

United States District Court,
E.D. Texas, Marshall Division.

PRODUITS BERGER S.A. and Lampe Berger USA,
Inc. Plaintiffs.

v.

David M. SCHEMENAUER and the Marshall Group,
Inc. Defendants.

No. CIVA 2:06CV002

Feb. 27, 2007.

Michael Charles Smith, Carl R. Roth, The Roth Law Firm, P.C., Marshall, TX, Charles Gorenstein, Birch Steward Kolash & Birch, Falls Church, VA, for Plaintiffs.

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MEMORANDUM OPINION AND ORDER

LOVE, Magistrate J.

The Court issues this claim construction opinion and order to construe terms that the parties contend are either in dispute or otherwise require construction.

The plaintiffs, Produits Berger S.A. and Lampe Berger USA, Inc. ("Plaintiffs"), claim that defendants David M. Schemenauer and The Marshall Group, Inc. ("Defendants") infringe six claims in the patent-in-suit, U.S. Patent No. 6,537,061 ("the '061 patent").

For the reasons set forth below, the Court construes the identified claims in accordance with the rulings made in this opinion.

The Patent-In-Suit

The abstract describes an invention concerning a catalytic combustion afterburner made of porous material, comprising in its lower part a substantially axial cavity for receiving a taper designed to convey to the burner a combustible liquid, and in its upper part an annular peripheral zone bearing a catalyst and enclosing a central zone without catalyst forming a vaporizing zone. The afterburner comprises in its upper part an open duct, communicating the cavity upper part with the outside air.

Applicable Law

"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) (en banc) (quoting Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed.Cir.2004)). In claim construction, courts examine the patent's intrinsic evidence to define the patented invention's scope. See *id.*; C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 861 (Fed.Cir.2004); Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1267 (Fed.Cir.2001). This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. See Phillips, 415 F.3d at 1314; C.R. Bard, Inc., 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. Phillips, 415 F.3d at 1312-13; Alloc, Inc. v. Int'l Trade Comm'n, 342 F.3d 1361, 1368 (Fed.Cir.2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. Phillips, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314-15.

Claims "must be read in view of the specification, of which they are a part." *Id.* (quoting Markman v. Westview Instruments, Inc., 52 F.3d 967, 978 (Fed.Cir.1995)). "[T]he 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.'" *Id.* (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996)); Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed.Cir.2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. Phillips, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id.* Also, the specification may resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." Teleflex, Inc., 299 F.3d at 1325. But, "although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims." Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998); see also Phillips, 415 F.3d at 1323. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. Home Diagnostics, Inc., v. Lifescan, Inc., 381 F.3d 1352, 1356 (Fed.Cir.2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent.").

Although extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.'" Phillips, 415 F.3d at 1317 (quoting C.R. Bard, Inc., 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms. However, technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

The Terms

The Court adopts the parties' construction where agreed. The Court will construe the remaining disputed terms which the parties agree require construction: (1) "With a wick to convey a combustible liquid to the burner"; (2) the "Separated" Limitation; (3) "Annular Peripheral Zone"; (4) "The Open Channel"; (5) Claim 5; (6) Claim 7; (7) Claim 8; (8) Claim 12; (9) Claim 14-the "Wick" Limitation; (10) Claim 14-the "Annular Peripheral Zone"; and (11) Claim 14- "Fixed into the Neck of Said Flask" and "Resting on a Base."

1. With a wick to convey a combustible liquid to the burner

The clause "with a wick to convey a combustible liquid to the burner" is found in phrase 4 of claim 1. There are two disputes associated with this phrase, namely: (1) whether the "liquid" is a required limitation of the claim; and (2) whether Defendant's proposed language of "This term may not be construed to encompass a wick that extends through the cavity to the upper surface of the catalytic combustion burner" should be added as a negative limitation. The Court looks at each of these in turn.

The Combustible Liquid

Plaintiffs assert that the combustible liquid is not itself part of the claimed invention and contend that the present invention relates primarily to the configuration of the catalytic burner stone, not in any way to the combustible liquid. Plaintiffs argue this is evident from the claim itself, which merely calls for a wick "to convey" the liquid but does not require presence of the liquid itself. Further, according to Plaintiffs, it is clear from the specification that there is nothing new or unique about the combustible liquid mixture in the context of the present invention.

Defendants, on the other hand, argue that the combustible liquid prominently referenced in claim 1 must be construed as a required limitation on the claim. Defendants point to the prosecution history, including a response to an Office Action by the Patent Office dated May 3, 2002, wherein the Applicants for what became the '061 patent amended certain claims because of substantive rejections based upon the prior art. *See* Doc. No. 58, Ex. 3, at PB0238. Specifically, Defendants cite the Applicants' statement that "claim 12 has been amended to further define features relating to the combustible liquid penetrating into the pores of the burner ..." as support that features relating to the liquid comprised a patentable distinction over the cited prior art. *Id.*

While the Court disagrees with Defendants that the Applicants distinguished their invention based upon the combustible liquid, the Court does find that the combustible liquid comprises a required limitation in claim 1. French Patent Publication FR 2 530 144 was applied by the examiner during prosecution of the patent which matured into the '061 patent. The examiner initially rejected claim 12 of the application, which became claim 1 of the '061 patent, on the basis that the invention was made to modify the burner of FR 2 530 144 to incorporate the annular groove of EPO 0 277 875 as the structure of the burner, including the annular cavity that serves to prevent encrustation of the wick due to carbon particle build-up. *Id.* at PB0252. In response to the office action, the Applicants specifically claimed that the "catalytic combustion burner as defined in amended claim 12" was distinguished from the prior art "by the presence of at least one open channel located in the upper part of the burner ..." *Id.* at PB0238-39. Thus, in accordance with the Applicants' position during prosecution, the Court finds that the open channel catalytic combustion burner distinguished the invention over the apparatus disclosed in FR 2 530 144. Nevertheless, the fact that Applicants amended claim 12 to further define "features relating to the combustible liquid penetrating into the pores of the burner" lends support to the idea that the liquid is a limitation.

Claim 1 of the '061 patent references the "combustible liquid" twice within phrase 4:(1) "a wick to convey a combustible liquid;" and (2) "said combustible liquid penetrating into the pores of said burner's porous material ..." '061 patent, claim 1, 5:37-39. While it is true, as Plaintiffs argue, that there is nothing new or unique about the combustible liquid mixture in the context of the present invention, it is also true that the claim language references the liquid and makes it clear that the liquid performs some function, *i.e.*, being conveyed by the wick and "penetrating" into the pores of the stone. *Id.* Further, even though the catalytic combustion burner can burn in the absence of combustible liquid or when the burner burns the last quantities of combustible liquid remaining in the flask, it is undeniable that the combustible liquid is an integral part of the invention, as the invention will not work absent "said combustible liquid penetrating into the pores of said burner's porous material."

Accordingly, the Court finds that the "liquid" referenced in claim 1 is itself part of the claimed invention and is, therefore, a required limitation of the claim

The Wick Limitation

Defendants seek to add the limitation, "This term may not be construed to encompass a wick that extends through the cavity to the upper surface of the catalytic combustion burner." Plaintiffs argue no portion of the patent or prosecution history supports such a limitation.

Defendants point to the prosecution history and argue that the Applicants of the '061 patent disavowed a wick extending up and through the cavity of the burner. Defendants point to the same response to the office action referenced above and argue that the Applicants expressly distinguished the positioning of the prior art wicks, *i.e.*, wicks that extended through the upper part of the cavity and were in contact with the atmosphere. *See* Doc. No. 58, Ex. 3, at PB0240. According to Defendants, because the Applicants expressly disavowed via arguments submitted to the Patent Office for purposes of establishing patentability over the prior art, Plaintiffs are now precluded from asserting a claim construction without such a limitation.

In the response referenced above, the Applicants noted that "FR 2 530 144 discloses a catalytic combustion burner provided with a cavity filled by *a wick which extends up to the upper part of this cavity and which is consequently in contact with the atmosphere.*" *Id.* (emphasis added). The point made by the patentee was that, in FR 2 530 144, the wick extended to a point where it blocked ingress of air to the cavity. However, the prior art did not solve the problem of wick burning, noting that "the wick which is very close to the catalytic combustion zone will burn and char and carbonize and produce carbon particles." *Id.* As a result, in the absence of oxygen, the wick in close contact with the stone in the device of FR 2 530 144 would carbonize.

The patent-in-suit did not attempt to solve the problem of wick burning through the positioning of the wicks, as Defendants contend. Rather, the novelty of the present invention is the "presence of at least one open channel located in the upper part of the burner." *See* Doc. No. 58, Ex. 3, at PB0238-39. The present invention provides the open passage that permits air to enter into the cavity to avoid carbonization. As the Applicants stated, the "presence of at least one open channel is neither disclosed in, or suggested by, either EP 0 277 875 or FR 2 530 144." *Id.* at PB0239.

The Court finds that the open channel provided the inventive step over the prior art, not the placement or positioning of the wick. Consequently, the Court will not construe the term as requiring the negative

limitation asserted by Defendants.

2. *Separated*

The fifth clause of claim 1 recites that the cavity of the catalytic burner comprises an upper part and opening at the lower end of the burner, the cavity "being separated from the upper surface (10) of the burner (3, 30) by a wall." Plaintiffs propose that the clause should be construed by its plain and ordinary meaning, *i.e.*, that "the cavity is separated from the upper surface by a wall." Defendants, on the other hand, propose an added limitation that "the cavity is *completely separated* from the burner's upper surface by a wall." In addition, Defendants propose the limitation that "[t]his term may not be construed to encompass a cavity that is only partially separated from the burner's upper surface by a partial wall."

Defendants base their construction on the fact that, consistent with the doctrine of claim differentiation, claim 1 literally requires "a wall," while claim 13 only requires a structure which "shuts off, at least in part, the upper part of the cavity." Claim 13 (an unasserted claim) recites, among other things, that "a central zone *shuts off, at least in part*, the upper part of the cavity." *See* '061 patent, claim 13 (emphasis added). According to Defendants, the Applicants knew how to claim a "partial" wall, which, in part, shuts off the upper part of the cavity, as recited in claim 13. Thus, because different words and phrases are used in claims 1 and 13, Defendants urge, there is presumed to be a difference between "wall," as used in claim 1, and the "shuts off, at least in part" language of claim 13, supporting a construction that the wall completely separates the cavity from the burner's upper surface.

Indeed, claim 1 requires that the cavity communicates with the atmosphere by the presence of at least one open channel (8, 33) being situated in the upper part (3b, 30b) of the burner (3, 30). *See* '061 patent, 5:48-51. Claim 2 adds the limitation that the invention is characterized in that "said channel (8) is substantially axial." *Id.*, 5:52-53. Claim 13, as cited by Defendants, requires the open channel communicating between the cavity and the atmosphere to extend radially. *Id.*, 6:38-43. However, selected terms in two claims may appear different but have the same scope. This does not violate the doctrine of claim differentiation because it is the claims as a whole that are presumed to differ in scope, not merely selected terms of the respective claims. *See Tandon Corp. v. U.S. Int'l Trade Comm'n*, 831 F.2d 1017, 1023 (Fed.Cir.1987) (citations omitted). In other words, though claims 1 and 13 may vary in scope, the term "wall" can have the same meaning.

As Defendants acknowledge, Fig. 2 of the specification shows that the annular groove 9 extends axially over a greater distance than the thickness of the wall separating the cavity 6 from the upper surface 10 of the burner. '061 patent, 3 :25-28. As illustrated in Fig. 2, the open passage 8 of the invention passes through the wall that separates cavity 6 from upper surface 10. Thus, Defendants' assertion that the wall must completely separate the upper surface from the cavity is contrary to the plain language of the patent.

Defendants' argument that the prosecution history shows a complete separation is also not persuasive. Defendants claim that claim 1, as originally filed with the USPTO, did not contain any language which in any way referred to any structure which separated the cavity and the upper surface of the burner. Doc. No. 58, Ex. 3, at PB0333. Defendants argue that in order to make the claims "conform" with the specification and the application, originally filed claim 1 was cancelled and "new claim 12" was added, which added that "the upper surface was shut off from the cavity, at least in part." *Id.* at PB0270. In response to a rejection, the Applicants submitted "amended claim 12," which required "a wall" separating the upper surface of the burner from the cavity," which Defendants assert is the same as claim 1 in the '061 patent. Defendants claim

the progression of this limitation in claim 1 of the '061 patent shows the Applicants have surrendered any coverage of a partial wall. Defs.' Br., at 19-20.

The Court disagrees with Defendants' reliance on the prosecution history. In the response to the office action dated May 3, 2002, the Applicants distinguished the present invention on the basis of the presence of at least one open channel located in the upper part of the burner. Doc. No. 58, Ex. 3, at PB0238-39. Nowhere in the response did the Applicants submit that the prior art was distinguished by the presence of a full or partial wall. This does not amount to an express or unequivocal disclaimer as Defendants suggest. *Middleton, Inc. v. Minn. Mining & Mfg. Co.*, 311 F.3d 1384, 1388 (Fed.Cir.2002). Because the Court concludes that the prosecution history does not change the plain meaning of the term, the Court finds that no construction is necessary. As plainly set forth in the claim, the Court construes the term separated to mean that the cavity is separated from the upper surface by a wall and will add no further limitation.

3. Annular Peripheral Zone

The sixth clause of claim 1 recites "the burner (3, 30) having an annular peripheral zone (7) carrying a catalyst." Plaintiffs propose that the phrase needs no construction, that the burner has an annular peripheral zone that includes a catalyst. Defendants assert that the construction be narrowed to "an outer circular zone" which includes a catalyst.

Both parties appear to agree that the term periphery and, hence, the term "peripheral" means "the perimeter of a circle or other closed curve; also: the perimeter of a polygon." *See Merriam-Webster Online*, Doc. No. 58, Ex. 2, at 1-2. Additionally, both parties submit the dictionary definition of "annular," means "a thing in the form of a ring." *Id.* at 8. Defendants assert that because "peripheral" has an ordinary meaning of the "perimeter" (of some shape) and "annular" has an ordinary meaning of "ring," logic would dictate that the term "annular peripheral" would have an ordinary meaning of "outer circular." To not construe the term as "circular," Defendants argue, is to ignore the word "annular."

The exemplary embodiment of the burner stone illustrated in the patent has a round or circular shape. *See* '061 patent; Fig. 2; 1:8-10; 3:1-5; Fig. 8; 5:6. The claim is not limited to such a shape, however. Such structures may include circular or round configurations, but are not necessarily limited to such. Accordingly, the Court finds no basis for limiting the claims in such a manner.

4. The Open Channel

The seventh clause of claim 1 recites that the invention is "characterized in that said upper part (24) of the cavity communicates with the atmosphere by the presence of at least one open channel (8, 33), and said channel (8, 33) being situated in the upper part (3B, 30b) of the burner (3, 30)." The parties have agreed that this phrase should be construed to require "At least one open channel is provided in the upper part of the burner so that the upper part of the cavity communicates with the atmosphere through the open channel."

The parties diverge, however, as Defendants seek to impose the limitation that "This term may not be construed to encompass a cavity that is only partially separated from the burner's upper surface by a partial wall." In other words, Defendants submit that the phrase must be limited in a way where the cavity is "completely" separated from the upper part of the burner. Plaintiffs, on the other hand, contend that this portion of the claim does not refer in any way to a "wall" and, thus, provides no basis for asserting such a limitation.

Based upon the above analysis with respect to "wall" in phrase 5, the Court declines to add the negative limitation proposed by Defendants that the claim requires that a wall completely separate the upper surface from the cavity.

5. Claim 5

Claim 5 depends from claim 1 and includes all of the limitations of claim 1. Similar to Phrase 6 from claim 1 discussed above, this claim further recites that the invention comprises "a substantially axial annular groove" which separates "the annular peripheral zone from the central zone." The parties' dispute centers once more on the word "annular." Plaintiffs argue that annular has its ordinary meaning, referring to "a thing in the form of a ring." Defendants assert, more particularly, that claim 5 requires a circular groove.

There is nothing in the claim or the disclosure of the patent that indicates that the annular groove must be circular. As discussed with regard to phrase 6 from claim 1, although the exemplary embodiment is round or circular, *see* Fig. 2; 1:8-10; 3:1-5; Fig. 8; 5:6, it is inappropriate to limit the claim by imposing a limitation found, not in the claim, but only in the specification or drawing, or only in a preferred embodiment. *See Phillips v. AWH Corp.*, 415 F.3d 103, 1320 (Fed.Cir.2005). Accordingly, the Court finds no basis for limiting the claim.

6. Claim 7- "to contain"

Claim 7 depends from claim 1 and adds to the invention a catalytic combustion flask "to contain" a combustible liquid. Plaintiffs argue that the present invention, as recited in claim 1, is a catalytic combustion burner and that claim 7 adds a flask designed to hold the catalytic combustion burner, the flask being present "to contain a combustible liquid." However, Plaintiffs contend that the combustible liquid is not itself a part of the present invention. Defendants, on the other hand, propose that claim 7 should be construed to require a flask containing a combustible liquid.

Because this claim includes all of the limitations of claim 1, the Court finds that the "combustible liquid" is a required limitation of this claim as well. Further, the ordinary language of the claim itself requires "a wick (4) dipping into said liquid ... *See* '061 patent, claim 7. As Defendants posit, if the liquid is not there, how can the wick be "dipping" into the liquid? The claim language not only states "a wick (4) to dip;" the claim clearly states "a wick dipping into said liquid." *Id.* This additional language demonstrating the active tense of the verb "dipping" into the liquid further supports Defendants' position that the liquid is part of the claim.

Thus, as it did in claim 1, the Court finds that the "liquid" referenced in claim 7 is itself part of the claimed invention and is, therefore, a required limitation of the claim

7. Claim 8

Claim 8 further limits claim 7 by reciting that the burner has "a peripheral shoulder" separating a large diameter upper part from a smaller diameter lower part. Plaintiffs assert that the "peripheral" has its ordinary meaning, referring to the external boundary area of a surface or body. Defendants, as in previous arguments, propose that claim 8 must be limited to a combustion burner which includes a circular shoulder. Defendants advance the same argument with respect to claim 8 that they asserted as to claims 1 and 5, that "peripheral" means "the perimeter of a circle or other closed curve; also: the perimeter of a polygon." Further, Defendants note that the claim twice identifies that the additional structure has a "diameter." *See* '061 patent, 3:15-17. According to Defendants, the ordinary meaning of "diameter" refers to the diameter of a circle

and, because "peripheral" means the perimeter of a circle, it logically flows that a proper construction of "peripheral shoulder" would be a "circular shoulder."

The Merriam-Webster Online Dictionary defines "diameter" as "a chord passing through the center of a figure or body," and "the length of a straight line through the center of an object," without limiting such figure to a circle. As the Court has previously opined, the claim is not limited to a round or circular shape as demonstrated in the exemplary embodiment. *See* Figs. 2, 8; 3:44-46; 5:13-15. The shoulder may include circular or round configurations, but the Court finds no basis for limiting the claim only to such.

8. Claim 12

Claim 12 depends from claim 7 and adds the further limitation "with the burner resting on a base fixed into the neck of said flask." Two terms within claim 12 are disputed: "fixed" and "resting on."

Fixed

Plaintiffs propose a construction that the base "is fixed or 'fitted' into the neck of the flask." Plaintiffs note this interpretation is directly supported by the language of the specification and its use of the word "fitted." *See* '061 patent, 3 :66-67.

Defendants seek a stricter construction that the base be "securely fastened" into the neck of the flask. Defendants note that the word "fixed" only appears in claims 12 and 14 and nowhere else in the patent. Thus, Defendants argue, the specification cannot provide any guidance as to any particular meaning intended for the term. Defendants then point to the ordinary meaning of the word "fix" or "fixed" to supply the necessary construction: "to make firm, stable or stationary" or "to give a permanent or final form to." Merriam-Webster Online, Doc. 58, Ex. 2, at 12-13. Thus, Defendants submit, based upon the ordinary meaning of the term "fixed," the term should be construed as requiring the base to be "securely fastened" to the neck.

The specification clearly recites that the base be "fitted" inside the neck of said flask. *See* '061 patent, 3 :67. The specification suggests that the base "can" be crimped around an annular enlargement of the neck. *Id.*, 4:2. While it may be possible that the invention may allow for a base element that is securely fastened into the neck of the flask, if it is crimped around the neck as described above, it is not a requirement of the invention, and is certainly not required in the recitation of claim 12.

Resting On

Claim 12 also recites that the burner is "resting on" the base. Plaintiffs submit that this requires only that the burner be sitting upon or supported by the base. Defendants propose that the claim should be construed to require that the burner must be positioned *in direct contact with* the base.

The ordinary meaning of "on" includes a definition of "used as a function word to indicate position in contact with and supported by the top surface of." *See* Merriam-Webster OnLine, Doc. No. 58, Ex.2, at 5. Reading this definition, alone, would tend to support Defendant's position. However, other definitions attributed to "on" include "used as a function word to indicate position *in close proximity with*," and "used as a function word to indicate *a source of attachment or support*," and do not require the "in contact with" language on which Defendants rely. *Id.* (emphasis added).

The plain language of the claim states that the burner must be "resting on" the base, not "in contact" with the base, as Defendant suggests. Further, each embodiment of the invention disclosed in the '061 patent includes a burner (Fig.2) held in a support (Fig.3). The support and the burner are placed within the base (Fig.4) of a flask. The patent discloses that the burner is resting on the base because it is supported by the base. To require a construction that the burner be in contact with the base is unsupported and inconsistent with the disclosure of the patent.

9. Claim 14-The "Wick" Limitation

The third clause of independent claim 14 recites that the burner of the invention has "in its lower part a substantially axial cavity (6) with said wick (4) to convey said combustible liquid (2) to the burner." The parties agree that this clause should be construed to mean that "The lower part of the burner has a cavity that extends substantially axially of the burner and which includes the wick for conveying the combustible liquid to the burner."

As they did with regard to phrase 4 of claim 1, Defendants propose the additional limitation, "This term may not be construed to encompass a wick that extends all the way through the cavity." However, for the reasons expressed in the section relating to claim 1, the Court declines to construe the term as requiring the negative limitation asserted by Defendants.

10. Claim 14-The "Annular Peripheral Zone"

As with respect to phrase 4 of claim 1, the fourth clause of claim 14 discloses "an annular peripheral zone (7) carrying a catalyst." Plaintiffs again assert that the term "peripheral" has its ordinary meaning, referring to an external boundary area of a surface or body which may be circular, polygonal, or some other shape. Defendants assert this phrase should be construed as "an outer circular zone."

The Court agrees, as discussed previously, that Defendants attempt to improperly read into the claim a limitation from the specification. See '061 patent; Fig. 2; 1:8-10; 3:1-5; Fig. 8; 5:6. The claims are not limited to the exemplary embodiment, however, and the Court will not limit its construction to such.

11. Claim 14-Fixed into the Neck of Said Flask and Resting on a Base

As with respect to claim 12, the parties dispute that this clause should be limited to a base that is "securely fastened" to the flask and a burner that is positioned "in contact with" the base. Defendants first argue that the terms should be construed to require the burner be directly on the base. Further, Defendants urge a limitation that the term "not be construed to encompass a burner which is positioned in contact with a support and the support is positioned in contact with a base."

For the reasons discussed previously, the Court finds only that the burner should be resting on the base, not *in direct contact with* the base, as Defendants propose. Contrary to Defendants' position, the claim requires only that the burner be supported by the base.

Conclusion

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. For ease of reference, the Court's claim interpretations are set forth in a table attached to this opinion.

So ORDERED.

| CLAIM TERMS AND ELEMENTS | PLAINTIFFS' PROPOSED CLAIM CONSTRUCTION | DEFENDANTS' PROPOSED CLAIM CONSTRUCTION | AGREED CLAIM CONSTRUCTION | COURT'S CONSTRUCTION |
|---|---|---|---|--|
| 1. A catalytic combustion burner (3, 30) in a porous material comprising | | | This claim is directed to a catalytic combustion burner made of a porous material. | This claim is directed to a catalytic combustion burner made of a porous material. |
| an upper part (3b, 30b) having an upper surface (10) and a lower part (3a, 30a) ended with a lower end (3c, 30c), | | | The catalytic combustion burner has an upper part comprising an upper surface, and a lower part terminating at a lower end. | The catalytic combustion burner has an upper part comprising an upper surface, and a lower part terminating at a lower end. |
| said burner (3, 30) having a substantially axial cavity (6) | | | A cavity within the catalytic combustion burner extends along an axis of the burner. | A cavity within the catalytic combustion burner extends along an axis of the burner. |
| with a wick (4) to convey a combustible liquid (2) to the burner (3, 30), said combustible liquid (2) penetrating into the pores of said burner's | The claimed combination further includes a wick to convey a combustible liquid to the burner. The combustible liquid, which is not itself part of the | The cavity further includes a wick to convey a combustible liquid to the catalytic combustion burner. The combustible liquid must be of a type capable of penetrating | | The cavity further includes a wick to convey a combustible liquid to the catalytic combustion burner. The combustible liquid must be of a type |

| | | | |
|--|--|--|--|
| <p>porous material,</p> | <p>invention, should be of a type capable of penetrating into the burner's porous material. [Fig. 1; col. 1, lines 3-6, 12-13; col. 2, lines 17-18, 46-47, 50-52, 57-59, 64-65]</p> | <p>into the burner's porous material. This term may not be construed to encompass a wick that extends through the cavity to the upper surface of the catalytic combustion burner.</p> | <p>capable of penetrating into the burner's porous material.</p> |
| <p>said cavity (6) comprising an upper part (24) and opening at the lower end (3c, 30c) of the burner (3, 30) and being separated from the upper surface (10) of the burner (3, 30) by a wall, and</p> | <p>The cavity within the burner has an upper part and an opening at the lower end of the burner. The cavity is separated from the upper surface by a wall. [Fig. 2; col. 3, lines 25-28; Fig. 8; col. 5, line 8]</p> | <p>The cavity within the burner has an upper part and an opening at the lower end of the burner. The cavity is completely separated from the burner's upper surface by a wall. This term may not be construed to encompass a cavity that is only partially separated from the burner's upper surface by a partial wall.</p> | <p>The cavity within the burner has an upper part and an opening at the lower end of the burner. The cavity is separated from the upper surface by a wall.</p> |
| <p>the burner (3,</p> | <p>The burner has an</p> | <p>The burner has an</p> | <p>The burner has an</p> |

30) having an annular peripheral zone (7) carrying a catalyst and surrounding a central zone (40) with no catalyst forming a vaporization zone, said annular peripheral zone (7) and said central zone (40) being located in the upper part (3b, 30b) of said burner (3, 30),

annular peripheral zone which includes a catalyst. The annular peripheral zone surrounds a central zone which has no catalyst, the central zone forming a vaporization zone. The

annular peripheral zone and the central zone are located at the upper part of the burner. ("Peripheral" has its ordinary meaning, referring to the external boundary area of a surface or body. While the exemplary embodiment in the patent has a round or circular ring shape, the claim is not limited to such a shape.)
[Fig. 2; col. 1, lines 8-10; col. 3, lines 1-5; Fig. 8; col. 5, line 6]

outer circular zone which includes a catalyst. The outer circular zone surrounds a central zone which has no catalyst, the central zone forms a vaporization zone. The outer circular zone and the central

zone are located in the upper part of the burner.

annular peripheral zone which includes a catalyst. The annular peripheral zone surrounds a central zone which has no catalyst, the central zone forming a vaporization zone. The

annular peripheral zone and the central zone are located at the upper part of the burner.

characterized in that said upper part (24) of the cavity communicates with the atmosphere by the presence of at least one open channel (8, 33), and said channel (8, 33) being situated in the upper part (3b, 30b) of the burner (3, 30).

At least one open channel is provided in the upper part of the burner so that the upper part of the cavity communicates with the atmosphere through the open channel.

[Fig. 2; col. 3, lines 6-9; Fig. 8; col. 5, lines 19-22]

At least one open channel is provided in the upper part of the burner so that the upper part of the cavity communicates with the atmosphere through the open channel.

This term may not be construed to encompass a cavity that is only partially separated from the burner's upper surface by a partial wall.

At least one open channel is provided in the upper part of the burner so that the upper part of the cavity communicates with the atmosphere through the open channel.

2. A burner according to claim 1, characterized in that said channel (8) is substantially axial.

This claim includes all of the limitations of claim 1

This claim includes all of the limitations of claim 1

and further requires that the open channel extends substantially along an axis of the burner.

and further requires that the open channel extends substantially along an axis of the burner.

3. A burner according to claim 1,

This claim includes all of the limitations of

This claim includes all of the limitations

characterized in that said channel (8) has a diameter substantially between a quarter and about three-quarters of the diameter of the cavity (6).

4. A burner according to claim 1, characterized in that said channel (8) has a diameter of substantially a quarter to a half of the diameter of the cavity (6).

5. A burner according to claim 1, characterized in that said burner

An annular groove at the upper surface of the burner separates the annular

This claim includes all of the limitations of claim 1 and further requires that a circular

claim 1 and further requires that the diameter of the open channel is substantially between 1/4 and 3/4 of the diameter of the cavity within the burner.

This claim includes all of the limitations of claim 1 and further requires that the diameter of the open channel is substantially 1/4 to 1/2 of the diameter of the cavity within the burner.

of claim 1 and further requires that the diameter of the open channel is substantially between 1/4 and 3/4 of the diameter of the cavity within the burner.

This claim includes all of the limitations of claim 1 and further requires that the diameter of the open channel is substantially 1/4 to 1/2 of the diameter of the cavity within the burner.

This claim includes all of the limitations of claim 1 and further

| | | | |
|--|--|--|---|
| <p>(3, 30) further comprises a substantially axial annular groove (9) extending from the upper surface (10) of the burner (3, 30) and separating the annular peripheral zone (7) from the central zone (40).</p> | <p>peripheral zone (which carries a catalyst) from the central zone. The annular groove extends substantially axially with respect to the upper surface of the burner. ("Annular" has its ordinary meaning, referring to a thing in the form of a ring. While the exemplary embodiment in the patent has a round or circular ring shape, the claim is not limited to such a shape.) [Fig. 2; col. 3, lines 22-31; Fig. 8; col. 5, lines 3-5]</p> | <p>groove at the upper surface of the burner separates the outer circular zone from the central zone. The circular groove extends substantially axially with respect to the upper surface of the burner.</p> | <p>requires that an annular groove at the upper surface of the burner separates the annular peripheral zone (which carries a catalyst) from the central zone. The annular groove extends substantially axially with respect to the upper surface of the burner.</p> |
|--|--|--|---|

| | | | |
|--|---|---|---|
| <p>7. A catalytic combustion flask (1), to contain a combustible liquid (2) the neck of which (5) is designed to hold a combustion catalytic</p> | <p>A catalytic combustion flask according to this claim is for containing a combustible liquid (which is not part of the invention, <i>per se</i>), and</p> | <p>This claim includes all of the limitations of claim 1 and further includes a catalytic combustion flask containing a combustible liquid, and including a neck which is</p> | <p>This claim includes all of the limitations of claim 1 and further includes a catalytic combustion flask containing a</p> |
|--|---|---|---|

burner (3, 30) with a wick (4) dipping into said liquid (2),

includes a neck which is designed to hold a combustion catalytic burner having a wick dipping into the liquid.

[Fig. 1; col. 1, lines 3-6, 12-12; col. 2, lines 17-20, 44-47, 50-52, 57-59, 64-65]

designed to hold the catalytic combustion burner having a wick dipping into the liquid.

combustible liquid, and including a neck which is designed to hold the catalytic combustion burner having a wick dipping into the liquid.

characterized by being equipped with a burner (3, 30) according to claim 1,

The claimed combination further includes a catalytic combustion burner as recited in claim 1, discussed above.

The claimed combination further includes a catalytic combustion burner as recited in claim 1, as discussed above.

8. A flask according to claim 7, with the burner (3, 30) having a peripheral shoulder (11) separating its larger diameter upper part (3b, 30b) from its smaller diameter lower part (3a, 30a),

The burner includes a peripheral shoulder separating an upper part of relatively larger diameter from a lower part of relatively smaller diameter. ("Peripheral" has its ordinary meaning,

This claim requires all of the limitations of claim 7 and further requires the catalytic combustion burner includes a circular shoulder separating an upper part from a lower part, wherein the upper part of the burner has a diameter greater

This claim requires all of the limitations of claim 7 and further requires that the catalytic combustion burner includes a peripheral shoulder separating an upper

referring to the external boundary area of a surface or body. While the exemplary embodiment in the patent has a round or circular shape, the claim is not limited to such a shape.)
[Figs. 2, 8; col. 3, lines 44-46, col. 5, lines 13-15]

than the diameter of the lower part of the burner.

part from a lower part, wherein the upper part of the burner has a diameter greater than the diameter of the lower part of the burner.

this shoulder (11) being held by an additional shoulder (12) in a support (13) surrounding at least the lower part (3a, 30a) of the burner (3, 30),

A support surrounds at least the lower part of the burner, and includes an additional shoulder which holds the shoulder of the catalytic combustion burner.

A support surrounds at least the lower part of the burner, and includes an additional shoulder which holds the shoulder of the catalytic combustion burner.

characterized in that the support (13) extends downwards beyond the lower end (3c, 30c) of the burner (3, 30).

The support extends downwardly beyond the lower end of the catalytic combustion burner.

The support extends downwardly beyond the lower end of the catalytic combustion burner.

7. A flask according to claim 8, characterized in that the support (13) is extended downwards, beyond the lower end (3c, 30c) of the burner (3, 30), by a tubular extension (20).

10. A flask according to claim 9, characterized in that the tubular extension (20) has at least one section with a constriction (21) to grip the wick (4) and to limit the amount of combustible liquid (2) it conveys to the burner (3, 30) by the capillary action of the wick (4).

This claim includes all of the limitations of claim 8 and further requires a tubular extension of the support extending downwardly beyond the lower end of the burner.

This claim includes all of the limitations of claim 9 and further requires the tubular extension of the support has a section which includes a constriction to grip the wick and limit the amount of the combustible liquid conveyed by the wick to the burner by capillary action.

This claim includes all of the limitations of claim 8 and further requires a tubular extension of the support extending downwardly beyond the lower end of the burner.

This claim includes all of the limitations of claim 9 and further requires the tubular extension of the support has a section which includes a constriction to grip the wick and limit the amount of the combustible liquid conveyed by the wick to the burner by capillary action.

11. A flask according to claim 8, characterized in that the support (13) contains at least one hole (22) enabling the inside of the flask (1) to communicate with the atmosphere.

This claim includes all of the limitations of claim 8 and further requires the support for the catalytic combustion burner includes a hole enabling the inside of the flask to communicate with the atmosphere.

This claim includes all of the limitations of claim 8 and further requires the support for the catalytic combustion burner includes a hole enabling the inside of the flask to communicate with the atmosphere.

12. A flask according to claim 7, with the burner resting on a base fixed into the neck of said flask, characterized in that said base has at least one hole enabling the inside of the flask to communicate with the atmosphere.

A base is fixed or fitted into the neck of the flask. The burner rests on the base. The base has at least one hole or opening enabling the inside of the flask to communicate with the atmosphere. (The claim requires only that the burner rest on, i.e., be supported by, the base. There is no requirement that the burner

This claim requires all of the limitations of claim 7 and further requires a base securely fastened into the neck of the flask and the burner positioned in contact with the base. The base has at least one hole or opening enabling the inside of the flask to communicate with the atmosphere.

This claim requires all of the limitations of claim 7 and further requires that a base is fixed or fitted into the neck of the flask. The burner rests on the base. The base has at least one hole or opening enabling the inside of the flask to communicate with the

be in contact with the base.

In fact, that is contrary to the disclosure of the patent.)

[Fig. 4; col. 3, line 66-col. 4, line 9; col. 4, lines 33-35, 40-45]

atmosphere.

14. A catalytic combustion flask (1), to contain a combustible liquid (2)

the neck of which (5) is designed to hold a combustion catalytic burner (3, 30) with a wick (4) dipping into said liquid (2),

said combustion catalytic burner having in its lower part a substantially axial cavity (6) with said wick (4) to convey

The lower part of the burner has a cavity that extends substantially axially of the burner and which includes the wick for

The lower part of the burner has a cavity that extends substantially axially of the burner and which includes the wick for conveying

This claim is for a catalytic combustion flask for containing a combustible liquid comprising:

The flask has a neck which is designed to hold a combustion catalytic burner having a wick dipping into the combustible liquid.

This claim is for a catalytic combustion flask for containing a combustible liquid comprising:

The flask has a neck which is designed to hold a combustion catalytic burner having a wick dipping into the combustible liquid.

The lower part of the burner has a cavity that extends substantially axially of the burner and

said
combustible
liquid (2) to
the burner (3,
30), and

conveying the
combustible liquid to
the
burner.

the
combustible liquid to
the
burner.

which
includes the wick
for
conveying the

combustible liquid
to
the burner.

This term may not be
construed
to encompass a wick
that
extends all the way
through the
cavity.

in its upper
part (3b, 30b)
an annular
peripheral
zone (7)
carrying a
catalyst and
being
separated by a
substantially
axial annular
groove (9)
extending
from
the upper
surface (10) of
the burner
(3,30), with a
central zone
(40) with no
catalyst
forming a
vaporization
zone,

The upper part of the
catalytic burner has
an
annular peripheral
zone
which carries a
catalyst, and
a central zone with
no
catalyst forming a
vaporization zone.
The
annular peripheral
zone and
the central zone are
separated by an
annular
groove which
extends
substantially axially
with
respect to the upper
surface
of the burner.

The upper part of the
catalytic
burner has an outer
circular
zone which carries a
catalyst
and a central zone
with no
catalyst forming a
vaporization
zone. The outer
circular zone
and the central zone
are
separated by a
circular groove
which extends
substantially
axially.

The upper part of
the
catalytic burner
has an
annular peripheral
zone
which carries a
catalyst,
and a central zone
with
no catalyst
forming a
vaporization zone.
The
annular peripheral
zone
and the central
zone are
separated by an
annular
groove which
extends
substantially
axially
from the upper
surface
of the burner.

("Peripheral" has its ordinary meaning, referring to the external boundary area of a surface or body. While the exemplary embodiment in the patent has a round or circular ring shape, the claim is not limited to such a shape.)

[Fig. 2; col. 1, lines 8-10; col. 3, lines 1-5, 22-31; Fig. 8; col. 5, lines 3-6]

characterized in that the central zone (40) shuts off, at least in part, the upper part (24) of the cavity (6) and that said upper part (24) communicates with the atmosphere by the presence of at least one open channel (8, 33),

The central zone shuts off, at least in part, the upper part of the cavity within the burner. At least one open channel is provided in the burner so that the upper part of the axial cavity communicates with the atmosphere via the open channel.

The central zone shuts off, at least in part, the upper part of the cavity within the burner. At least one open channel is provided in the burner so that the upper part of the axial cavity communicates with the atmosphere via the open

said channel (8, 33) being situated in the upper part (3b, 30b) of the burner (3, 30), and

the burner (3, 30) resting on a base (16) fixed into the neck (5) of said flask (1),

characterized in that said base (16) has at least one hole (10)

A base is fixed or fitted into the neck of the flask. The burner rests on the base. (The claim requires only that the burner rest on, i.e., be supported by, the base. There is no requirement that the burner be in contact with the base. In fact, that is contrary to the disclosure of the patent.) [Fig. 4; col. 3, line 66-col. 4, line 4; col. 4, lines 33-35, 40-45]

A base is securely fastened into the neck of the flask and the burner positioned in contact with the base.

This term may not be construed to encompass a burner which is positioned in contact with a support and the support is positioned in contact with a base.

This term must be construed to require the burner to be directly on the base.

channel.

The open channel is located in the upper part of the burner.

The open channel is located in the upper part of the burner.

A base is fixed or fitted into the neck of the flask. The burner rests on the base.

The base has at least one hole or opening enabling the inside of the flask

The base has at least one hole or opening enabling the inside

note (17)
enabling the
inside of the
flask (1) to
communicate
with the
atmosphere.

inside of the flask
to
communicate with
the
atmosphere.

enabling the insi
de of
the flask to

communicate with
the
atmosphere.

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