United States District Court,
E.D. Pennsylvania.

IKN, INC,
v.
CEMPROTEC GMBH.

No. Civ.A.05-185

Nov. 22, 2005.

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MEMORANDUM AND ORDER

SANCHEZ**, J.**

IKN, Inc. (IKN) is suing CemProTec GmbH (CPT) for infringement of U.S. Patent No. 5,299,555 (the '555 Patent). In a patent infringement lawsuit, the court must, as a matter of law, construe the claims contained in the patent allegedly infringed. Of critical importance to the parties here is the construction of Claim 1, the only independent claim in the '555 Patent. FN1 After careful consideration of the arguments advanced in the parties' claim construction briefs and during the *Markman* hearing,FN2 along with my independent review of the patent, I will construe all of the disputed phrases in Claim 1, with the exception of the means-plus-function limitation, in accordance with CPT's proposed construction.

FN1. Claims 2 through 13 are dependent.

FN2. The purpose of a *Markman* hearing, which derives its name from Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed.Cir.1995), is to hear argument and, if necessary, receive evidence on the scope of the claims in the patent allegedly infringed.

BACKGROUND

The '555 Patent relates to improvements in the design of a rectangular frame element that, when assembled with other elements, forms a grate used to support, aerate, and convey "clinkers"-large granules from which cement is ultimately manufactured. The grate's surface is formed by plates that extend transversely between

the opposing surfaces of the frame. Clinkers are formed in a kiln and thereafter deposited on a grate assembly for cooling. The clinker granules are abrasive, and their movement across the grate causes the surface plates to wear, especially those located at the forward section of each frame element.FN3 In a conventional grate assembly, the frame and surface plates are an integral structural unit. To replace worn plates in this type of assembly, the entire grate element, including the non-worn portions of the frame, must be removed and a new element installed in its place. The process of removing and replacing individual elements disturbs the alignment of the grate assembly and results in high material replacement costs.

FN3. "Forward," as the term is used in the context of cement manufacturing, means the downstream section of the frame element oriented with reference to the direction in which the clinker material flows from the kiln.

To obviate the need to replace the entire grate element when just some of the surface plates become worn, Jean-Claude Claes, an engineer for the Belgian foundry Magotteaux S.A.,FN4 invented a grate element wherein the frame and surface plates are structurally separate from one another (i.e., the grate element is not a seamless unit). Unlike a conventional grate element, replacement of the individual plates in Claes's invention is accomplished with minimal disassembly of the frame, which remains structurally intact with the grate assembly. Longitudinal guide profiles extend along the inner surfaces of the side members, and the plates have a conforming counter-profile. This arrangement permits easy insertion and removal of the plates, eliminates the need to realign the assembly, and greatly reduces the down-time associated with replacement of worn plates. To aerate the clinkers on the surface of the grate, Claes's invention incorporates gas-venting slots between the plate members.

FN4. IKN's founder, Karl von Wedel, worked closely with the Magotteaux foundry.

In 1994, the United States Patent and Trademark Office (PTO) issuedhe '555 Patent to Claes for his invention. IKN is assignee of the '555 Patent, and its parent, IKN GmbH, manufactures clinker cooler grate assemblies comprised of the grate elements that are the subject of the '555 Patent. IKN's complaint alleges CPT's clinker cooler frame elements, marketed under the name "Smart Blades," infringe the claims contained in the '555 Patent.

DISCUSSION

Principles of Claim Construction

A patent is the grant of a property right to the inventor. Under the Patent Act, the rightful holder of a patent is granted "the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States...." 35 U.S.C. s. 154(a). "It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude." ' Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed.Cir.2005) (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed.Cir.2004)).

There are two discrete analytical stages to a patent infringement lawsuit. "The first step is determining the meaning and scope of the patent claims asserted to be infringed"-a process referred to as "claim construction." Markman v. Westview Inst., Inc., 52 F.3d 967, 976 (Fed.Cir.1995). The "interpretation and construction of patent claims, which define the scope of the patentee's rights under the patent, is a matter of

law exclusively for the court." Id. at 970. "The second step is comparing the properly construed claims to the device accused of infringing." *Id*. The infringement analysis is one reserved for the trier of fact. By properly construing the claims in a patent, the scope of the asserted property right can be accurately ascertained.

Claims may be either independent or dependent. An independent claim is one that does not refer back to or depend on another claim. Dependent claims, on the other hand, refer to and limit a prior dependent or independent claim. 37 C.F.R. s. 1.75. Additionally, a patentee may, instead of explicitly reciting a structure or material, "express a means or a step for performing a specified function." 35 U.S.C. s. 112 para. 6. Claims written in this manner are categorized as "means-plus-function" claims, and, to properly construe them, a court must first identify and articulate the functional limitation embodied in the claim and then determine the structure, material, or acts-or equivalents thereof-described in the specification for performing that function. Personalized Media Commc'n L.L.C. v. Int'l Trade Comm'n, 161 F.3d 696, 703 (Fed.Cir.1998).

The Court of Appeals for the Federal Circuit has established a protocol for claim construction. As set forth in *Markman* and reaffirmed in *Phillips,* a court must construe claims based on the intrinsic evidence related to a patent, which consists of the claim language itself, the specification, and, if necessary, the prosecution history. By relying on these sources, it is possible to construe claim terms from the perspective of a "person of ordinary skill in the art." Phillips, 415 F.3d at 1313. This standard, not the general meaning of words from a dictionary, is the "objective baseline from which to begin claim interpretation." *Id*.FN5 The rationale for this approach is straightforward: the functions served by the patent-protection to the inventor and notice to the public-would be eviscerated if a claim were construed "in a manner different from the plain import of its terms." Phillips, 415 F.3d at 1312 (internal quotation omitted).

FN5. "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of commonly understood words." Phillips, 415 F.3d at 1314. The vast majority of patent infringement lawsuits, though, do not fall within this category. *Id*.

Claim construction begins with an analysis of the terms used by the patentee to define the invention. For example, the relationship between or among certain claim terms may reveal only one construction both logically and practically satisfies relevant limitations in the claim. Additionally, the same term, when used consistently throughout a claim, creates a presumption the patentee intended to use this term uniformly in defining the invention. *Id*. at 1314. Very often, though, the claim language, standing alone, will not adequately or explicitly reveal how a person of ordinary skill in the art would construe the terms. In these situations, a court must consider the second, and perhaps most valuable, source of intrinsic evidence: the specification.

Reliance on the specification is critical to claim construction because a person of ordinary skill in the art is assumed to have understood the claims in the context of the entire patent, which includes the specification. The *Phillips* opinion explained there are also statutory reasons for relying heavily on the specification: section 112 of the Patent Act requires the inventor, in the specification, to provide "a written description of the invention, and 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 ... to make and use the same...." 35 U.S.C. s. 112 para. 1; *see* Phillips, 415 F.3d at 1316. The subsequent paragraph in this section states: "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." *Id*. para. 2. A patent should, according to these provisions, be considered an integrated document consisting of the specification and claims. Moreover, the PTO "determines the scope of claims in patent applications not solely based upon the claim language, but upon giving claims their broadest reasonable construction 'in light of the specification as it would be interpreted by an ordinary person skilled in the art." ' Phillips, 415 F.3d at 1316 (quoting In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed.Cir.2004)). It is "entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims." Id. at 1317. "Thus, the specification is always highly relevant to the claim construction analysis. Usually it is dispositive; it is the single best guide to the meaning of a disputed term." Vitronics Corp. v. Conceptronics, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996).

The prosecution history, which includes the complete record before the PTO, as well as any "prior art cited during the examination of the patent," may illuminate the meaning of a disputed claim term because these proceedings represent the inventor's attempt to explain the invention. Phillips, 415 F.3d at 1317. The prosecution history, though, is less useful for claim construction than the specification because the proceedings before the PTO represent a "negotiation" between the inventor and the agency. *Id*. Therefore, it is discretionary to rely upon the prosecution history for construing disputed claims. In fact, the primary purpose for consulting the prosecution history is to ascertain whether the inventor limited the scope of the disputed claim during the proceedings before the PTO. Markman, 52 F.3d at 980.

To summarize, reliance on the three sources of intrinsic evidence previously mentioned-the claim language, specifications, and, if necessary, the prosecution history-will, in nearly all situations, permit a court to accurately construe the claims in dispute. It is legal error for a court to consider extrinsic evidence (e.g., expert and inventor testimony, dictionaries, and treatises) when the intrinsic evidence plainly reveals the scope of the claims. *Id*.FN6

FN6. Both *Phillips* and *Markman* authorize a court to rely upon and consider extrinsic evidence for the limited purpose of understanding (not construing) the claims. The import of this distinction is that a court may rely on expert testimony, scientific treatises, and dictionaries for educational purposes (i.e., to acquire the knowledge that a person ordinarily skilled in the art would have), but it should not rely on this information to determine the scope of the protected property right.

The limitation on using extrinsic evidence to construe claims is based upon sound practical considerations. Simply put, a construction based on extrinsic evidence is inherently less accurate or reliable than one derived from intrinsic evidence. In *Phillips,* the court devoted a substantial part of the opinion to clarify (and revise) the role dictionary definitions should play in claim construction because some courts have impermissibly used them as a check on the specification. According to the Federal Circuit, "[t]hat approach ... improperly restricts the role of the specification in claim construction." Phillips, 415 F.3d at 1320. "The main problem associated with elevating the dictionary to such prominence is that it focuses the inquiry on the abstract meaning of words rather than on the meaning of claim terms with the context of the patent." Id. at 1321. The purpose in claim construction is to ascribe a meaning to the disputed claim terms consonant with the understanding of one skilled in the art. Dictionary terms do not provide the necessary context for claim construction because they are not derived from the patent and invariably contain multiple meanings for a single word. Id. at 1321-23. Adoption of dictionary definitions, though, is permissible when it is apparent a person of ordinary skill in the art would, after referring to the intrinsic evidence of record, confirm the term in question should be given the generic dictionary meaning.

Construction of the Claims in the '555 Patent

There are thirteen claims in the '555 Patent. Claim 1 is an independent claim, and Claims 2 through 13 are dependent. The parties dispute the construction of Claims 1, 2, 8, and 10.FN7 Therefore, this memorandum proceeds by addressing the disputed phrases in numerical sequence.

FN7. In the accompanying Order, I will construe the disputed claim terms and Claim 6; a claim upon which the parties expressly agree.

Construction of Claim 1 is at the heart of this endeavor.FN8 The claim, in its entirety, reads as follows:

FN8. In this case, the relevant "art" (i.e., the field from which a person of ordinary skill would understand the invention) is the design of clinker cooling systems for cement manufacturing. The parties do not dispute this position, and the '555 Patent provides ample support for this conclusion. For example, the single paragraph that comprises the "Field of the Invention" section states the frame element can be used to "support solid materials during their burning, cooling or other heat treatment." Frame Element for Forming a Grate, U.S. Patent No. 5,299,555 col.1 l.6-8 (filed Sept. 8, 1992) (issued Apr. 5, 1994). This section also reveals that by venting gas from underneath the frame element, it is possible to heat-treat, aerate, and convey the material on the surface of the grate. Id. The "Background of the Invention" section describes, with even greater detail, the context within which the invention was developed: "Such grates are generally exposed to great wear. This is particularly true for their use during cooling of cement clinkers, which with great weight also have a coarse surface roughness." Id. at col.1 l.18-21. The explanation of the disadvantages associated with conventional grate systems (i.e., the need to replace non-worn parts as well as the worn ones) lends additional support for concluding that a person of ordinary skill in designing, manufacturing, and operating cement clinker cooling systems is the appropriate standard to apply here.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:
1. A grate element for forming a grate, comprising a frame means having two spaced-apart and elongated side members which include opposing surfaces, several plate members arranged one next to the other in a longitudinal direction of said side members, said plate members being supported on and extending transversely between said opposing surfaces of said side members, means defining a gas-venting slot between said plate members, and said plate members each being constructed as individual structural parts releasably connectable to said opposing surfaces of said side members.

Frame Element for Forming a Grate, U.S. Patent No. 5,299,555 col.6 l.17-30 (filed Sept. 8, 1992) (issued Apr. 5, 1994).
The parties' first dispute concerns the construction of the phrase "side members which include opposing surfaces." Id. at col.6 l.22. The central issue in construing this phrase is the scope of the term "opposing surfaces." CPT argues "opposing surfaces" should be construed as "side members, each having a surface that faces or looks toward the corresponding surface of the other side members." Def.'s Claim Constr. Br. at 10. According to CPT, the "opposing surfaces" are restricted exclusively to the inner surfaces of the side members. IKN, on the other hand, contends the term "opposing surfaces" should not be so limited, but instead should be construed to mean "surfaces positioned across from each other." Pl.'s Claim Constr. Br. at 7. This construction would include, as IKN argues, the upper edges of the side members in addition to the

inner surfaces.

Beginning with an evaluation of the claim language itself, the repeated use of the word "said opposing surfaces," which appears in relation to three limitations in the claim, reveals the patentee intended to use this term uniformly in defining the invention. According to Claim 1, the plate members must be "supported on," "extend[ ] transversely between," and be "releasably connectable" to "said opposing surfaces of said side members." The construction of this phrase must practically satisfy each of these conditions and remain logically consistent in defining the scope of the property right. More precisely, the term cannot be construed as the inner surfaces of the side members that oppose one another as applied to one limitation while, with respect to another limitation, given a broader construction to include additional surfaces.

The language in two of the dependent claims also informs the construction of independent Claim 1. My review of the language in Claims 5 and 7, which relate to Claim 1, reveals the patentee distinguished the inner surfaces that oppose one another from the upper surfaces of the side members. For example, Claim 5 explains the "upper edge" of the front wall of the frame is lower than the "upper edge" of each side member. This claim further states the longitudinal guide profiles "are oriented above said front wall on said opposing surfaces of said side members," U.S. Patent No. 5,299,555 col.6 l.54-56, indicating the patentee chose to carefully describe the surface of the side member to which he wished to refer. Claim 7 reinforces this observation because it differentiates between Claim 1's limitation that the plate members be supported by "said opposing surfaces" and the purpose of the plate members' longitudinally extending flanges, which cover "an upper edge of an associated side member." Id. at col.6 l.65-66.

A preliminary assessment of the relationship of the claim terms reveals construing the phrase "said opposing surfaces of said side members" as limited to the inner surfaces of the elongated side members ensures consistency and uniformity in defining the invention. For example, it would be inconsistent to construe the term "said opposing surfaces" in Claim 1 to include, as IKN contends, the surfaces positioned across from one another and to simultaneously impose this construction on dependent Claims 5 and 7, wherein the patentee distinguished the inner opposing surfaces from the upper edges of the longitudinally extending side members. Thus, the claim language, standing alone, does not permit a logically consistent construction of the term "opposing surfaces" that could include the upper, outer, and bottom surfaces of side members.

The specification in the '555 Patent also provides substantial support for construing the term "said opposing surfaces of said side members" as limited to the inner surfaces that oppose one another. Two preferred embodiments of the invention, which are depicted in Figures 2 and 6 of the '555 Patent, reveal the limitations associated with "opposing surfaces" can only be satisfied if the term is construed to exclusively include the inner surfaces of the frames that oppose one another. Stated conversely, upon consideration of these figures, it is impracticable to adhere to any of the limitations if "said opposing surfaces" were construed to broadly include the upper edge, outer surface, and lower edge of the side members. In the "Summary of the Invention," the patentee explained "the longitudinal guide profiles are ... provided on the *inner surfaces of the sidewalls* above said upper edge of the front wall, which inner surfaces face one another...." Id. at col.2 l.48-51 (emphasis added). Three paragraphs later, the patentee again distinguished the surfaces of the side members by stating "the plate members have on each of their lateral edges a longitudinal flange designed to cover the upper edge of an associated side member." Id. at col.3 l.9-11. The sentence from the specification that most informs the proper construction of the phrase "said opposing surfaces" is contained in the "Description of the Invention," wherein it states: "FIGS. 2 and 3 show that the longitudinally extending grooves 18, 20 are provided on the *opposing inner surfaces of the sidewalls* 12, 14." Id. at col.4 l.33-35 (emphasis added). When the patentee wished to refer to more than just the

"opposing inner surfaces" of the three-dimensional side members, the patentee used the term "sidewalls" or "side members" to describe this struture. Id. at col.2 l.42-44 ("The side members are, in a preferred development of the invention, formed by sidewalls which are parallel to one another...."). Simply put, the patentee, in describing the invention to a person of ordinary skill in the art, chose terms that plainly distinguish the opposing inner surfaces of the elongated side members from the other surfaces of the frame. Therefore, based on the logical relationship of the claim terms, the need for consistency in defining the invention, and the information from the specification, I will construe the term "side members which include opposing surfaces" as "side members, each having an inner surface that faces or looks toward the corresponding surface of the other side member." FN9

FN9. CPT also argues that, during the prosecution of the '555 Patent, the patentee surrendered all other surfaces of the side members except the inner opposing surfaces. As originally submitted, the claim contained only one limitation: the plate members were required to be releasably connectable to the opposing surfaces. CPT contends a comparison of the claim as originally submitted and as eventually approved by the PTO reveals the claimed invention was narrowed to include only the inner opposing surfaces of the side members.

Although there is merit to CPT's argument, the claim language itself and the specification provide ample guidance in construing the phrase "said opposing surfaces of said side members." Therefore, the role of the prosecution history here is limited, at most, to confirming the scope of the property right as adequately revealed by the primary forms of intrinsic evidence.

CPT advances the same prosecution history argument with respect to the construction of two of the limitations in Claim 1.
This construction also informs and is directly applicable to ascertaining the proper meaning of the two previously-mentioned limitations: "said plate members *being supported on* and *extending transversely between* said opposing surfaces of said side members...." Id. at col.6 l.24-26 (emphasis added). The central issue to resolve concerning the first limitation is whether the plates are supported exclusively by the opposing surfaces of the side members-a position advanced by CPT-or, as IKN contends, in conjunction with the upper edges of the frame.FN10 To resolve this dispute, I must turn to the specification. The "Description of the Invention" section expressly states the longitudinally extending grooves, which are positioned on the opposing inner surfaces of the sidewalls, "serve as longitudinally extending guide profiles for *supporting* the plate members." Id. at col.4 l.36-37 (emphasis added). Furthermore, the specification also provides:

FN10. IKN's argument is premised on a construction of the term "opposing surfaces" that includes the upper edge of the side members.

[t]he plate members have on each of their lateral edges a longitudinal flange designed to cover the upper edge of an associated side member. The longitudinal flanges rest, during insertion of the plate members into the longitudinal guide profiles, on the upper edges of the associated side member to cover the upper edge of the side member.
Id. at col.3 l.9-15. From the two portions of the specification previously quoted, a person of ordinary skill in the art would understand the support for the plate members as deriving solely from the longitudinal guide profiles located on the inner surfaces that oppose one another. Therefore, I will construe the phrase

"supported on ... said opposing surfaces" to mean "the plate members are held up and in position and their weight is borne by the surface of each of the two side members that faces or looks toward the corresponding surface of the other side member."
The parties' dispute over the second limitation, which requires the plate members to "extend[ ] transversely between said opposing surfaces of said side members," is also resolved by reference to the specification. In describing the invention, the patentee explained the plate members "line up ... from the front end perpendicularly between the sidewalls" because the lateral edges of the plates incorporate tongue-like flanges, which "conform complementarily with respect to the longitudinally extending grooves." Id. at col.2 l.53-55 and col.4 1.48-60. These grooves, according to the specification, are located on the inner opposing surfaces of the sidewalls. Thus, based on the manner in which the patentee described the frame element, the second limitation in Claim 1 will be construed as follows: "The plate members are arranged in a transverse direction to the side members such that the plate members extend from a point of contact with the surface of each of the two members that faces or looks toward the corresponding surface of the other side member."

Claim 1 contains a means-plus-function limitation, which reads, "means defining a gas-venting slot between said plate members." Id. at col. 6 l.27-28. To properly construe this claim, I must first identify the function embodied within the claim language, then determine the structure or equivalents existing at the time the patent was issued for performing that function. The function set forth in the claim itself is "defining a gas-venting slot between said plate members." The primary dispute between the parties, though, is the extent of the structure necessary to perform this function. CPT argues the PTO's rejection of Claim 1, as originally submitted,FN11 precludes IKN from now attempting to broadly claim any equivalent structure, and the narrowing of this claim during prosecution limits the structure to the reference in the specification to "[t]wo spacing projections ... provided on the edges of the main section" of the plate members. IKN not only disputes CPT's interpretation of the prosecution history, but also argues the structure recited in the specification is greater than CPT contends. While CPT may be technically correct in asserting the inventor was not entitled to claim all gas-venting slots known in the art, its reliance on the prosecution history proves too much because it overlooks the recitation of structure contained in the specification for performing the gas-venting function. For example, while the specification describes the spacing projections as "defin[ing] a gas-venting slot between the mutually adjacent plate members," Id. at col.4l.59-60, it also emphasizes their primary purpose is to define the width of the slot: "The spacing projections can easily be reduced in size by a metal shaving process or can be increased in size by building the area up through welding so that the width of the slot can be varied." Id. at col.4 l.60-64. Thus, while the spacing projections are a necessary element of the structure for performing the gas-venting function, they are not-standing alone-sufficient to accomplish it. A person of ordinary skill in the art, when reading the specification, would understand the surfaces of the adjacent plate members, in addition to the spacing projections, are part of the structure for venting gas from underneath the grate to aerate the material on its surface. Therefore, I will adopt IKN's argument with regard to the amount of structure necessary for performing the function associated with the means-plus-function limitation in Claim 1.

FN11. When first presented to the PTO, this aspect of Claim 1 was not written as a means-plus-function limitation, but read, in pertinent part, "between which plate members is provided a gas venting slot...."

The last phrase in Claim 1, which is also in dispute, reads as follows: "said plate members each being constructed as individual structural parts releasably connectable to said opposing surfaces of said side members." Id. at col.6 l.28-30. CPT argues this phrase imposes two limitations on the plate members: (1) each must be an individual structural part and (2) releasably connectable to the opposing surfaces. IKN's

primary objection to CPT's proposed construction focuses on the meaning of the term "releasably connectable"; it does not believe the phrase "said plate members each being constructed as individual structural parts" needs further elaboration. Without belaboring the construction of the limitation requiring the plate members be constructed as individual structural parts, a fair reading of the entire specification shows the purpose of the invention is to allow *individual* parts to be replaced as they become worn. Thus, I will construe the phrase "said plate members each being constructed as individual structural parts" to mean: "Every one of the plate members is an independent structural part, constructed separate and apart from every other plate member."

The remaining dispute here concerns the proper construction of the limitation requiring the plate members be "releasably connectable to said opposing surfaces of said side members." The central issue here is whether the terms require a direct connection between these structural parts or merely a contact relationship. Having construed the term "opposing surfaces" as limited to the inner surfaces that oppose one another, it is apparent this limitation requires each individual plate member be connected to these surfaces. Thus, reference to the specification is necessary to understand how a person of ordinary skill in the art would construe the nature of this connection.

IKN argues provisions in the specification reveal the "releasably connectable" limitation embodies a contact relationship between the plate members and the side members.FN12 CPT disagrees and contends the specification makes clear the "releasably connectable" limitation is accomplished by the cooperating guide profiles on the opposing surfaces and the counter-profiles on each plate member. I agree with CPT because the specification precisely describes the manner in which the connection between the plate members and the opposing surfaces is achieved. For example, the specification states: "The connection of the plate members with the side members is structurally very easily accomplished, as ... described in ... connection with several exemplary embodiments," which are represented by Figures 2 and 6. Id. at col.2 l.8-11. In both of these figures, and from the accompanying descriptions in the specification, it is evident the connection between the plate members and the opposing surfaces is accomplished solely via the cooperating profiles and counter-profiles. Although IKN argues the specification describes a connection between the flanges and the upper edges of the side members, this phrase reveals only a contact relationship between these parts and, as such, is insufficient to satisfy the limitation. Thus, I will construe the "releasably connectable" limitation as requiring each individual plate member to be "connected directly to the opposing surfaces of the two side members in such a manner that it is capable of being freed from the opposing surfaces of the two side members." FN13

FN12. This argument also assumes the proper construction of the term "opposing surfaces" includes the upper edges-a position I have previously rejected.

FN13. The modifier "releasably" simply refers to the various references in the specification to the ease with which the plate members can be inserted and removed from the frame when the invention is disassembled for the purpose of removing and replacing worn plates.

Portions of dependent Claims 2, 8, and 10 are also in dispute. Upon consideration of the specification, I will, in the accompanying order, summarily construe Claims 2 and 8 consistent with CPT's proposed construction. The parties' dispute concerning Claim 10, though, warrants a brief discussion. Claim 10 is a means-plus-function claim and reads as follows: "The grate element according to claim 2, wherein an end

plate is provided which has means for facilitating a locking connection to said side members." Id. at col.7 l.9-11. The claimed function (i.e., "facilitating a locking connection to said side members") is adequately revealed, and I note the patentee's use of the term "said side members" is a reference to the elongated side members of the frame. Upon review of the specification to determine the appropriate structure, acts, or equivalents thereof for performing the function, I disagree with CPT's argument the claim is void and cannot be construed because there is no corresponding structure recited in the specification. CPT's precise argument is there is no structure for achieving a locking connection between "said side members" and the "end plate member"-it claims the specification only makes reference to the connection between the end plate member and the frame in general. I agree with IKN that this argument is needlessly restrictive considering the language used in the specification, which describes the end plate member as connected to the frame such that "[t]he end plate members can be secured, for example, by welding, by bolting, by locking or in any other known manner." Id. at col.3 l.34-36. The specification also refers to a downwardly-extending flange from the end plate member that, through the incorporation of a welding seam, can be secured to the front wall, which, like each side member, is also part of the frame. Id. at col.4 l.65-68 to col.5 l.1-10. Thus, there are adequate means disclosed in the specification for a person of ordinary skill in the art to comprehend the manner in which a locking connection of the end plate member to the side members can be facilitated.

I will enter an appropriate order setting forth the construction of Claims 1, 2, 6, 8, and 10.FN14

FN14. The claim terms not expressly addressed in the Order are sufficiently clear and require no elaboration because, in light of my construction of Claims 1 and 2, the language used by the patentee permits a person of ordinary skill in the art to conceptualize and understand the scope of the asserted right.

ORDER

AND NOW, this 22nd day of November, 2005, I construe, in a phrase-by-phrase manner, Claims 1, 2, 6, 8, and 10 in the '555 Patent as follows:

Terms in Claim 1	Court's Construction
A grate element for forming a grate,	An individual grate element for forming a
comprising	grate assembly, comprising
a frame means having two spaced-apart and	side members, each having an inner surface
elongated side members which include	that faces or looks toward the corresponding
opposing surfaces,	surface of the other side member;
several plate members arranged one next to	several plate members arranged one next to

the other in a longitudinal direction of said side members,	the other in a longitudinal direction of said side members.
said plate members being supported on ... said opposing surfaces of said side members,	The plate members are held up and in position and their weight is borne by the surface of each of the two side members that faces or looks toward the corresponding surface of the other side member and,
said plate members ... extending transversely between said opposing surfaces of said side members,	The plate members are arranged in a transverse direction to the side members such that the plate members extend from a point of contact with the surface of each of the two members that faces or looks toward the corresponding surface of the other side member.
means defining a gas-venting slot between said plate members,	Function: defining a gas-venting slot between said plate members. Corresponding structure: the

	Corresponding structure: the spacing projections that abut against the adjacent plate member and the surfaces between two plate members wherein each plate member has a main section and a shoulder that extends beneath the main section of an adjacent plate member, as well as equivalents thereof.
and said plate members each being constructed as individual structural parts	Every one of the plate members is an independent structural part, constructed separate and apart from every other plate member.
releasably connectable to said opposing surfaces of said side members.	Each individual plate member must be connected directly to the opposing surfaces of the two side members in such a manner that it is capable of being freed from the opposing surfaces of the two side

	surfaces of the two side members.
Terms in Claim 2	Court's Construction
The grate element according to claim 1,	The limitation "guide profile" in this case
wherein said opposing surfaces of said side	means: "A shape formed in or on the inner
members each have a longitudinal guide	opposing surface of each elongated side
profile extending in a longitudinal direction	member along which the plate members may
of said side members, and	move in a certain path."
wherein each of said plate members have at	Every one of said plate members have a shape
their lateral edges a counter profile	formed in or on their terminal ends that is the
cooperating with an associated one of said	opposite of or contrary to the elongated shape
longitudinal guide profiles.	formed in or on the opposing surfaces of the
	side members, wherein the shapes work
	together to support the plate members on,
	enable the plate members to be releasably
	connectable to and guide the plate members
	into position on the opposing surfaces of the

side members of the frame.

Claim 6	Court's Construction
The grate element according to claim 1,	The individual grate assembly of claim 1,
wherein said plate members have at least one	wherein the plate members have at least one
of leading and trailing spacing projections	leading and one trailing projections on each
facing an adjacent plate member, which	plate member that face and abut against
spacing projections are designated to abut	adjacent plate members, thus maintaining
against an adjacent plate member to define	space between the plate members for venting
said gas-venting slot therebetween.	gas.

Claim 8	Court's Construction
The grate element according to claim 2,	The limitation "each of said counter profiles
wherein said plate members each have a main	is provided on said lateral edges of said main
section forming a grate surface and a shoulder	section" means: "Each counter profile is
extending beneath an adjacent plate member,	situated on or proceeds from the end of the
and wherein each of said counter profiles is	side of the main section of the plate member."
provided on said lateral edges of said main	
section.	

Claim 10	Court's Construction
The grate element according to claim 2,	Function: Facilitating a locking connection to
wherein an end plate member is provided	said side members through the use of an end
which has means for facilitating a locking	plate member.
connection to said side members.	Corresponding structure, material, or acts:
	The end plate member can be secured to the
	frame by welding, by bolting, or by locking,
	and means equivalents thereof, so as to
	facilitate a locking connection of the end plate
	member to the side members.

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IKN, Inc. v. CemProTec GmbH

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