

United States District Court,  
W.D. Missouri, Jefferson City Division.

**SEMCO INCORPORATED,**  
Plaintiff.

v.  
**VENMAR VENTILATION, INC., and Venmar Ces, Inc,**  
Defendants.

No. 01-4193-CV-C-NKL

**Dec. 17, 2002.**

Douglas D. Churovich, Lionel L. Lucchesi, McPherson D. Moore, William B. Cunningham, Jr., Polster, Lieder, Woodruff & Lucchesi, St. Louis, MO, Laurence Robert Tucker, Armstrong, Teasdale, Schlafly & Davis, Kansas City, MO, for Plaintiff.

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***MEMORANDUM AND ORDER ON CLAIM CONSTRUCTION***

**NANETTE K. LAUGHREY, District Judge.**

United States Patent No. 4,769,053 issued on September 6, 1998 (hereafter the "Fischer Patent"). Plaintiff, Semco, Inc. (hereinafter "Semco") has filed suit against the defendants Venmar Ventilation, Inc. and Venmar CES, Inc. alleging Semco's ownership of the Fischer patent, and Defendants' infringement of the Fischer patent.

**General**

This Court conducted a hearing with testimony of witnesses and submission of exhibits by the parties. The Court has also considered the briefs and oral arguments of the parties.

The Fischer patent issued with 24 patent claims. Of those 24 claims, claims 1 and 13 are independent claims. Claim 1 sets forth "a sensible and latent heat exchange media", while claim 13 sets for a "total energy recovery wheel." However, in many of their claim terms, Claims 1 and 13 contain identical (or highly similar) claim language. Claims 1 and 13 both contain the same disputed claim terms.

Prior to a determination of validity or infringement of the claims of the Fischer patent, the meaning and scope of the terms of the claims must be determined by this Court, as a matter of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed.Cir.1995), *affirmed* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). The interpretation of patent claims is the same for validity and for infringement.

Laitram Corp. v. Cambridge Wire Cloth Co., 863 F.2d 855, 866 (Fed.Cir.1988).

"In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to 'particularly point out and distinctly claim the subject matter which the patentee regards as his invention.' 35 U.S.C. s. 112, para. 2." Interactive Gift Express v. Compuserve, Inc., 256 F.3d 1323, 1331 (Fed.Cir.2001).

"The terms used in the claims bear a 'heavy presumption' that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art. (cites omitted). Moreover, unless compelled otherwise, a court will give a claim term the full range of its ordinary meaning as understood by persons skilled in the relevant art. (cites omitted)". Texas Digital Systems, Inc. v. Telegenix, Inc., 308 F.3d 1193, 2002 U.S.App. Lexis 21567 at \*9-10 (Fed.Cir.2002).

"It is well settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification, and, if in evidence, the prosecution history. See Markman, 52 F.3d at 979; Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). "Extrinsic evidence is that evidence which is external to the patent and file history, such as expert testimony, inventor testimony, dictionaries, and technical treatises and articles." Vitronics, 90 F.3d at 1584. However, "extrinsic evidence in general, and expert testimony in particular, may be used *only* to help the court come to the proper understanding of the claims; it may not be used to vary or contradict the claim language." *Id.*

The first step in reviewing intrinsic evidence is to look at the disputed words in the claims themselves. *See* Vitronics, 90 F.3d at 1582. The words in a claim are generally given their ordinary and customary meaning. *Id.*

A patentee may redefine ordinary and commonly used terms, and be his own lexicographer, but such new definitions must be clearly stated in the patent specification. Markman, 52 F.3d at 980. Accordingly, after reviewing the claims, the court looks to the patent specification to determine whether the patentee changed the ordinary meaning of the disputed claim term to something different from that which is understood and used by those of ordinary skill in the art. Vitronics, 90 F.3d at 1582.

"If the claim language is clear on its face, then our consideration of the rest of the intrinsic evidence is restricted to determining if a deviation from the clear language of the claims is specified. A deviation may be necessary if 'a patentee [has chosen] to be his own lexicographer and use terms in a manner other than their ordinary meaning.' Vitronics, 90 F.3d at 1582. A deviation may also be necessary if a patentee has 'relinquished [a] potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference.' " Interactive Gift Express, 256 F.3d at 1331 (citation omitted).

Next, the Court considers the written description and prosecution history to determine if the patentee acted as a lexicographer and changed the meaning of any of the claim terms. Digital Biometrics v. Identix, Inc., 149 F.3d, 1335, 1344. "If not, the ordinary meaning, to one skilled in the art, of the claim language controls." *Id.* (citing York Products, Inc. v. Central Tractor Farm & Family Center, 99 F.3d 1568, 1572 (Fed.Cir.1996)("Without an express intent to impart a novel meaning to claim terms, an inventor's claim terms take on their ordinary meaning")); Teleflex, Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1327 (Fed.Cir.2002) ("We hold that claim terms take on their ordinary and accustomed meanings unless the patentee demonstrated an intent to deviate from the ordinary and accustomed meaning of a claim term by

redefining the term or by characterizing the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.").

### Primary Claim Terms In Dispute

As discussed above, while the Fischer patent has some 24 claims, of which claims 1 and 13 are the only independent claims, the primary disputed claim terms are common to both claims 1 and 13. The primary disputed claim terms read as follows:

**"said molecular sieve having a plurality of pores of a substantially uniform size and a pore diameter of about 3 Angstroms** such that said molecular sieve is capable of adsorbing moisture from a humid air stream flowing through said sensible and latent heat exchange media, and is capable of releasing said adsorbed moisture into a dry air stream flowing through said sensible and latent heat exchange media in a time period of less than about 1.5 seconds."

The main dispute focuses on the bold face language. Defendants contend that the disputed claim term should be interpreted to encompass only a 3 Angstrom molecular sieve wherein most of the sodium cations of a 4 Angstrom molecular sieve have been replaced by larger potassium cations.

35 U.S.C. s. 112, para. 1, requires a patent specification to "contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

The Fischer Patent provides the context for interpreting the disputed claim language in the section of the specification entitled "Detailed Description Of Preferred Embodiments." Beginning at Column 5, line 4, a general description is given of what molecular sieves would be suitable for use in the claimed invention. At Column 5, lines 8-12 is a general description of a molecular sieve. At Column 5, lines 12-32, a description of what molecular sieve properties make a molecular sieve suitable for use with the patented invention is as follows:

"Suitable molecular sieves are those **having a plurality of pores of a substantially uniform size such that the molecular sieve is capable of adsorbing moisture from a humid air stream flowing through the sensible and latent heat exchange media 10, and is capable of releasing the adsorbed moisture into a dry air stream flowing through the sensible and latent heat exchange media 10**, but is not capable of adsorbing contaminants from either of the air streams. Because water molecules have a critical diameter of 2.8 Angstroms and small contaminants such as ammonia and hydrogen sulfide have critical diameters of 3.6 Angstroms, the molecular sieves preferably have a pore diameter of about 3 Angstroms."

It will be noted that the bold face portion of the quoted language from the specification contains some of the same language used in the disputed claim term.

At Column 5, line 34 et seq., it is stated that "Molecular sieves are materials whose atoms are arranged in a crystal lattice in such a way that there are a large number of interconnected uniformly sized pores." One of ordinary skill in the art, upon reading this passage would know that a molecular sieve, such as is described in Claims 1 and 13, should have "a large number of interconnected uniformly sized pores." This shows the

context in which the claim phrase "said molecular sieve having a plurality of pores of a substantially uniform size" is used in the specification of the Fischer Patent.

At Column 5, lines 40 and 41, the Fischer Patent specification discloses that one type of molecular sieve that may be used is a "zeolite". At Column 5, lines 42-45, the general chemical formula for zeolites is given. Then at Column 5, line 45 et seq., naturally occurring zeolites are discussed.

Thereafter, at Column 5, lines 52 et seq., the specification discloses that "artificial zeolites molecular sieves include zeolites A, D, L, R, S, T, X, and Y". The general chemical formula is given for Zeolite A.

Further, at Column 5, line 66 et seq., the patent specification then discusses preparing an embodiment from a 4 Angstrom molecular sieve, and states that:

"The molecular sieves generally known in the art as 4 Angstrom molecular sieves have a pore diameter of about 4 Angstroms and are an alumino silicate of crystal structure A with sodium cations."

Then, the specification becomes even more specific when it discloses that:

"The molecular sieves generally known in the art as 3 Angstrom molecular sieves are an alumino silicate of crystal structure A and with sodium and potassium cations. The 3 Angstrom molecular sieves are prepared by **substituting most of the sodium cations in a 4 Angstrom molecular sieve with larger potassium cations**. Thus, while most of the pores in 3 Angstrom molecular sieves are about 3 Angstroms in diameter, some of the pores are about 4 Angstroms in diameter." (see Col. 5, line 62-Col. 6, line 6).

Defendants improperly equate the patent specification language "substituting most of the sodium cations in a 4 Angstrom molecular sieve with larger potassium cations" with the claim language "plurality of pores of a substantially uniform size and a pore diameter of about 3 Angstroms". Nothing in the specification of the Fischer patent disclaims any broad meaning of the disputed claim term, and there are no manifest exclusions or restrictions on the disputed claim term that disavows any broad meaning to the claim phrase "said molecular sieve having a plurality of pores of a substantially uniform size and a pore diameter of about 3 Angstroms".

The language in a patent claim is not restricted to embodiments described in the specification. While "an inventor must describe what he conceives to be the best mode, but he is not confined to that. If this were not so most patents would be of little worth." *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 418, 28 S.Ct. 748, 52 L.Ed. 1122 (1908). The Supreme Court further enunciated this policy stating that while the specifications demonstrate the inventor's preferred embodiment or best mode, the inventor is not confined to this "particular mode of use, since the claims of the patent, not its specifications, measure the invention." *Smith v. Snow*, 294 U.S. 1, 11, 55 S.Ct. 279, 79 L.Ed. 721 (1935).

The Federal Circuit has repeatedly admonished those construing patent claims that "References to a preferred embodiment, such as those often present in a specification, are not claim limitations. (cite omitted). This Court has cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification." *Transmatic, Inc. v. Gulton Industries, Inc.*, 53 F.3d 1270, 1277 (Fed.Cir.1995).

If everything in the specification were required to be read into the claims, or if structural claims were to be

limited to devices operated precisely as a specification-described embodiment is operated, there would be no need for claims. Nor could an applicant, regardless of the prior art, claim more broadly than that embodiment. Nor would a basis remain for the statutory necessity that an applicant conclude his specification with "claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. s. 112. *It is the claims that measure the invention.* (emphasis added).

SRI International v. Matsushita Electric Corp., 775 F.2d 1107, 1121 (Fed.Cir.1985) (en banc).

The court in Dayco Products, Inc. v. Total Containment, Inc., 258 F.3d 1317, 1325 (Fed.Cir.2001), stated: "As we said in Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186, 48 U.S.P.Q.2d 1001, 1005 (Fed.Cir.1998), 'while ... claims are to be interpreted in light of the specification and with a view to ascertaining the invention, it does not follow that limitations from the specification may be read into the claims.' (quoting Sjolund v. Musland, 847 F.2d 1573, 1581, 6 U.S.P.Q.2d 2020, 2027 (Fed.Cir.1988)". Further, the Dayco court said "Our cases make clear, however, that adding limitations to claims not required by the claim terms themselves, or unambiguously required by the specification or prosecution history, is impermissible. See Laitram Corp. v. NEC Corp., 163 F.3d 1342, 1347 (Fed.Cir.1998) (a court may not import limitations from the written description into the claims); Dayco Products, 258 F.3d at 1327.

### **The Prosecution History Shows That No Amendment To The Claims And No Reasons Advanced To Distinguish Prior Art, Cause A Relinquishment or Contraction Of The Disputed Claim Language.**

As noted in Interactive Gift Express, 256 F.3d at 1331, "A deviation may also be necessary if a patentee has "relinquished [a] potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference." Defendants have not shown that any amendment, reasoning or argument during the prosecution of the Fischer patent relinquished any claim construction of the disputed claim terms "plurality of pores" or "about 3 Angstroms".

A review of the prosecution history of the Fischer patent shows that there were two actions by the Examiner and two amendments or responses by Mr. Fischer's attorney. In addition, there was a draft Declaration by Mr. Fischer contained in the file wrapper of the Fischer patent. In the Amendment dated November 19, 1987, Mr. Fischer's attorney amended the disputed claim phrase as follows:

"and a layer of a coating composition comprising a *cationic* molecular sieve applied to at least a portion of the surface of said sensible heat exchange material, said molecular sieve having a plurality of pores of a substantially uniform size *and a pore diameter of about 3 Angstroms* such that said molecular sieve is capable of adsorbing moisture from a humid air stream flowing through said sensible and latent heat exchange media, and is capable of releasing said adsorbed moisture into a dry air stream flowing through said sensible and latent heat exchange media *in a time period of less than about 1.5 seconds*, but is not capable of adsorbing contaminants from either of the air streams." (where the underlined words indicated words that were added by amendment).

First, claim 1 was amended to specify that the "molecular sieve" was a "cationic molecular sieve". The effect of this amendment was to require that the molecular sieve was cationic (i.e., that it had cations). However, this amendment did not specify that the molecular sieve had to have any certain cations, much less that the cations had to be sodium and potassium cations. This amendment did not require that the molecular sieve must be prepared such that there must be more potassium cations than sodium cations.

Moreover, no arguments were made to the Patent Office that stated, in effect, that there had to be any particular cations or that the molecular sieve had to have more potassium cations than sodium cations.

The next amendment to claim 1 specified that the pores had "a pore diameter of about 3 Angstroms". Again, there were no arguments made and the words themselves do not require the molecular sieve be "prepared by substituting most of the sodium cations in a 4 Angstrom molecular sieve with larger potassium cations", as urged by Defendants.

A review of the entire remaining prosecution history further shows that no amendment or argument was made to the Examiner to overcome a prior art reference which would constitute a relinquishment of the broad meaning of the disputed claim term.

In Mr. Fischer's draft Declaration dated March 15, 1988 filed with the Amendment mailed to the Patent Office on March 15, 1988, nowhere does Mr. Fischer state or argue that the molecular sieve must be prepared by substituting most of the sodium cations in a 4 Angstrom molecular sieve with larger potassium cations. Nowhere in this draft Declaration does Mr. Fischer state or argue that the only molecular sieve that differentiates his claimed invention from the prior art is one that is an A type zeolite having more potassium cations than sodium cations, or words to that effect.

In paragraph 7 on pages 5-8 of his Declaration, Mr. Fischer uses the term "3A molecular sieve." In no instance does Mr. Fischer ever state or argue that the 3A molecular sieve must be prepared by substituting most of the sodium cations in a 4 Angstrom molecular sieve with larger potassium cations.

Paragraph 8 of Mr. Fischer's Declaration states that "The 3 Angstrom pore size of molecular sieve physically prevents most contaminants from being adsorbed, because most contaminant molecules are larger than 3 Angstroms." Again, there is nothing in his Declaration where Mr. Fischer relinquished any broad interpretation of the claim term "about 3 Angstroms".

In the Amendments of November 18, 1987 and March 15, 1988, Mr. Fischer, through his attorney, successfully distinguished the molecular sieve described in the independent claims here at issue over the dehumidification wheels disclosed in the prior art references to Macriss and the Japanese Published Patent Application. However, no statement or argument was made to the Patent Office to overcome any of the prior art which relinquished any construction of the claim term "plurality of pores of a substantially uniform size and a pore diameter of about 3 Angstroms".

In Defendants' Proposed Order Re Claim Construction, filed October 2, 2002, Defendants at page 7 et seq. point to numerous places in the specification and the prosecution history of the Fischer patent and allege that these statements were proper limitations of the broad meaning of the claim terms. Neither the cases cited by Defendants nor the Fischer Patent and its prosecution history support that proposition. The references made by the Defendants to the specification and the prosecution history of the Fischer patent are not specific and do not constitute "... a clear and unambiguous disclaimer of a claim scope that would [so limit the disputed claim term of "about 3 Angstroms", as argued by Defendants] as required to deviate from the ordinary meaning of the claim recitation. *See, e.g.*, Northern Telecom Ltd. v. Samsung Electronics Co., 215 F.3d 1281, 1294, 55 U.S.P.Q.2d 1065, 1075 (Fed.Cir.2000) (requiring prosecution history statements cited as narrowing claim scope to have "reasonable clarity and deliberateness."); IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1439, 54 U.S.P.Q.2d 1129, 1141 (Fed.Cir.2000), *cert. dismissed*, 530 U.S. 1299, 121 S.Ct. 24, 147 L.Ed.2d 1047 (2000) ("In light of the ambiguity of the patentee's statements and the

subject matter actually disclosed in the references, we cannot say that the patentee clearly disavowed coverage of [claim scope].")" *Inverness Medical Switzerland et al. v. Princeton Biomeditech Corp.*, 2002 U.S.App. LEXIS 22693 at \*19.

### **The Phrase "Plurality of Pores" Is Construed To Mean A Large Number Of Pores.**

The disputed claim terms from claims 1 and 13 includes the phrase "a plurality of pores." *Webster's Ninth New Collegiate Dictionary* (1991) gives three definitions of "plurality": "the state of being plural"; "a large number or quantity"; or "a number greater than another." (See page 20 of Defendants' Markman Brief.)

However, as noted above, the specification of the Fischer patent states (see Column 5, lines 33-35) that "Molecular sieves are materials whose atoms are arranged in a crystal lattice in such a way that there are a large number of interconnected uniformly sized pores." From the context of the specification of the Fischer patent, one of ordinary skill in the art, upon reading the claim term "plurality of pores" and the above-noted passage from the specification that there molecular sieve should have a large number of uniformly sized pores, would understand that "plurality" should be interpreted to mean "a large number". Moreover, it is noted that this meaning of the term "plurality of pores", i.e., a large number of pores, is not contrary to the very dictionary definition cited by the Defendants which included the definition "a large number or quantity." (See page 20 of Defendant's Markman Brief).

"Because words often have multiple dictionary definitions, some having no relation to the claimed invention, the intrinsic record must always be consulted to identify which of the different possible dictionary meanings of the claim terms in issue is most consistent with the use of the words by the inventor." *Texas Digital*, 308 F.3d 1193, 2002 U.S.App. LEXIS 21567 at \*14 (internal citation omitted). "[W]here there are several common meanings for a claim term, the patent disclosure serves to point away from the improper meanings and toward the proper meaning." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed.Cir.1998). "The objective and contemporaneous record provided by the intrinsic evidence is the most reliable guide to help the court determine which of the possible meanings of the terms in question was intended by the inventor to particularly point out and distinctly claim the invention." *Texas Digital*, 308 F.3d, 1193, 2002 U.S.App. LEXIS 21567 at \*15.

The specification of the Fischer patent expressly describes the molecular sieve as having a large number of uniformly sized pores. Because that meaning of "plurality" is consistent with a normal dictionary definition of the word, the claim phrase "plurality of pores of substantially uniform size" is construed to mean "a large number of pores of substantially uniform size."

### **The Claim Term "such that said molecular sieve is capable of adsorbing moisture from a humid air stream flowing through said sensible and latent heat exchange media, and is capable of releasing said adsorbed moisture into a dry air stream flowing through said sensible and latent heat exchange media in a time period of less than about 1.5 seconds"**

In the Amendment dated November 19, 1987, Mr. Fischer's attorney amended Claims 1 and 15 (which later became Claims 1 and 13, respectively, of the Fischer Patent). That Amendment added the phrase "*in a time period of less than about 1.5 seconds*", where the underlined words indicate the words that were added by amendment. In the amendment of March 15, 1988, the words "but is not capable of adsorbing contaminants from either of the air streams" were deleted.

At page 4 of the Amendment of November 19, 1987, Mr. Fischer's attorney pointed out that "Claims 1 and 15 have been amended to provide that the molecular sieve is capable of absorbing and releasing moisture at the rate of less than about 1.5 seconds."

In paragraph 10 on page 10 of Mr. Fischer's Declaration, he states that "The reference does not teach or suggest to one of ordinary skill in the art that a coating of 3A molecular sieve would be able to transfer moisture at a rate of less than about 1.5 seconds and be useful as the sensible and latent heat exchange media of my present invention."

The reasons advanced to the Examiner in the November 19, 1987 Amendment and the statements made by Mr. Fischer in his March 15, 1988 Declaration show clearly that the addition of the requirement that the "molecular sieve is capable of adsorbing moisture from a humid air stream flowing through said sensible and latent heat exchange media, and is capable of releasing said adsorbed moisture into a dry air stream flowing through said sensible and latent heat exchange media in a time period of less than about 1.5 seconds" is a functional limitation that is in addition to the other limitations regarding the molecular sieve. *Ultradent Products, Inc. v. Life-Like Cosmetics, Inc.*, 127 F.3d 1065, 1070-71 (Fed.Cir.1997)(functional characteristics used for claimed elements as to viscosity and stickiness); *Smith & Nephew, Inc. v. Ethicon, Inc.*, 276 F.3d 1304, 1310-11 (Fed.Cir.2001)("such that" claim language used to set forth element of claim).

Claims 1 and 13 both use the word "comprising" immediately after the words "a layer of coating composition". In the lexicon of patent law, "comprising," means that the "recited members are only a part of the device." *Ex parte Schaefer*, 171 U.S.P.Q. 110 (Pat.Off.Bd.App.1971). In other words, while the "layer of a coating composition" may include a "molecular sieve having a plurality of pores of substantially uniform size and a pore diameter of about 3 Angstroms", it may also include other elements or ingredients.

### **Other Disputed Claims Terms**

Defendants have also argued that the claim phrase

"said gas permeable matrix being formed of a sensible heat exchange material that is capable of absorbing sensible heat from a warm air stream and releasing said absorbed sensible heat into a cool air stream as said air streams flow through said sensible and latent heat exchange media,"

is "... indefinite under 35 U.S.C. s. 112 for omitting essential material-more particularly, a wheel or other means that is needed to rotate or alternate the molecular sieve medium between the various air streams." (see page 25 of Defendants' Markman Brief). While this argument was advanced in Defendants' Markman Brief, it was not addressed at the *Markman* hearing.

The claim phrase "capable of absorbing sensible heat from a warm air stream and releasing said absorbed sensible heat into a cool air stream" describes a physical property or attribute of the "sensible heat exchange material." As such, this claim requirement does not need to have "a wheel or other means needed to rotate" it because it only describes a physical attribute of the heat exchange material.

Because this claim term merely defines a physical attribute or characteristic of the sensible heat material, it is not an omission of an essential element of the invention if the means for rotating the sensible heat material is omitted from the claim. Moreover, it is well established that it is not necessary to include every component or attribute that is described in the specification in the broad claim. In *Reiffin v. Microsoft*

Corp., 214 F.3d 1342, 1347 (Fed.Cir.2000), Judge Newman's Concurring Opinion stated:

The district court accepted Microsoft's proposition that the patentee must include in every claim "each and every element" that was described as "part of his invention," whether or not the element is necessary for patentability of the claim.

Failure to do so, the district court held, invalidates the claims for noncompliance with the written description requirement of s. 112 para. 1. That is not a correct statement of the law. Section 112 para. 2 instructs the applicant to "distinctly claim[ ] the subject matter which the applicant regards as his invention." This does not automatically require inclusion in every claim of every element that is part of the device or its operation.

It is standard for applicants to provide claims that vary in scope and in content, including some elements of a novel device or method, and omitting others. *See* Irving Kayton, 1 *Patent Practice* (6th ed) 3.1, 3.3 (1995):

'Patent practitioners typically draft a series of claims approximating a spectrum of patent protection ... The first way in which a claim may be made narrower is by adding a limitation to it in the form of an additional element'....

...

While the specification must of course describe the claimed invention, it is well established that the claims need not include every component that is described in the specification. (citations omitted).

In like matter, there is no restriction in the claim to support the proposition advanced by Defendants that "the moisture that is absorbed also must be released in the same amount or degree."

Defendants further contend that the claim term "layer" in the context of "coating composition" (as used in claims 1, 9, 12 and 21) has a modified meaning because of the prosecution history of the Fischer patent (see page 26 of Defendants' Markman Brief). However, the term "layer" was not amended during the prosecution of the Fischer patent. Moreover, the term "layer" is defined in a dictionary (e.g., *Webster's Ninth New Collegiate Dictionary*, 1987) as "layer ... n .. 2a: one thickness, course or fold laid or lying over or under another".

At Column 5, line 4 et seq., the specification of the Fischer patent states that "A layer 28 of a coating composition is applied to at least a portion of the surface 30 of the sensible heat exchange material 26 ...". The layer 28 is illustrated in Fig. 2 of the Fischer patent and it is shown to be one thickness of the coating composition. Accordingly, the common dictionary meaning of the word "layer" is consistent with the manner in which the term "layer" is used in both the specification and in claims 1 and 13 of the Fischer patent.

A review of the prosecution history does not show that Semco or Mr. Fischer made any express statement that could be reasonably viewed as an intent to deviate from the ordinary and accustomed meaning of a claim term "layer" by redefining the term or by characterizing the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope. *See* *Teleflex*, 299 F.3d at 1327. Accordingly, the term "layer" is construed to have its ordinary meaning.

Lastly, in claim 13, Defendants contend that the following claim phrase is indefinite:

"and being formed of a sensible heat exchange material that is capable of absorbing sensible heat from a warm air stream and releasing said absorbed sensible heat from a warm air stream and releasing said absorbed sensible heat into a cool air stream as said air streams flow through said sensible and latent heat exchange media,"

because it includes a double inclusion of the sensible heat provision. However, a careful reading of this claim provision shows that what is described is that the heat exchange material has the capability "absorbing sensible heat from a warm air stream and releasing said absorbed sensible heat from a warm air stream" and further has the capability of "releasing said absorbed sensible heat into a cool air stream" As such, there is no double inclusion and the claim is not indefinite.

### ORDER

Therefore, the Court, based on the intrinsic evidence, does hereby Order, Adjudge and Decree, that the claims of United States Patent No. 4,769,053 are construed, as a matter of law, in the following table with the language of each claim term shown in the left-hand column, and with Court's construction thereof shown in the right-hand column:

***Claim 1:***

"A sensible and latent heat exchange media"	This term means "a structure for effecting sensible and latent heat exchange".
"comprising"	"comprising" means "including the following elements but not excluding others". In other words, the elements that follow the word "comprising" in Claim 1 are part of the claimed subject matter, although other elements that are not set forth in the claim can still be present.
"a gas permeable matrix, said gas permeable matrix providing passageways therethrough through which an air stream can flow through said sensible and latent heat exchange media"	This means "a structure with passageways or fluid paths through which an air stream can pass or flow through the media"
"and said gas permeable matrix being formed of a sensible heat exchange material that is capable of absorbing sensible heat from a warm air stream and releasing said absorbed sensible heat into a cool air stream as said air streams flow through said sensible and latent heat exchange media"	This means "the gas permeable matrix is formed of a suitable, sensible heat exchange material that is capable of absorbing sensible heat from a warm air stream and releasing the absorbed sensible heat into a cool air stream as the air streams flow through the sensible and latent heat exchange media".
and a layer of a coating composition comprising"	This means that there is "a layer of a coating composition which includes, but is not limited to, the elements set forth following the word 'comprising' ".
"a cationic molecular sieve applied to at least a portion of the surface of said sensible heat exchange material"	This means that "the layer of coating composition includes, but is not limited to, a molecular sieve material applied to at least a portion of the surface of the previously mentioned sensible heat exchange material, where the molecular sieve includes cations."

"said molecular sieve having a plurality of pores of a substantially uniform size and a pore diameter of about 3 Angstroms"	This means that "the molecular sieve has a large number of pores of a substantially uniform size having a pore diameter of about 3 Angstroms."
"such that said molecular sieve is capable of adsorbing moisture from a humid air stream flowing through said sensible and latent heat exchange media, and is capable of releasing said adsorbed moisture into a dry air stream flowing through said sensible and latent heat exchange media in a time period of less than 1.5 seconds"	This means "that the molecular sieve has the capability of adsorbing moisture from a humid air stream which flows through the sensible and latent heat exchange media, and that the molecular sieve is also capable of releasing the adsorbed moisture into a dry air stream that flows through said sensible and latent heat exchange media, in a time period of less than about 1.5 seconds"

**Claim 13:**

"A total energy recovery wheel"	This term means "a wheel for recovering sensible and latent heat."
"comprising"	"comprising" means "including the following elements but not excluding others". In other words, the elements that follow the word "comprising" in Claim 13 are part of the claimed subject matter, although other elements that are not set forth in the claim can still be present.
"a hub"	This term means "a structure upon which the wheel is supported so that the wheel may be rotated."
"a sensible and latent heat exchange media"	This term means "a structure for effecting sensible and latent heat exchange".
"a gas permeable matrix, said gas permeable matrix providing passageways therethrough through which an air stream can flow through said sensible and latent heat exchange media"	This means "a structure with passageways or fluid paths through which an air stream can pass or flow through the media."
"and being formed of a sensible heat exchange material that is capable of absorbing sensible heat from a warm air stream and releasing said absorbed sensible heat into a cool air stream as said air streams flow through said sensible and latent heat exchange media"	This means "the gas permeable matrix is formed of a suitable, sensible heat exchange material that is capable of absorbing sensible heat from a warm air stream and releasing the absorbed sensible heat into a cool air stream as the air streams flow through the sensible and latent heat exchange media".
and a layer of a coating composition comprising"	This means that there is "a layer of a coating composition which includes, but is not limited to, the elements set forth following the word 'comprising' ".
"a cationic molecular sieve applied to at least a portion of the surface of said sensible heat exchange material"	This means that "the layer of coating composition includes, but is not limited to, a molecular sieve material applied to at least a portion of the surface of the previously mentioned sensible heat exchange material, where the molecular sieve includes cations."
"said molecular sieve having a plurality of pores of a substantially uniform size and a pore diameter of about 3 Angstroms"	This means that the molecular sieve has a large number of pores of a substantially uniform size having a pore diameter of about 3 Angstroms."
"such that said molecular sieve is capable of	This means "that the molecular sieve has the capability of

adsorbing moisture from a humid air stream flowing through said sensible and latent heat exchange media, and is capable of releasing said adsorbed moisture into a dry air stream flowing through said sensible and latent heat exchange media in a time period of less than 1.5 seconds"

adsorbing moisture from a humid air stream which flows through the sensible and latent heat exchange media, and that the molecular sieve is also capable of releasing the adsorbed moisture into a dry air stream that flows through said sensible and latent heat exchange media, in a time period of less than about 1.5 seconds.

"means for supporting said sensible latent heat exchange media circumferentially about said hub; and"

The function being performed by this claim term is "supporting the sensible latent heat exchange media about the circumference of the hub". This claim language is construed to cover the corresponding structure, material or acts described in the specification of this patent for performing that function, and equivalents thereof. 35 U.S.C. s. 112, para. 6,

"drive means for rotating said total energy recovery wheel"

The function being performed by this claim term is "rotating the wheel about the hub". This claim language is construed to cover the corresponding structure, material or acts described in the specification of this patent for performing that function, and equivalents thereof. 35 U.S.C. s. 112, para. 6.

Under 35 U.S.C. s. 112, para. 4, a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers. Therefore, the dependent claims of this patent are so construed.

**IT IS SO ORDERED.**

W.D.Mo.,2002.

Semco Inc. v. Venmar Ventilation, Inc.

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