from flat sheet material," "having an opening means formed ... below [its] upper edge," and having "an attaching portion attachable to a portion of said frame of said pair of eyeglasses...." 174 F.3d at 1317. Likewise, the Federal Circuit's *Rodime* decision held that a "positioning means," which included two support arms, a pivot shaft, a positioning arm, a bearing assembly, a stepper motor, and a tensioned steel band, was not subject to means-plus-function analysis. 174 F.3d at 1298.

Alternatively, even where structure is not explicitly described in the claims, the Federal Circuit has approved the use of terms with "a well-known meaning to those of skill in the [relevant art] connotative of structure." *Personalized Media Communications LLC v. Int'l Trade Comm'n,* 161 F.3d at 704-705. In that case, the Circuit interpreted the limitation "digital detector":

"Detector" is not a generic structural term such as "means," "element," or "device"; nor is it a coined term lacking a clear meaning, such as "widget" or "ram-a-fram." ... [N]either the fact that a "detector" is defined in terms of its function, nor the fact that the term "detector" does not connote a precise physical structure in the minds of those of skill in the art detracts from the definiteness of structure.... Even though the term "detector" does not specifically evoke a particular structure, it does convey to one knowledgeable in the art a variety of structures known as "detectors."

Id. The Court concluded that the detector, with or without adjectival qualification, avoided analysis under s. 112, para. 6, primarily because of a dictionary defining a detector as a "rectifier" or "demodulator". *Id*. Similarly, in *Greenberg v. Ethicon Endo-Surgery, Inc.,* the Circuit Court stated of the phrase "detent mechanism": "A close reading of the specification reveals ... that the term is used ... simply as a shorthand way of referring to each of the key structural elements of the invention. Each of those elements is subsequently described in detail, without use of the term 'means,' [in the specification], and each is subsequently claimed, again without the use of the term 'means,' [in the patent claim]." 91 F.3d at 1584.

This court follows *Personalized Media* and *Greenberg* to conclude that, though no structure is explicitly recited for the "transferring unit" in the claims themselves, that phrase is mere "shorthand" for referring to

the "transfer roller 10" described in the specification. Though "transferring unit" may well be a "generic structural term," *see Personalized Media* at 704, a "transfer roller" is a definite structure-and as already explained, the terms are interchangeable. *See* Section 2.C., above. Further, the claims themselves state the location, as well as purpose, of the claimed roller, referring to, for example, "a transferring unit for transfer of ribbon stock through a passage formed by a guide, said passage defining a longitudinal axis (claim 1)". *See* Cole, 102 F.3d at 531 (despite patent drafter's use of phrase "perforation means," finding structure where, in disposable baby diaper designed to break apart along perforated seams, "The claim describes not only the structure that supports the tearing function [i.e., perforations], but also its location (extending from the leg band to the waist band) and extent (extending through the outer impermeable layer).").

This conclusion is enforced by the Patent Examiner's comment concerning a "transfer unit"-as noted, Examiner Crane apparently recognized such as having a well-known meaning to those skilled in the art. *See Personalized Media,* 161 F.3d at 704-705. As in *Greenberg,* the "transfer roller" is described in detail in the specification, and the "transferring unit" is specified in the claims. Each phrase conveys, permissibly, "a variety of structures." *Personalized Media,* 161 F.3d at 705.

The court finds that the transferring unit connotes structure, not function, to one skilled in the art. Accordingly, means-plus-function treatment is denied. Instead, the transferring unit is interpreted as a mechanism that moves ribbon stock, from a roll at the beginning of the assembly line, through the claimed machine. *See* Section 2.C., above.

CONCLUSION

The motion by defendant Ken Specialties for summary judgment that the '919 patent is invalid for indefiniteness and failure to satisfy the written description requirement is denied. The patent is constructed as set forth in this opinion.

ORDER

Defendant Ken Specialties moves for summary judgment that the '919 patent is invalid for indefiniteness, 35 U.S.C. s. 112, para. 2, and for failure to satisfy the written description requirement, 35 U.S.C. s. 112, para. 1. Further, each party requests that the court make a *Markman* ruling to construct the '919 patent claims in its favor. The court heard oral argument July 21 and 31, 2000. For the reasons stated in the accompanying opinion,

It is this day of August, 2000:

ORDERED that:

1) The motion by defendant Ken Specialties for summary judgment that the '919 patent is invalid for indefiniteness, and for failure to satisfy the written description requirement is **denied.**

2) The '919 patent is constructed as set forth in the accompanying opinion.

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