

System v. Concrete

CV-94-484-M 07/26/99

UNITED STATES DISTRICT COURT

DISTRICT OF NEW HAMPSHIRE

System Evergreen, A.G.
and Michie Corporation,
Plaintiffs

v.

Civil No. 94-484-M

Concrete Systems, Inc.,
Cleco Corporation, and
Methuen Construction Co., Inc.,
Defendants

O R D E R

This is an action for patent infringement. Plaintiffs, System Evergreen, A.G. and Michie Corporation, allege that defendants, Concrete Systems, Inc., Cleco Corp., and Methuen Construction Co., willfully infringed U.S. Patent No. 4,293,245 (the "'245 patent") through the manufacture, sale, and use of their "Eco-Wal" product. Pending before the court are the parties' cross-motions for partial summary judgment.

Plaintiffs argue that defendants' product infringes the '245 patent because the Eco-Wal system literally includes every limitation recited in the patent's third claim. They further claim that the defendants' behavior prior to commencement of this suit rises to the level of willful infringement. Defendants respond that claim 3 is invalid as a matter of law for failing both the enablement and written description requirements as set forth in 35 U.S.C. § 112. In the alternative, defendants contend that if the validity of the claim is sustained and infringement

is found, defendants' reliance on the opinion of counsel precludes a finding of willful infringement.

INTRODUCTION

A. Factual Background

Plaintiff, System Evergreen, is the assignee of the '245 patent, which issued to Felix Jaecklin on October 6, 1981. The patent is directed to an earth-filled structural system, composed of stackable concrete units that can be used as a retaining wall or free-standing sound barrier. Co-plaintiff, Michie Corporation, manufactures and sells precast concrete products pursuant to its exclusive license under the '245 patent.

Defendant, Concrete Systems, manufactures and sells the Eco-Wal – an earth-filled, concrete retaining wall system. Cleco Corporation manufactures and sells molds used to create precast concrete forms that are incorporated in the Eco-Wal. The remaining defendant, Methuen Construction, purchased at least one Eco-Wal system and then, in turn, sold it to the State of New Hampshire.

B. History of the '245 Patent

The patent originally issued with 27 claims, only one of which was independent (claim 1). At the outset of this suit, and at the parties' request, the court issued an order construing claim 1 of the patent. See System Evergreen v. Concrete Systems,

Inc., No. 94-484-M, slip op. (D.N.H. November 13, 1996) (hereinafter "Order of Nov. 13, 1996" or "Claim Construction Order"). Armed with this construction, defendants sought to have the patent reexamined in the Patent and Trademark Office ("PTO"). The PTO granted defendants' request and issued an Office Action in Reexamination, rejecting claims 1, 2, 4, 5, 9-13, 15, 20, 21, and 25-27; and confirming the patentability of claims 3, 6-8, 14, 16-19, and 22-24.

According to the Examiner:

Claims 3, 6-8, 14, 16-19, and 22-24 are confirmed because the prior art does not fairly teach a system such as taught by Velde [U.S. Patent No. 1,268,649] having an L-type cross-section, as set forth in claims 3, 16 and 17; or covering slab elements, as set forth in claims 6-8, or the "elements" arranged in a vertical position, as recited in claim 14, a longitudinal beam having a canal, as set forth in claims 18 and 19, or the arrangement of elements as set forth in claims 22-24.

See Document No. 118, Defendants' Motion for Summary Judgment, Appendix, Exhibit D, Office Action in Reexamination, May 2, 1997, p. 5, ¶ 3.

Rather than continue prosecuting the patent, plaintiffs conceded the rejected claims, terminated the reexamination proceeding and asserted infringement of claims 18 and 19 against defendants in this court. In its order of September 30, 1998, the court construed claims 12, 18 and 19, concluding that defendants were not liable for infringement. See System

Evergreen v. Concrete Systems, Inc., No. 94-484-M, slip op. (D.N.H. September 30, 1998) (hereinafter "Order of Sept. 30, 1998" or "Infringement Order").

The parties now focus their attention on claim 3 of the '245 patent, which recites:

3. The system of claim 1 in which there is at least one longitudinal beam having an L-type cross-section with an upright L-portion extending upwards from said flat support portion and being positioned at the outer edge portion of the longitudinal beam, said upright L-portion being arranged at an angle relative to said main plane of the frame or slab so as to form a sloping front and/or internal surface of said board retaining the earth material, said sloping being chosen so as to form an overhang to the front side of the wall.

DISCUSSION

Summary judgment is appropriate where the "pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Rule 56(c), Fed. R. Civ. P. It is well-established that this standard is equally applicable in patent infringement actions. See Johnston v. IVAC Corp., 885 F.2d 1574, 1576-77 (Fed. Cir. 1989).

Literal infringement is determined by a two-step analysis. First, the claims of the patent must be properly construed to ascertain their scope and meaning. Second, a determination must

be made as to whether the accused product or process infringes the asserted claim as properly construed. See Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1581 (Fed. Cir. 1996) (citing Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996)).

I. Claim Construction

A. Applicable Legal Standards for Construing Claims

Courts have the “power and obligation to construe as a matter of law the meaning of language used in patent claims.” Markman, 52 F.3d at 979. To determine the proper construction of a claim, the court first considers the intrinsic evidence – the claims, the written description, and if in evidence, the prosecution history. See Vitronics, 90 F.3d at 1582.

Even within the intrinsic evidence, however, “there is a hierarchy of analytical tools.” Digital Biometrics, Inc. v. Identix, Inc., 149 F.3d 1335, 1344 (Fed. Cir. 1998). “The actual words of the claim are the controlling focus.” Id. Words in a claim are generally given their ordinary and customary meaning, unless the patentee specifically defined those words differently in the patent specification. See Vitronics, 90 F.3d at 1582. The specification is, therefore, considered to determine whether the patentee used any words in a manner inconsistent with their ordinary meaning. See id. Likewise, the prosecution history is considered because “it may contain contemporaneous exchanges

between the patent applicant and the PTO about what the claims mean.” Digital Biometrics, 149 F.3d at 1344. If the intrinsic evidence of record unambiguously describes the scope of the patented invention, “resort to ‘extrinsic’ evidence, such as treatises and technical references, as well as expert testimony when appropriate, should not be necessary.” Id.

B. The Legal Construction of Claim 3 of the ‘245 Patent

Because interpretation of patent claims turns on the actual wording of the claim, that is the place to start. As in many patent cases, the meaning of only a few words in the claims is at issue here. See, e.g., Digital Biometrics, 149 F.3d at 1345. The parties have identified the meaning of the phrases “upright L-portion,” “from said flat support portion,” “arranged at an angle,” and “front side of the wall” of claim 3 as being in dispute.

In relevant part, claim 3 further defines the longitudinal beam of claim 1 as having “an L-type cross section with an upright L-portion extending upwards from said flat support portion.” The meaning of the term “L-type cross section” is not in dispute. The parties have stipulated that longitudinal beams having generally L-type cross sections are depicted in: Figure 5 (Reference Number 3); Figure 19 (Reference Number 51); Figure 20 (Reference Numbers 1 and 2); and Figure 24 (Reference Number 1).

The court agrees that the term "L-type cross section" is evident from the plain language of the claim and from the above figures as depicted in the specification. However, the court disagrees with plaintiffs' assertion that these figures are actual representations of the invention as recited specifically in claim 3. The invention of claim 3 is of a much narrower scope than that of the invention depicted and described in those figures. Consequently, because the court does accept the above figures as accurately representing the invention in claim 3, the figures are only useful to show examples of particular aspects or elements of claim 3.

Because the actual dispute over the proper construction of claim 3 derives from the ambiguity of the phrase "from said flat support portion," the court will construe that element first.

1. "From said flat support portion"

Claim 3 specifically recites that the "upper L-portion extend[s] upwards from said flat support portion." The term "said flat support portion" finds proper antecedent basis in claim 1 as "a substantially flat support." Because the court previously construed claim 1 of the '245 patent in its Order of Nov. 13, 1996, a review of that construction seems appropriate.

In the Claim Construction Order, both parties concurred in the construction of the "substantially flat support" limitation

in claim 1 as "the upper surface of that portion of the longitudinal beam which is arranged at an acute angle with respect to the main plane or slab, and the area within the framework on which some of the earth material that fills the framework rests." Claim Construction Order, p. 10. At the time, the term "flat support" was not in dispute, and as such, it received scant attention. But the parties now offer conflicting interpretations of the construction.

Plaintiffs argue that the "flat support" represents the upper surface of the entire longitudinal beam rather than the upper surface of only that portion of the beam positioned at an acute angle. According to plaintiffs, because the upper surface of the entire longitudinal beam (both the horizontal portion and the angled portion) supports earth material, the upper surface of the entire beam constitutes the "flat support." Plaintiffs reason that because claim 1 implicitly recites more than one portion of the longitudinal beam – i.e., "at least one portion [of the beam] arranged at an acute angle" – the beam could have different areas constituting the "flat support." In other words, if the beam has multiple portions, then it will also have multiple areas that constitute the "flat support." Therefore, it follows that if one portion of the beam lies parallel to the horizontal plane, its corresponding "flat support" will do the same.

According to plaintiffs, their interpretation of the limitation is consistent with the construction previously accepted by all parties, because the upper surface of the horizontal (i.e., non-angled) portion of the beam represents an "area within the framework on which some of the earth material that fills the framework rests," and, therefore, falls within the previous construction of the "flat support." Plaintiffs offer the testimony of Dr. Jaecklin, the inventor, in support of their position. According to Dr. Jaecklin, because the beam holds the earth material in a vertical sense as well as in a lateral or horizontal sense, the "flat support" should be construed as the upper surface of entire beam, both the horizontal and vertical (angled) portions.

For the reasons that follow, the court cannot agree. According to defendants, the phrase "and the area within the framework on which some of the earth material that fills the framework rests," designates the function of the "flat support" rather than identifies another portion of the beam representing the "flat support." The court agrees. Although the construction previously adopted is somewhat ambiguous, that ambiguity does not necessarily render the term "flat support" ambiguous or unclear.

The intrinsic evidence of record indicates that the proper construction of the term "flat support" is strictly limited to the area of the beam that lies in the plane at an acute angle.

Stated somewhat differently, the flat support is the upper surface of that portion of the longitudinal beam that is arranged at an acute angle with respect to the main plane. It does not include the upper surface of those portions of the beam that lie in a horizontal plane (even though some earth material resides on these portions of the beam).

Claim 1 recites in relevant part:

[S]aid frame elements further including at least one longitudinal beam having a cross-section with at least one portion thereof arranged at an acute angle against the main plane of the frame or slab, the upper surface thereof forming a substantially flat support for said earth material

(emphasis added). The plain language of this claim indicates that the longitudinal beam may have more than one portion, but it strictly requires that at least one portion of the beam lie at an acute angle with respect to the plane.

The actual dispute with regard to this claim derives from the use of the phrase "the upper surface thereof." In particular, the proper construction of the term "flat support" turns on whether the phrase "upper surface thereof" refers to the "longitudinal beam" as a whole (as plaintiffs suggest) or to the "portion" of the longitudinal beam that is arranged at an acute angle (as defendants suggest). As shown below, the overall structure of the claim supports the defendants' proposed construction.

Claim 1 begins by reciting a structural system for the construction of walls comprising a framework. The claim next specifies the various elements which make up the framework – i.e., the frame elements. As seen from the claim, one such frame element is the longitudinal beam – “. . . the frame elements further including at least one longitudinal beam”

The claim further describes the longitudinal beam as “. . . having a cross-section with at least one portion thereof arranged at an acute angle against the main plane of the frame” (emphasis added). In this context, it cannot realistically be disputed that the “at least one portion thereof” language refers to the longitudinal beam element that directly precedes it. No other construction makes sense. See In re Hyatt, 708 F.2d 712, 714 (Fed. Cir. 1983) (“A claim must be read in accordance with the precepts of English grammar.”).

Immediately following this language in the claim is “. . . the upper surface thereof forming a substantially flat support for said earth material” (emphasis added). If the term “thereof” in this part of the claim is construed as referring to the language that directly precedes it as well, namely the “portion . . . [of the longitudinal beam] arranged at an acute angle,” then defendants’ interpretation of this claim element would necessarily be correct. Plaintiffs presumably assert that the use of this second “thereof” relates back to the

"longitudinal beam," rather than to the limitation that directly precedes it. Plaintiffs offer no evidence other than the testimony of inventor Dr. Jaecklin to support this proposition.

Based on the actual syntax of the claim language, however, the court sees no reason to interpret the use of the phrase "upper surface thereof" to refer to any limitation other than that which directly precedes it in the claim.¹ The sentence structure discloses that the term "thereof" preceding the "flat support" limitation refers to the portion of the beam arranged at an acute angle, rather than the beam as a whole. Consequently, the phrase "the upper surface thereof" should be interpreted as further describing that portion of the longitudinal beam arranged at an acute angle with respect to the main plane.

This construction makes sense in light of the patentee's previous use of the term "thereof," and in the language that directly follows that portion of the claim. As stated above, the patentee's first use of the term "thereof" referred to the limitation that directly preceded it in the claim. Moreover, in subsequent language, when the patentee placed further limitations on the longitudinal beam, he first specifically reiterated the

¹ If the patentee intended for the "upper surface" language to further describe the longitudinal beam as a whole, he could have used either of the following language: (1) "the upper surface of said longitudinal beam forming a substantially flat support . . . ;" or (2) "said longitudinal beam having an upper surface which forms a substantially flat support"

"longitudinal beam" as an element and then introduced new limitations, such as: "at least one such longitudinal beam being located at the front side of said wall and having an upper front edge portion" (emphasis added).

Given these considerations, the overall structure of the claim itself suggests that the flat support element refers to the upper surface of the portion of the beam arranged at an acute angle, rather than the upper surface of the entire longitudinal beam itself.

The intrinsic evidence taken as a whole supports this construction as well. While the patent specification sets forth no special meaning for the term "flat support" – in fact, it is devoid of any reference to a "flat support" – the written description of the patent uses the term "inner surface," and in some cases, "inner sloping surface," when describing the area on which the earth material rests. Thus, it seems clear that the flat support definitely includes the upper surface of the angled portion of the beam, i.e., the "sloping surface." However, the specification fails to resolve whether the flat support includes the upper surface of the horizontal or non-angled portions as well. As a result, the parties direct the court's attention to the prosecution history of the patent. See Vitronics, 90 F.3d at 1582.

The prosecution history of the patent is relevant to claim construction because "it may contain contemporaneous exchanges between the patent applicant and the PTO about what the claims mean." Digital Biometrics, 149 F.3d at 1344. The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution. See Alpex Computer Corp. v. Nintendo Co., Ltd., 102 F.3d 1214, 1220 (Fed. Cir. 1996).

The original application for the '245 patent had 40 claims, 2 of which were independent – claims 1 and 10. Claims 1 through 9 were eventually canceled via a preliminary amendment, and claim 10 read as follows:

A structural system for the construction of walls especially walls consisting of crib type structure built with earth material, comprising frame or slab type elements with frame or slab parts in at least one plane and at least one support area on at least one frame or slab side.

Claim 19 depended from claim 10 and it introduced the limitation requiring the wall to have sloping surfaces (the apparent predecessor to claim 1's "acute angle" limitation). It read as follows:

The system of claim 10 wherein said frame or slab type element has sloping surfaces.

The patentee specifically indicated that the surfaces of the figures represented by reference numbers 18, 19, 20, and 23 in the figures constituted "sloping surfaces."

Claim 20 as amended depended from claim 10 and recited:

The system of claim 10 wherein at least one longitudinal beam of said frame or slab like element has a cantilevering cross section and downward sloping outer surfaces.

The "downward sloping outer surface" referred to the surface indicated by reference number 21 of figure 5. Consistently with both the prosecution history and the court's order of Sept. 30, 1998, this downward sloping outer surface is used as a sound barrier and as an obstacle to prevent individuals from scaling the wall, rather than as a sloping surface employed to house earth material.

Claim 24 introduced the use of a longitudinal beam having an L-type cross section. This claim depended from claim 20, and read as:

The system of claim 20 having an L-type longitudinal beam with vertical L-portion looking down.

Incorporating the limitations of claim 20 (the cantilevering cross section and the downward sloping outer surface), claim 24 would appear to be adequately depicted by Figure 5 of the '245 specification. However, the beam in Figure 5 has a vertical L-

portion "looking" up, not down. The patentee indicated that the beam represented by reference number 46 was "looking down."

On May 29, 1980, Examiner Taylor issued an Office Action rejecting all of the application's claims. In particular, claims 10 and 19 were rejected under 35 U.S.C. § 102 as not being novel in light of U.S. Patent No. 1,953,005 to Nagel (hereinafter "Nagel"). Claims 20 and 24 were rejected under 35 U.S.C. § 103 as being obvious in light of the Nagel reference. Specifically, the Examiner stated:

The structural features added by these claims to the base claim is considered to be no more than a matter of design or choice and not a patentable distinction because there is no structure recited that indicates these features are critical or provide any new or unobvious results.

Therefore, according to the Examiner, the use of "slopes" was not a patentable distinction over the prior art, but merely a design choice.

In light of this rejection, the patentee canceled, among others, claims 10 and 19, and amended claim 20 to depend from newly added claim 48. Claim 24 was left unamended, but was now dependent on claims 20 and 48. Claim 48 was added and currently stands as claim 1 of the '245 patent. Similarly, claim 50 was added as a new claim, and it currently stands as claim 3 of the '245 patent.

In entering these amendments, the patentee argued that new independent claim 48 was patentably distinct over Nagel and U.S. Patent No. 2,149,957 to Dawson (hereinafter "Dawson") because the inventions in Nagel and Dawson were not directed to earth "slopes." In addition, the patentee argued that neither Nagel nor Dawson disclosed "flat support" portions of the longitudinal beams which could bear earth material "as is necessary for such slopes."

The patentee further cited and sought to distinguish his invention from the following prior art references: U.S. Patent Nos. 1,733,790 to Gilman, 2,972,870 to Cooper, and 3,877,236 to O'Neil; and German Patents OS 2,718,290 to Neumann and PS 2,513,268 to Janus. According to the patentee, his invention differed from the above references because none of the references contained "flat earth support surfaces."

At the very least, both the Nagel and Dawson references disclose longitudinal beams having flat, horizontal upper surfaces which form the framework of a retaining wall. Neither reference teaches the use of longitudinal beams that are arranged at an angle with respect to the main plane. During prosecution, the patentee essentially used this argument to overcome the prior art rejection. Specifically, the patentee distinguished over the Dawson and Nagel references by claiming that they, unlike his invention, failed to teach the use of a "flat support" which

could bear earth material for an "earth slope." Through this argument, the patentee limited the scope of his invention. Consequently, he cannot now claim that the flat support element of his invention represents that which he disclaimed during prosecution – namely the horizontal portions of the beam. Although some earth material does reside on the surfaces of these horizontal or non-angled portions, by patentee's own admission, this is neither a novel feature, nor the thrust of his invention.

Thus, the proper construction of the term "flat support" does not include the upper surface of the entire longitudinal beam. Rather, this element is strictly limited to the upper surface of that portion of the longitudinal beam that is arranged at an acute angle with respect to the plane.

2. "Upright L-portion"

The term "upright L-portion" can be understood from its plain and ordinary meaning. This element as introduced in claim 3 constitutes the upper portion of a beam that has an L-type cross-section. In this context, according to The Random House Dictionary of the English Language, the term "L" means having the shape of a right angle. See The Random House Dictionary, 1071 (1987). Accordingly, if the L-shaped beam of the '245 patent formed perfect right angles, the "upright L-portion" would constitute the vertical portion of the "L," rather than its horizontal or base portion. Because the beams used in the '245

patent are not directed to perfect right angles, the term "upright L-portion" simply refers to that portion of a generally L-shaped beam that exists in a generally or substantially vertical plane. The upper portion of the longitudinal beam represented by Reference Number 3 in Figure 5 is indicative of an "upright L-portion."

Accordingly, in claim 3, the phrase the "upper L-portion extend[s] upwards from said flat support portion" simply means that the "upright L-portion," as defined above, is attached to the "flat support," as that term has been defined, to form a beam with a generally L-shaped cross-section.

3. The "angle" limitation

Claim 3 further introduces a new angle as an element of the claim. In particular claim 3 recites: "said upright L-portion being arranged at an angle relative to the main plane of the frame or slab" (emphasis added). Plaintiffs suggest that the angle of claim 3 be defined as either the "acute angle" of claim 1 that the court previously defined as "the angle between at least one portion of the longitudinal beam and the main plane of the frame or slab," or the angle supplementary² to the "acute angle" of claim 1.

² A "supplementary angle" is defined as either of two angles that when added together produce an angle of 180°.

The court cannot accept either construction of that element. That claim 3 introduces the "angle" element using the article "an" indicates that the patentee intended for the "upright L-portion" to lie at a different angle than the one recited in claim 1. Ascribing the same meaning to the two different angles of claims 1 and 3 would have the effect of rendering one of the limitations meaningless. Because all limitations are to be considered meaningful, see Lantech, Inc. v. Keip Mach. Co., 32 F.3d 542, 546 (Fed. Cir. 1994), the court cannot accept plaintiffs' proposed construction of this element.

Furthermore, accepting plaintiffs' construction would contradict the court's interpretation of the "flat support" element as being distinct from the "upright L-portion." As previously construed, the "flat support" is that portion of the beam that is arranged at an "acute angle." Because the "upright L-portion" is attached to and extends from the "flat support," it is clearly oriented at an angle that is separate and distinct from the "acute angle" of claim 1. Thus, the "angle" limitation as recited in claim 3 is defined as the angle between the "upright L-portion" and the main plane that is formed when the "upright L-portion" is attached to the "flat support," i.e., that portion of the beam that lies at an "acute angle."

4. "Front side of the wall"

Plaintiffs suggest that the term "front side of the wall" is also in dispute. The meaning of this term appears to be clear and plain, and does not appear to be material to this litigation. Nevertheless, the court will construe the term. Based on the intrinsic evidence of record, the "front side of the wall" is that portion of the wall which is perceived by the viewer. The earth material that fills the framework of the invention essentially rests behind this area or "side" of the wall so as to provide a better "esthetic appearance" to an external viewer. In other words, the "front side of the wall" is the side of the wall that essentially hides the earth material from view.

II. Infringement

A. Literal Infringement

With the proper construction of claim 3 in hand, the court now turns to the question of infringement. For plaintiffs to establish literal infringement in this case, they need to show that every element of claim 3 of the '245 patent is found in the accused product. See CVI/Beta Ventures, Inc. v. Tura LP, 112 F.3d 1146 (Fed. Cir. 1997). If even one limitation of the claim is not met by the accused device, then literal infringement is avoided. See Lantech, 32 F.3d at 547.

In light of the above construction and the evidence regarding defendants' accused product, it is clear that claim 3

of the '245 patent is not literally infringed. Inspection of the accused product reveals the absence of several of the essential elements of claims 1 and 3.

1. The "L-type" cross-section

Specifically, the accused product does not include at least one longitudinal beam having an "L-type cross-section," as required by claim 3. Rather, the accused product includes longitudinal beams that consist of U-shaped or trough-like cross-sections. Presumably, plaintiffs base their claim of infringement on the theory that the bisection of a portion of the U-shaped longitudinal beam of the accused product results in two beams of L-shaped cross-sections. In other words, according to plaintiffs, defendants infringe the '245 patent because the accused product seems to join two L-shaped beams together, and because addition of other elements to an open-ended claim using the transition "comprising" does not defeat a claim of infringement.

The court disagrees. Plaintiffs' theory of literal infringement is inconsistent with patent law. Here, defendants are not employing two distinct L-type beams, or one L-type beam combined with another beam arranged at an acute angle. Rather, the accused product employs a U-shaped or a trough-like beam similar to the beam in claim 18 of the '245 patent which contained a "longitudinal canal." The '245 patent clearly

distinguishes between U-shaped and L-shaped beams. Thus, defendants are not merely "adding" another element to the patented invention in this case. Rather, defendants altered or "designed around" this claim element by sufficiently distinguishing the cross-section of their beam from that of claim 3. Claim 3 specifically limits the cross-section of its beam to one with an "L-type" cross-section. Because the accused product uses U-shaped beams rather than L-shaped beams, literal infringement is avoided. See Lantech, 32 F.3d at 547. Accordingly, summary judgment in plaintiffs' favor is not warranted.

2. "Upright L-portions"

Similarly, the accused product does not contain any "upright L-portions" within the meaning of the '245 patent. Although each U-shaped trough present within the accused device contains two upright portions attached to a base, so as to form the canal or trough, the accused product fails to disclose any such portion "extending upwards from said flat support."

As stated above, the "flat support" represents only the upper surface of that portion of the longitudinal beam that is arranged at an acute angle. The only portions of the beams within the accused product that lie at acute angles with respect to the main plane are the "upright" portions of the beam that come together to form the "U-shaped" cross-section or "trough".

Because the "flat support" of the '245 patent does not include the upper surface of those portions of the longitudinal beam that lie in the horizontal plane, the base or horizontal bottom of the accused product is outside the scope of this element.

Accordingly, in the accused product, if the "flat support" is interpreted as being the walls of the trough, then the accused product lacks the "upright L-portion" as required by claim 3. Conversely, if the walls of the trough in the accused product are interpreted as being "upright L-portions," then the "flat support" limitation as required by claim 1 is necessarily absent from the accused product (because these walls are attached to a horizontal bottom portion of the trough, and that horizontal portion cannot constitute the "flat support" element).

Therefore, regardless of how the accused product is viewed, no reasonable fact-finder could find both a flat support and an upright L-portion (as two distinct elements) in the accused device. Therefore, in addition to the lack of the "L-type cross-section" element, plaintiffs are not entitled to summary judgment on the issue of infringement because the accused device does not contain either the "upright L-portion," or in the alternative, "the flat support" element.

3. The "angle" limitation

Incorporating the limitations of its parent claim, claim 3 of the '245 patent requires the presence of two angles with respect to the main plane. The first angle, as recited in claim 1, requires that a portion of the longitudinal beam be arranged at an acute angle with respect to the main plane (the upper surface of this portion of the beam will form the "flat support"). Claim 3 requires that the "upright L-portion" of the beam extend from the "flat support" and be positioned at an angle with respect to the main frame so as to form a sloping overhang or retaining board. As specified above, contrary to plaintiffs' assertions, these two angles are distinct.

Inspection of the accused device reveals only the inclusion of one angle. In particular, the upright portions of the beam that form the walls of the trough as attached to the beam's horizontal bottom, are arranged at an acute angle with respect to the main frame. Clearly, these portions of the beam in the accused product could read upon the "flat support" requirement of claim 1. However, as stated above, if these portions of the beam read upon the "flat support" element of claim 1, then there are no corresponding "upright" portions "arranged at an angle relative to said main plane" Such an interpretation precludes a finding of infringement.

Nevertheless, regardless of the interpretation ascribed to the elements of the accused device, defendants' product necessarily lacks one of the two required angles as recited in claims 1 and 3, respectively. Therefore, because at least one of the required angle limitations is missing in the accused product, the accused device cannot literally infringe the '245 patent. See id. Moreover, if the two angles were construed as being the same (as plaintiffs suggest), then the flat support and the upright L-portion would necessarily be the same portion of the longitudinal beam. As discussed above, such an interpretation would violate some basic maxims of patent law. Thus, in addition to the reasons stated above, plaintiffs are not entitled to judgment as a matter of law on the issue of infringement because the accused product does not include one of the essential angle limitations required by the claims.

Because, at best, the accused device lacks at least three of the essential limitations present within claim 3 of the '245 patent, a finding of literal infringement is not possible. Consequently, plaintiffs are not entitled to summary judgment on the issue of literal infringement.

B. Doctrine of Equivalents

Similarly, (although not expressly raised by plaintiffs), plaintiffs do not appear to be entitled to judgment as a matter of law under the doctrine of equivalents. Under the doctrine of

equivalents, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is "equivalence" between elements of the accused product and the claimed elements of the patented invention. See Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 117 S. Ct. 1040, 1045 (1997). Infringement under the doctrine of equivalents requires that an equivalent be found for every element of the claim "somewhere in [the] accused device." Corning Glass Works v. Sumitomo Elec. U.S.A., Inc., 868 F.2d 1251, 1259 (Fed. Cir. 1989).

The accused device completely lacks at least three elements required by claims 3 and 1, respectively. Under the "All Elements Rule," "if the accused device wholly fails to meet a limitation to which the patentee expressly limited the claims, a finding of equivalence is precluded." Hughes Aircraft v. United States, 140 F.3d 1470, 1477 (Fed. Cir. 1998). The accused product clearly fails to meet at least one of the "angle" limitations imposed by either claim 1 or 3, because it only uses one angle. Similarly, the accused product does not contain either a "flat support" as that term has been defined, or "an upright L-portion." Moreover, because the patentee expressly limited his invention in claim 3 as having an "L-shaped" cross-section, and because the patentee distinguished between beams that were "L-shaped" and those that were "U-shaped" or trough-like, it is precluded from now asserting a scope of equivalents

that would encompass the accused product. Thus, even if plaintiffs had raised the issue, it is unlikely that they would be entitled to judgment as a matter of law on the issue of infringement under the doctrine of equivalents.

III. Invalidity Analysis

Under 35 U.S.C. §112, the patent act requires that a patent specification contain (1) an enabling disclosure; (2) a sufficient written description of the claimed invention; and (3) a disclosure of the best mode of carrying out the invention. The relevant statutory language appears in the first paragraph of §112 of Title 35:

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.

35 U.S.C. §112, ¶ 1.

Defendants argue that the '245 patent is invalid based on two separate theories: (1) lack of enablement; and (2) insufficient written description.

A. Legal Standards for Proving Invalidity

_____ "A patent is presumed valid, and the burden of proving invalidity, whether under §112 or otherwise, rests with the

challenger.” United States v. Telectronics, Inc., 857 F.2d 778, 785 (Fed. Cir. 1988). “Invalidity must be proven by facts supported by clear and convincing evidence.” Id. Although the issue of enablement is a question of law, a determination of enablement is based on factual inquiries. See B.F. Goodrich Co. v. Aircraft Braking Sys. Corp., 72 F.3d 1577, 1582 (Fed. Cir. 1996). Whether a patent specification satisfies the written description requirement is a question of fact. See Utter v. Hiraga, 845 F.2d 993, 998 (Fed. Cir. 1988). The factual determinations necessary in this case are only amenable to summary judgment when, after reviewing all of the evidence in the light most favorable to the non-moving party, no reasonable jury could find for the non-moving party.

B. Enablement

Under the enablement requirement, a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation. See In re Wright, 999 F.2d 1557, 1561 (Fed. Cir. 1993). A patent specification must contain a disclosure, either through illustrative examples or written description, that is sufficient to teach one skilled in the art how to make and use the invention as broadly as it is claimed. See In re Vaeck, 947 F.2d 488, 496 (Fed. Cir. 1991).

"[I]t is not necessary that a patent applicant test all the embodiments of his invention; what is necessary is that he provide a disclosure sufficient to enable one skilled in the art to carry out the invention commensurate with the scope of his claims." Amgen, Inc. v. Chugai Pharm. Co., 927 F.2d 1200, 1213 (Fed. Cir. 1991) (internal citation omitted). "[P]atent applicants are not required to disclose every species encompassed by their claims" In re Vaeck, 947 F.2d at 496. Furthermore, a patent need not teach that which is well known in the art. See Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384 (Fed. Cir. 1986).

A disclosure may be enabling even though a considerable amount of routine experimentation is required to practice the invention. See PPG Indus. Inc. v. Guardian Indus. Corp., 75 F.3d 1558, 1564 (Fed. Cir. 1996). If "undue" experimentation is required to make and use the invention, however, the patent fails to satisfy the enablement requirement. See id. at 1563-64. The determination of what constitutes undue experimentation in a given case requires the application of a standard of reasonableness.

Factors to be considered in determining whether a disclosure would require undue experimentation include: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working

examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claim. See In re Wands, 858 F.2d 731, 737 (Fed. Cir. 1988).

Finally, a patent is not a production document and details required for commercial exploitation of the invention need not be given. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 941 (Fed. Cir. 1990) (patent document not intended to be a production specification); see also, Christianson v. Colt Indus. Operating Corp., 822 F.2d 1544, 1562 (Fed. Cir. 1987).

In the present case, defendants insist that the court invalidate the '245 patent for lack of an enabling disclosure because no language or figure in the specification describes or shows a longitudinal beam having an L-shaped cross-section with an upright L-portion extending upwards from another portion of the same longitudinal beam that is arranged at an acute angle with respect to the main plane of the frame or slab. In support of their proposition, defendants offer the declaration of Mr. Larry Shaw, one of ordinary skill in the art.

According to Mr. Shaw, the '245 patent discloses, via figures or otherwise, the "substantially flat support" element that has been so vigorously disputed by both parties. In his

declaration, Mr. Shaw states that the "flat support" limitation of claim 1 is represented by the upper surface of longitudinal beam 3 of Figure 3, "because that surface is arranged at an acute angle with respect to the main plane." Mr. Shaw's designation is consistent with the court's definition of the "flat support" element. Mr. Shaw similarly had no trouble identifying longitudinal beams of a generally L-shaped cross-section; nor was he confounded by the term "upright L-portion." Again, Mr. Shaw's interpretations of these "disputed" terms are consistent with the court's.

Nevertheless, defendants attempt, through Mr. Shaw's declaration, to show that claim 3 fails to enable one of ordinary skill in the art to practice the invention because the specification does not specifically describe or depict an upright L-portion of a longitudinal beam that extends from a portion of the beam that is arranged at an acute angle with respect to the main plane (i.e., the flat support). While it is true that the '245 specification does not specifically show this particular feature of the invention (and thus, no figure in the specification accurately describes claim 3), nowhere in Mr. Shaw's declaration does he state that he could not practice the invention as described in claim 3 of the patent.

Similarly, Mr. Shaw does not attest that the practice of this invention would require one of ordinary skill in the art to

use "undue experimentation." Rather, Mr. Shaw flatly states that he could build any of the walls represented in any of the figures of the patent's specification; but that none of the figures adequately represents claim 3 of the patent. While the court agrees with Mr. Shaw that none of the figures in the '245 patent accurately describes the exact limitations of claim 3, the court finds it difficult to accept the proposition that one of ordinary skill in the art could not practice the invention of claim 3 due to that omission.

Although defendants rely upon Mr. Shaw's declaration to support the theory that no one of ordinary skill in the art could construct the invention of claim 3, Mr. Shaw has not so testified. He has not stated that he, as one of ordinary skill in the art, could not build the invention in claim 3, using the patent as a guide. Rather, Mr. Shaw has only stated that none of the figures in the '245 patent represent claim 3; a good point but not a relevant one.

Moreover, the court is not persuaded that one of ordinary skill in the art would not know how to construct a retaining wall with an L-shaped longitudinal beam in which the "upright" portion of the "L" was attached to a base portion that was arranged at an acute angle, as opposed to being horizontal to the main plane. That proposition seems odd, given the little trouble Mr. Shaw had in identifying what was meant by "flat support," "acute angle,"

"L-shaped," and "upright L-portion." According to defendants, even though Mr. Shaw could easily identify all of the structural elements needed to practice the invention of claim 3, he would not know how to build an L-shaped beam with a base lying at an acute angle to the plane because the patent is nonenabling. Defendants are not entitled to this inference; especially since the court – hardly one of ordinary skill in the art – can envision such a wall.

Therefore, although the patent specification does not depict an "upright L-portion" attached to a "flat-support," as those terms are properly defined, defendants have failed to clearly and convincingly demonstrate that one of ordinary skill in the art would either not know how to practice the invention of claim 3 or that such practice would require undue experimentation because of the lack of an enabling disclosure. Consequently, because defendants have not shown their entitlement to judgment as a matter of law, summary judgment is denied.

C. Written Description

The written description requirement is separate and distinct from the enablement requirement. See Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). The written description requirement is "broader than to merely explain how to 'make and use'; applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she

was in possession of the invention.” Id. In other words, a patent must “clearly allow persons of ordinary skill in the art to recognize that [the patentee] invented what is claimed.” In re Alton, 76 F.3d 1168, 1172 (Fed. Cir. 1996). A challenger must provide clear and convincing evidence that persons skilled in the art would not recognize in the disclosure a description of the claimed invention. See id. at 1175.

Defendants’ invalidity theory, that the specification of the ‘245 patent inadequately supports claim 3, mimics rather closely the argument they made concerning enablement. Specifically, according to defendants, claim 3 is invalid because the specification does not explicitly depict an L-shaped beam that has its base or lower portion arranged at an acute angle. In support of their argument, defendants direct the court’s attention to Mr. Shaw’s declaration. In addition, defendants assert that claim 3 is invalid because when the patentee amended his application to include four new claims (currently, claims 1 through 4) during prosecution, he used “wording” that was “substantially different” from that which was previously submitted to the PTO.

The essence of the “description requirement” mandated by § 112 is that “the specification as originally filed must convey clearly to those skilled in the art the information that the applicant has invented the specific subject matter later

claimed." In re Wright, 866 F.2d 422, 424 (Fed. Cir. 1989). Moreover, in contrast to defendants' assertion, it is well-established that "the claimed subject matter need not be described in *haec verba* in the specification in order for that specification to satisfy the description requirement." Id. at 425 (quoting In re Smith, 481 F.2d 910, 914 (C.C.P.A. 1973)). That the exact words in question "are not in the specification is not important." Id.

In the present case, the specification does not contain language which corresponds identically to the language of the claims at issue. However, the thrust of the disclosure of the '245 patent teaches the formation of a retaining wall using longitudinal beams of varying shapes that have sloping surfaces to effectively retain earth material. That the claims use different language than the specification is irrelevant.

Defendants contend that although the patent specification and its corresponding history disclose generally "L-shaped" beams, absent from this disclosure is "an upright L-portion extending upwards from said flat support portion." However, aside from pointing to this omission, defendants have failed to show by clear and convincing evidence that the specification failed to convey to those skilled in the art that the applicant was not in possession of the subject matter claimed as of the date of the application. Again, through Mr. Shaw's declaration,

defendants have merely stated that no figure in the specification depicts the invention of claim 3. Mr. Shaw has not suggested any disbelief on his part, after reading the specification, that the applicant was in possession of the subject matter claimed as of the date the application was filed.

Therefore, giving plaintiffs the benefit of all reasonable inferences, a disputed material fact exists as to whether the omission in the specification of a description of a beam with an upright L-portion attached to another portion of the beam arranged at an acute angle with respect to the main plane failed to clearly convey to those skilled in the art that the applicant had invented the specific subject matter as claimed in claim 3.

Consequently, defendants are not entitled to judgment as a matter of law on the issue of invalidity under 35 U.S.C. § 112.

IV. Willfulness

Both parties have moved for summary judgment on the issue of willfulness with respect to infringement. Although the court views this determination to be premature, and in any event somewhat moot given the above infringement analysis, full consideration of the issue has been given. However, for the following reasons, the court denies the parties' cross-motions for summary judgment on the willfulness issue.

Conduct that infringes a patent when the infringer knew of the patent and had no reasonable basis for believing that its actions were legal constitutes willful patent infringement. See Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc., 34 F.3d 1048, 1056 (Fed. Cir. 1994). Willfulness is a question of fact, see American Med. Sys. v. Medical Eng'g Corp., 6 F.3d 1523, 1530 (Fed. Cir. 1993), that must be proven by clear and convincing evidence. See Gustafson, Inc. v. Intersystems Indus. Prods., Inc., 897 F.2d 508, 510 (Fed. Cir. 1990). It is a classical jury question of intent, see Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1250 (Fed. Cir. 1989), and it is determined from the "totality of the circumstances." See Gustafson, 897 F.2d at 510.

It is well-settled that an important factor in determining whether willful infringement has been shown is whether or not the infringer obtained the opinion of counsel. See Ortho Pharmaceutical Corp. v. Smith, 959 F.2d 936, 944 (Fed. Cir. 1992). However, seeking a legal opinion does not automatically immunize an infringer from a finding of willful infringement. Rather, the opinion must be "competent" and its advice must not be ignored. See Read Corp. v. Portec, Inc., 970 F.2d 816, 829 (Fed. Cir. 1992).

For the opinion to be considered "competent," the legal advice it provides must be based on the totality of the circumstances so that reliance upon the opinion by the client

could be considered reasonable. See SRI Int'l Inc. v. Advanced Tech. Labs., 127 F.3d 1462, 1465 (Fed. Cir. 1997). A competent opinion should analyze the validity and infringement issues in detail, including discussions of the prior art, the accused device and the claim language. See Westvaco Corp. v. International Paper Co., 991 F.2d 735, 744 (Fed. Cir. 1993).

An important factor in justifying reliance on an opinion includes the selection of a qualified patent attorney, one with ample experience in the relevant field of technology. See Studiengesellschaft Kohle m.b.H. v. Dart Indus., Inc., 862 F.2d 1564, 1579 (Fed. Cir. 1988). At the very least, the infringer should know that the patent attorney has a good understanding of the potentially infringing device and what may distinguish it from the patent's claims. See id. at 1578.

In the present case, neither party is entitled to summary judgment on the issue of willful infringement. Plaintiffs have failed to prove the requisite infringement as a matter of law, and defendants have failed to show the absence of disputed material facts. Thus, even if infringement could, theoretically, be found in this case, neither party has established that willfulness must or cannot be found.

The facts indicate that two of the three defendants (Concrete Systems and Cleco Corp.) in this case obtained a legal

opinion from counsel concerning the possibility of infringement, upon learning of the '245 patent. However, the reliability or (un)justifiable reliance on that opinion has not been established by either party.

The facts suggest that the attorney giving the opinion was well-versed in the field of intellectual property and patent law. In addition, the stated bases for the opinion properly included an analysis of the '245 patent, the file history, and the prior art. Moreover, the opinion was drafted by the same attorney who prepared defendants' patent application on the allegedly infringing device. Thus, the choice of counsel was apparently reasonable.

Nevertheless, the opinion is quite brief, and it neither fully describes the patented invention nor the allegedly infringing device. In addition, the claims have not been analyzed separately; and there is no specific reference to, discussion of, or construction of claim 3. Similarly, the opinion lacks an analysis of the patent's validity; and no discussion of the relevant case law is present. Moreover, no substantial analysis of the doctrine of equivalents was rendered with respect to the claims.

The particular language of the claims was not discussed in any detail. Rather, the opinion focused on only one aspect of

claim construction – the prosecution history. In fact, most of the opinion consisted of a recitation of claim 1 and a recapitulation of some of the arguments made by the patentee during prosecution. Moreover, the analysis and claim construction used by the attorney in rendering his opinion of noninfringement was not even argued during any of the proceedings before this court. In fact, that analysis would have been wholly irrelevant to the proper disposition of this case. Thus, a material dispute would seem to exist as to whether the opinion was “competent” and whether defendants were reasonable in relying upon it. Those questions are best reserved for determination by the jury.

The facts also indicate that defendant Methuen was not aware of the opinion letter obtained by the other defendants, and did not seek to obtain an opinion of its own. However, the facts are also equally clear that this particular defendant did not have actual notice of the '245 patent until it was served with a complaint in the present action. Nevertheless, plaintiffs have offered evidence suggesting that this defendant knew of plaintiffs' Evergreen Wall (having seen it first hand), and was similarly aware of sales literature regarding plaintiffs' wall well before the initiation of this lawsuit. Moreover, once obtaining actual notice of the patent, Methuen merely relied on the advice of counsel, through the other defendants (Concrete Systems and Cleco Corp.), rather than seeking counsel on its own.

Again, a dispute exists as to the reasonableness of this particular defendant's reliance and knowledge.

Given the totality of the circumstances, neither party has demonstrated its entitlement to summary judgment on the issue of willfulness. As stated above, willfulness is a classic jury question of intent. Because, on these facts, a reasonable jury could find for either party on this issue (if infringement could somehow be found, which is doubtful), neither party is entitled to judgment as a matter of law.

CONCLUSION

In conclusion, for all of the foregoing reasons, plaintiffs' motion for summary judgment for willful infringement of claim 3 of the '245 patent (document no. 119) is denied. Defendants' motion for summary judgment as to invalidity and non-willfulness (document no. 118) is also denied.

SO ORDERED.

Steven J. McAuliffe
United States District Judge

July 26, 1999

cc: Steven J. Grossman, Esq.
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