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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Supermarket Energy Technologies, LLC, Plaintiff/Counter-Defendant, v. Supermarket Energy Solutions, Inc., Defendant/Counter-Claimant.	No. CV-10-2288-PHX-SMM **MEMORANDUM OF DECISION AND ORDER**

Before the Court is Defendant/Counter-Claimant's Motion for Summary Judgment of Invalidity. (Doc. 80.) The matter is fully briefed. (Docs. 86; 91.) For the reasons that follow, Defendant/Counter-Claimant's Motion is granted in part and denied in part.

PROCEDURAL POSTURE

This patent infringement action concerns United States Patent Number 5,899,078: "Method and Apparatus for Reducing Energy Use by Refrigeration Door and Frame Heaters" (the " '078 Patent") (Doc. 1-1 at 2.) The particular claim at issue is Claim 2, which concerns the "[a]pparatus for controlling a condensation-preventing heater in a refrigeration unit." (Doc. 1-1 at 7.) Following a two-day hearing pursuant to Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995), aff'd 517 U.S. 370 (1996), the Court construed the five elements of Claim 2 and granted Plaintiff/Counter-Defendant Supermarket Energy Technologies ("SET") summary judgment on the issue of infringement. (Docs. 42; 43; 46; 59.) Based on discovered information, Defendant/Counter-Claimant Supermarket Energy Solutions ("SES") sought leave to amend its answer and counter-claims and also moved the

Court to find the '078 Patent invalid because the claimed invention was on-sale and in public use more than one year before the patent application was filed. (Docs. 80; 82.) The Court issued an order granting SES leave to file an amended answer and counter-claims and amending nunc pro tunc the Court's claims construction. (Doc. 98.)

FACTUAL BACKGROUND

The named inventor of the '078 Patent—Malcolm Mager—filed his patent application on March 25, 1997. (Doc. 1-1 at 2.) The purpose of the claimed invention—the "Door Miser"—was to prevent condensation from forming on the glass doors of commercial refrigeration units by heating the doors only once condensation began to form, instead of continuously heating the doors, which is less efficient. (Doc. 87-1 at 4-5.) The design process was iterative, and at least one of the approximately 20 revisions to the Door Miser occurred after the patent was issued on May 4, 1999. (Docs. 1-1 at 2; 80-4 ¶ 6; 87 at 7-8; 87-1 at 8.) The very first Door Miser, as well as every subsequent revision, controlled a heater that prevented condensation from forming in a refrigeration unit. (Docs. 80-2 at 12-13; 80-5 at 7; 80-6 at 2; 87-1 at 5-8.) There were at least three "semi-discrete versions": the humidistat version, the "120-volt" version, and the "patented version." (Doc. 87-1 at 26.)

The assignee of the '078 Patent was Peak Energy Systems ("PES"), a company that marketed and sold the Door Miser. (Docs. 1-1 at 2; 80-5.) As president of PES, Mr. Mager sent correspondence dated January 25, 1996, to Brad Geuke, a potential distributor of the Door Miser. (Doc. 80-5 at 2.) The correspondence explains the "XL 2000 Control Panel Door Miser systems disconnect glass display door heaters except when required to prevent condensation." (Id. at 7.) Mr. Mager wrote that the Door Miser is "very profitable and sell[s] extremely well." (Id. at 2) During his deposition, Mr. Mager confirmed that numerous 120-volt Door Misers had been sold before the critical date, but denied that those devices were the patented iteration. (Docs. 80-2 at 14-15, 18, 35-36; 84-3 at 3, 87-1 at 29.)

In February of 1996, Mr. Geuke and Bruce Malwitz—owners of AZTech Energy Systems, Inc., ("AZTech") doing business as Energex Enterprises ("Energex")—met with Mr. Mager at his PES offices to discuss a possible distribution arrangement. (Doc. 80-3 at

7-8, 10-11.) Neither Mr. Mager nor Mr. Geuke can recall what occurred during this meeting. (Docs. 80-2 at 26-27; 87-1 at 19-20; 87-2.) On April 29, 1996, Energex agreed to distribute the Door Miser for PES. (Doc. 80-2 at 28-29.) On May 13, 2002, Mr. Malwitz negotiated a deal in which PES and Mr. Mager assigned the '078 Patent to AZTech—SET's predecessor in interest. (Doc. 84-6.)

At some point, Mr. Mager prepared a promotional brochure for Energex describing "[o]ngoing testing" including "[t]wo Door Miser systems . . . installed in a convenience store . . . from February 22, 1996, to March 22, 1996." (Docs. 80-2 at 22; 80-6 at 2.) The brochure lists Energex as the point of contact and explains the Door Miser's "XL2000 controller[] monitors the moisture content on the glass using small sensors adhered to the glass. If condensation begins to form, the sensors signal the controller, which then regulate the heaters to remove the condensation." (Id.) Mr. Mager and Mr. Geuke confirmed in their depositions that Energex was indeed distributing Door Misers. (Docs. 80-2 at 26-29; 84-2 at 5.) Mr. Mager also confirmed that the test devices referred to in the brochure were the 120-volt[1] Door Misers. (Doc. 80-2 at 22-26).

LEGAL STANDARDS

"The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). "The substantive law determines which facts are material; only disputes over facts that might affect the outcome of the suit under the governing law properly preclude the entry of summary judgment." Nat'l Ass'n of Optometrists & Opticians v. Harris, 682 F.3d 1144, 1147 (9th Cir. 2012). A material fact is subject to "genuine dispute" when "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). In ruling on a motion for summary judgment, the evidence is viewed in the light most favorable to the non-movant and all justifiable inferences are drawn in its favor. Id. at 255.

[1] The XL2000 control panel was in the 120-volt system. (Doc. 80-2 at 18.)

A patent is invalid if the claimed invention was in public use or was on sale more than one year before the date the patent application was filed (the "critical date"). 35 U.S.C. § 102(b) (2006).[2] A patent is also invalid if the differences between the claimed invention and the prior art are such that the claimed invention would have been obvious to an ordinarily skilled artisan at the time of invention. 35 U.S.C. § 103(a). Whether a patent is invalid under either section 102 or section 103 is a question of law based on underlying questions of fact, but a conclusion that a patent is invalid must be proved by clear and convincing evidence. Plantronics, Inc. v. Aliph, Inc., 724 F.3d 1343, 1353 (Fed. Cir. 2013) (§ 103); Netscape Commc'ns Corp. v. Konrad, 295 F.3d 1315, 1320 (Fed. Cir. 2002) (§ 102). Under either section 102 or section 103, "a [movant] seeking to invalidate a patent at summary judgment must submit such clear and convincing evidence of invalidity so that no reasonable jury could find otherwise." Eli Lilly and Co. v. Barr Labs., Inc., 251 F.3d 955, 962 (Fed. Cir. 2001).

"Public use includes 'any public use of the claimed invention by a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor.' " Motionless Keyboard Co. v. Microsoft Corp., 486 F.3d 1376, 1384 (Fed. Cir. 2007) (alteration omitted) (quoting In re Smith, 714 F.2d 1127, 1134 (Fed. Cir. 1983)). To determine if a public use has occurred within the meaning of section 102, courts consider the totality of the circumstances surrounding the public activity, including: the nature of the activity; public access to and knowledge of the activity; and the existence of confidentiality obligations. Netscape, 295 F.3d at 1320. If the nature of the public activity was experimental testing, additional circumstances include: who performed the testing; the number of tests; the duration of testing; and whether the inventor was compensated for the testing. Id.

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[2] The language and structure of Title 35 was changed by the Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284 (Sept. 16, 2011). Since this case was filed before the effective date, the Court refers to the pre-AIA versions of sections 102(b), 103, and 112. See Hamilton Beach Brands, Inc. v. Sunbeam Products, Inc., 726 F.3d 1370, 1374 n.1 (Fed. Cir. 2013).

"The overriding concern of the on-sale bar is an inventor's attempt to commercialize his invention beyond the statutory term." STX, LLC v. Brine, Inc., 211 F.3d 588, 590 (Fed. Cir. 2000). "The on-sale bar applies when two conditions are satisfied before the critical date: (1) the claimed invention must be the subject of a commercial offer for sale; and (2) the invention must be ready for patenting." Hamilton Beach Brands, Inc. v. Sunbeam Products, Inc., 726 F.3d 1370, 1374 (Fed. Cir. 2013). "To establish an on-sale bar, it must be shown that the device sold 'fully anticipated the claimed invention or would have rendered the claimed invention obvious by its addition to the prior art.' " Allen Eng'g Corp. v. Bartell Indus., Inc., 299 F.3d 1336, 1352 (Fed. Cir. 2002) (quoting Tec Air, Inc. v. Denso Mfg. Mich. Inc., 192 F.3d 1353, 1358 (Fed. Cir. 1999)).

A "definite sale" satisfies the first condition. Pfaff v. Wells Elecs. ("Pfaff I"), 124 F.3d 1429, 1433 (Fed. Cir. 1997), aff'd 525 U.S. 55 (1998). The second condition is satisfied "by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention." Pfaff v. Wells Elecs., Inc.("Pfaff II"), 525 U.S. 55, 67-68 (1998). "An invention is reduced to practice when it works for its intended purpose," Atlanta Attachment Co. v. Leggett & Platt, Inc., 516 F.3d 1361, 1366 (Fed. Cir. 2008); "a demonstration of the [claimed invention's] workability or utility" satisfies this condition, Honeywell Int'l Inc. v. Universal Avionics Sys. Corp., 488 F.3d 982, 997 (Fed. Cir. 2007).

DISCUSSION

I. Public Use

The only pre-critical date public use alleged by SES was the testing referred to in the promotional brochure. Considering the totality of the circumstances in the light most favorable to SET, there was a single test over a one month period at one location; Mr. Mager was not compensated; confidentiality agreements may have been in place and it is unlikely the public was aware of the use. Under these facts, SES has not proven by clear and convincing evidence that pre-critical date public use had occurred. Therefore, the Court will

deny SES summary judgment in that regard.

II. On-Sale

A. Applicability

Moving to the on-sale bar, "[a]n assessment of the validity of a patent claim in light of an alleged sale involves, first, determining whether a sale is truly a 'sale' within the meaning of 35 U.S.C. § 102(b)." Minton v. Nat'l Ass'n of Sec. Dealers, Inc., 336 F.3d 1373, 1376 (Fed. Cir. 2003). Mr. Mager confirmed in his deposition the assertions made in his January 25, 1996, solicitation to Mr. Geuke, viz., that Door Misers sold extremely well before the pre-critical date. (Docs. 80-2 at 14-15, 35-36; 80-5 at 2.) SET does not deny that pre-critical date sales occurred. Since the uncontroverted evidence is that pre-critical date sales occurred, no reasonable jury could conclude otherwise. Accordingly, SES has carried its burden with respect to the first predicate condition of the on-sale bar.

With regard to the second condition, whether the potentially invalidating prior art had been reduced to practice, SES argues that the pre-critical date Door Misers worked for their intended purpose. Evidence in the record that supports SES's assertion includes the brochure and solicitation letter corroborated by Mr. Mager's deposition that the devices were selling "extremely well," were "very profitable," and had achieved "amazing test results." (Docs. 80-2 at 14-16, 22-25, 35-36; 80-5 at 2; 80-6 at 2.) Mr. Mager denied that this was "salesman puffery" (Doc. 80-2 at 35), and explained that the devices "worked well," but often needed repair (Doc. 87-1 at 22-23). While Mr. Malwitz testified that he saw a demonstration of the Door Miser in February '96 (Doc. 80-3 at 11), neither Messrs. Mager's nor Geuke's scant recollection of the meeting overlaps with Mr. Malwitz's (Docs. 87-1 at 20; 87-2 at 4-5).

SET argues that the pre-critical date Door Miser did not work for its intended purpose because the promotional brochure claimed energy savings of 98% to 99% (Doc. 80-6 at 2), but Mr. Malwitz stated that the evolved iteration of the Door Miser only achieves savings of 60% to 70% for freezers and 80% to 90% for coolers (Doc. 87-3 at 17). Based on Mr. Malwitz's statement that the sensors were not properly positioned in the devices upon which the tests were conducted (id. at 8), SET concludes that the heaters failed to activate in the

presence of condensation and the pre-critical date Door Misers were thus practically nonfunctional. SET does not argue, however, that the heaters never activated or that the devices were totally nonfunctional, nor does SET deny that the devices sold well. Circumstantially, it is unreasonable to infer that devices that sold well did not function at all.

Even inferring, as the Court must, that the devices worked poorly, no reasonable jury could conclude that the pre-critical date devices did not function whatsoever. While imperfect, the devices demonstrated the workability and utility of the pre-critical date Door Miser; therefore, they worked for their intended purpose. See Honeywell Int'l, 488 F.3d at 997. Since the pre-critical date Door Misers worked for their intended purpose, they were reduced to practice and therefore ready for patenting. See Atlanta Attachment, 516 F.3d at 1367. Consequently, both conditions to the applicability of the on-sale bar are satisfied and the pre-critical date devices were sold within the meaning of section 102. Since the Court has already construed the disputed claims (Doc. 98 at 7-8), the remaining issue is "a comparison of the asserted claims with the device or process that was sold." Minton, 336 F.3d at 1376.

B. Anticipation and Obviousness

For the pre-critical date Door Miser to invalidate the '078 Patent, SES must show by clear and convincing evidence "that the device sold 'fully anticipated the claimed invention or would have rendered the claimed invention obvious by its addition to the prior art.' " Allen Eng'g, 299 F.3d at 1352 (quoting Tec Air, 192 F.3d at 1358). Anticipation "requires factual findings that 'each and every limitation is found either expressly or inherently' in the device or process that was sold." Minton, 336 F.3d at 1376 (quoting Celeritas Techs. Inc. v. Rockwell Int'l Corp., 150 F.3d 1354, 1360 (Fed. Cir. 1998)). Obviousness is a question of law based on underlying factual inquiries into "[w]hether the claimed subject matter would have been obvious to an ordinarily skilled artisan at the time of the invention." Plantronics, 724 F.3d at 1353.

SES is arguing both anticipation and obviousness. SET asserts that SES is limited to arguing anticipation and is precluded from arguing obviousness because SES admitted its "only affirmative defense to infringement . . . is that the '078 patent is invalid because the

patented device was offered for sale more than one year prior to the filing" date. (Doc. 65-3 at 4.) The Court disagrees with SET. "Section 102(b) may create a bar to patentability . . . in conjunction with [§ 103], if the claimed invention would have been obvious from the on-sale device in conjunction with the prior art." Dippin' Dots, Inc. v. Mosey, 476 F.3d 1337, 1344 (Fed. Cir. 2007) (quoting LaBounty Mfg., Inc. v. United States Int'l Trade Comm'n, 958 F.2d 1066, 1071 (Fed. Cir. 1992)). "Because of the conjunctive use of sections 102(b) and 103, this bar has been called the § 102(b)/103 bar." Pfaff I, 124 F.3d at 1436. Thus, the '078 Patent is invalid if SES proves by clear and convincing evidence that "the device sold ' . . . would have rendered the claimed invention obvious by its addition to the prior art.' " See Allen Eng'g, 299 F.3d at 1352 (quoting Tec Air, 192 F.3d at 1358).

C. Characteristics of the Pre-Critical Date Device

Comparison of the limitations of Claim 2 against the pre-critical date device requires a determination of that device's characteristics. SET asserts that the device's functional composition is shrouded by so much uncertainty that SES cannot meet the "high probability" standard required by a clear and convincing burden of proof. Pfizer, Inc. v. Apotex, Inc., 480 F.3d 1348, 1359 n.5 (Fed. Cir. 2007) (quoting Colorado v. New Mexico, 467 U.S. 310, 316 (1984)). SES argues that the 120-volt version of the Door Miser is the pre-critical date device and that Mr. Mager's testimony along with the solicitation letter and the promotional brochure identify that device's characteristics with sufficient exactitude for the Court to compare it against the limitations of Claim 2.

During his deposition, Mr. Mager testified that the Door Miser with the XL2000 control panel that he referred to in the January 25, 1996, solicitation letter to Mr. Geuke was the Door Miser that he was selling and also that it was the 120-volt version. (Doc. 80-2 at 18.) Mr. Mager confirmed that the 120-volt version was the January 1996 iteration and that it sold extremely well. (Doc. 80-2 at 14-15, 36; 87-1 at 29.) Mr. Mager also testified that the version that was used for the testing described in the promotional brochure was the XL2000 device. (Doc. 80-2 at 23-26.) SET does not argue the XL2000 was not the 120-volt version, nor does SET deny that the 120-volt version was the pre-critical date device.

Instead, SET notes Mr. Mager's poor memory regarding the development of the Door Miser, and stresses that he does not remember whether the XL2000 functioned with the humidistat version or the 120-volt version. The part of Mr. Mager's deposition testimony cited by SET undermines its position more than supporting it: he states that the 120-volt Door Misers that he was selling as of January 1996 had sensors, but that he did not remember whether the XL 2000 control panel referred to just the control box or both the control box and the sensor. (Doc. 87-1 at 16-17.) That testimony is consistent with the promotional brochure that described the devices tested in February and March of 1996 as using sensors to detect the presence of condensation. (Doc. 80-6 at 2.) Further, Mr. Mager abandoned humidistats when he "moved on and started with a 120-volt unit." (Doc. 87-1 at 23.)

SES also contends that the solicitation letter's use of the word "anticipate" rather than "detect" is evidence that the pre-critical date device used humidistats; however, Mr. Mager conceded that, although poorly written, his use of the term "moisture anticipator" meant sensor. (Id. at 28.) SET further argues the fact that Mr. Mager threw away several humidistats leads to the inference that he was selling humidistat versions of the Door Miser. As proof of uncertainty, SET points to Mr. Mager's inability to recall whether it was possible the January '96 version of the Door Miser used a humidistat. (Id. at 24.)

The Court finds an isolated equivocation that something may be possible must be viewed in context; in this case, a metaphysical possibility that something might have occurred is not sufficient to outweigh overwhelming evidence to the contrary. While SET tries its best to erect an argument from Mr. Mager's inability to precisely recall the iterative evolution of the Door Miser, what he does recall is unequivocal: devices sold before the critical date used sensors.

The record establishes that Mr. Mager recalls several particular characteristics of the 120-volt version. Regarding sensor structure, Mr. Mager testified that there were eight to ten sensors connected in parallel to the sensor line (Doc. 80-2 at 37), that the sensors were more than one conductor made of solder rather than gold, and that the purpose of the sensors was to detect condensation (id. at 19). Mr. Mager also testified that once the sensors detected

condensation beyond a threshold level, the XL2000 control panel would send a signal to turn off the heater. (Id. at 13, 19-20.) With respect to the structure that controlled power to the heater, the pre-critical date device had a control circuit with a relay configured so that the signal would "shut off the heater and break the circuit." (Id. at 12, 33.) This description is, again, consistent with the description in the promotional brochure: "If condensation begins to form, the sensors signal the [XL2000] controller, which then regulate[s] the heaters." (Doc. 80-5 at 2.) As there is no contrary evidence regarding the structural composition of the pre-critical date device, the Court finds the pre-critical date device had the characteristics testified to by Mr. Mager.

D. Comparison of Pre-critical Date Devices with the Limitations of Claim 2

Based on the foregoing findings of fact, the Court sets out to compare the characteristics of the pre-critical date device against the limitations in Claim 2 of the '078 Patent. There are five means-plus-function limitations in Claim 2: (1) sensing means; (2) means for controlling power; (3) control means; (4) means responsive to conductivity; and (5) means for measuring resistance. The fourth and fifth limitations are part and parcel to the control means limitation. "[A] challenger who seeks to demonstrate that a means-plus-function limitation was present in the prior art must prove that the corresponding structure —or an equivalent—was present in the prior art." Fresenius USA, Inc. v. Baxter Intern., Inc., 582 F.3d 1288, 1299 (Fed. Cir. 2009). In this context, structures are equivalent if they perform "the claimed function in substantially the same way to achieve substantially the same result." Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267-68 (Fed. Cir. 1999).

Sensing Means

The first limitation of Claim 2 requires "a plurality of sensing means connected in parallel, for detecting the presence of condensation, each of said sensing means being mounted on the refrigeration unit in proximity to said heater." (Doc. 1-1 at 7.) The Court defined the function of sensing means "as detecting the presence of condensation," and the corresponding structure as "two electrically isolated conductors, placed on an insulating substrate, arranged so that one conductor lies in close proximity to the other conductor where

the formation of condensation on the corresponding structure raises the conductivity between the conductors." (Doc. 98 at 7-8) Mr. Mager's uncontroverted testimony was that the pre-critical date device had eight to ten sensors connected in parallel to detect condensation, and that the sensors detected condensation by detecting an increase in conductivity between two separated conductors. (Doc. 80-2 at 19-20, 37.) The promotional brochure also describes sensors adhered to glass that respond to the presence of condensation. (Doc. 80-5 at 2.)

As SET points out, the sensors were mounted inside the door, rather than outside the door; however, they were nevertheless mounted on the refrigeration unit. SET also argues that the pre-critical date device did not use RJ-11 inputs to connect the sensors in parallel. The Court finds that there is functional identity between the pre-critical date sensors and the claimed sensing means: detect the presence of condensation. Both the pre-critical date sensors and the claimed sensing means perform that function in substantially the same way with substantially similar results: more than one set of two conductors arranged in parallel and configured so that the formation of condensation between them raises conductivity. SET's remaining arguments are conclusory and unsupported, e.g., "[t]here is no evidence Mr. Mager used a sensor prior to the critical date that functioned as described in claim 2." (Doc. 86 at 9.) Therefore, the sensing means limitation was present in the prior art.

Means for Controlling Power

The second limitation of Claim 2 requires "means, responsive to a control signal, for controlling power to said heater." (Doc. 1-1 at 7.) The Court defined the function of means for controlling power "as controlling power to a condensation-preventing heater on a refrigeration unit in a way that is responsive to a control signal," and the corresponding structure as "a relay where one terminal of the magnetic inductive coil is connected to the output of a threshold-detector, and where the second terminal of the coil is connected to the voltage bus, and where the coil controls relay terminals normally in the open position, and where the relay terminals are connected in series between the condensation-preventing door heaters and the power source for the door heaters." (Doc. 98 at 8.) Mr. Mager testified that the pre-critical date device had a relay that activated to power the heaters and broke to shut

off the heaters. (Doc. 80-2 at 12-13, 19-20, 32-33.) Mr. Mager's testimony is corroborated by the promotional brochure's explanation that "[i]f condensation begins to form, the sensors signal the controller, which then regulate[s] the heaters to remove condensation." (Doc. 80-6 at 2.) SES's expert, Dr. F. Williams Sarles, opined that a relay is essentially a switch well-known in prior art to consist of a magnetic coil that opens and closes the relay terminals, and explained that the pre-critical date Door Miser relay necessarily must have had the structure defined by the Court, or one equivalent thereto. (Doc. 80-4 at 6.)

SET's only assertion about this limitation is terse: SES "fails to offer any documentary proof to demonstrate the 'pre-critical date Door Miser' used . . . a relay controlled by an electromagnetic coil as a means for controlling power." (Doc. 86 at 9-10.) SET does not: dispute that a relay is well-known in the art; deny that the pre-critical date device had a relay; nor controvert Mr. Sarles' declaration. Functional identity exists between the pre-critical date device means for controlling power and the claimed means for controlling power: power to the heaters is controlled by a signal. The only evidence before the Court is that the means for controlling power structure in the pre-critical date device is equivalent to the structure corresponding to the claimed means for controlling power: a relay that closed and opened in response to the signal so as to regulate power to the heater. Both structures perform the same function in substantially the same way to achieve substantially the same result. As a consequence, both the sensing means and the means for controlling power limitations were present in the same prior art reference.

Control Means

The third limitation of Claim 2 requires "control means, responsive to the detection of condensation by said sending means, for providing said control signal so that power is applied to said heater only when condensation is present." (Doc. 1-1 at 7.) The Court defined the function of control means "as providing a control signal so that power is only applied to a condensation-preventing heater on a refrigeration unit when condensation is present, and is responsive to the detection of condensation by the sensors," and the corresponding structure as "a pair of sensor lines, where one sensor line is connected to the non-inverting

input of an op-amp, and the other sensor line is connected to ground, and where the voltage bus is connected to the non-inverting input of the op-amp with one of the sensor lines, and where the voltage bus is applied to the inverting input of the op-amp via a voltage divider made up of resistors connected between the voltage bus and ground, and where a capacitor is connected between the non-inverting sensor line and a ground so that the control circuitry is not triggered by spurious signals, such that an increase in the conductivity between the pair of the sensor lines triggers the op-amp to send a control signal." (Doc. 98 at 8.)

Mr. Mager testified that the XL2000 sent a control signal to power the heaters when the sensors detected condensation beyond a certain threshold (Doc. 80-2 at 12-13, 19-20, 32-33), which is consistent with the solicitation letter that described the function of the XL2000 as disconnecting the "heaters except when required to prevent condensation" (Doc. 80-5 at 7), as well as the promotional brochure's description of the XL2000 (Doc. 80-6 at 2). Indeed, all the evidence is that the pre-critical date device had a control that would activate the heaters via a signal when the sensors detected condensation; therefore, there is functional identity between the pre-critical date control and the control means limitation in Claim 2.

While it is clear that the function is the same, Mr. Mager's testimony sheds no light on whether that function was accomplished in substantially the same way. In fact, he testified that he was not familiar with an op-amp. (Doc. 80-2 at 37.) The only evidence with regard to structure is Dr. Sarles' declaration that in order to perform the control means function, the pre-critical date device necessarily must have had a threshold detector circuit the same as or equivalent to the control means structure. After explaining the operation and components of a threshold detector circuit, Dr. Sarles opined that the threshold circuit in the '078 Patent "is a basic circuit design and would have been known to first year electrical engineering students and would have been an obvious choice for the 'control means' circuit." (Doc. 80-4 at 8-9.)

SET does not contend that the XL2000 did not perform substantially the same function as the control means function, nor does SET contend that the threshold detector circuit as defined in claims construction is not a basic circuit design that would be an obvious choice. Further, SET does not present any evidence that contradicts Dr. Sarles' opinions.

SET does, however, point out that Dr. Sarles offered no evidence to support his conclusions and that there must be factual support for an expert's conclusory opinion to support a determination of invalidity.

In reply, SES attached a supplemental declaration of Dr. Sarles that included pages from the 1982 National Semiconductor Linear Databook and details how one threshold detector circuit uses the same op-amp and circuit topology as the threshold detector circuit that was patented. (Doc. 91-4.) When new evidence is submitted with a reply to a motion for summary judgment, the non-moving party must be given an opportunity to respond. Provenz v. Miller, 102 F.3d 1478, 1483 (9th Cir. 1996). SET has had more than six months to respond by objecting to SES's supplemental declaration. See LRCiv. 7.2(m)(2). Accordingly, the Court will consider Dr. Sarles' supplemental declaration. See S.E.C. v. Platforms Wireless Int'l Corp., 617 F.3d 1072, 1087 n.9 (9th Cir. 2010) (finding no error in district court's consideration of evidence submitted with reply partly because non-movants did not object to the new evidence despite having two months to do so).

Thus, the only evidence before the Court is that the circuit described as the corresponding structure to the control means function is prior art and that it works in substantially the same way to achieve substantially the same result as the circuit that necessarily must have been used in the pre-critical date device.

E. Invalidity

Consequently, the pre-critical date device embodied the sensing means, means for controlling power, and the control means limitations from Claim 2. Since the Court's definition of the control means limitation necessarily encompasses the remaining limitations of "means responsive to conductivity" and "means for measuring resistence," all of the limitations from Claim 2 were present in a single prior art reference—the so-called pre-critical date device. In other words, the Door Miser that was sold before the critical date fully anticipated each and every limitation of Claim 2, thereby invalidating the '078 Patent. See Minton, 336 F.3d at 1376.

Even if the control means threshold detector circuit was not present in the same pre-

critical date device that had both the sensing means and the means for controlling power limitations, the '078 Patent would be invalid for obviousness. "If a device was . . . [sold] before the critical date, then that device becomes a reference under section 103 against the claimed invention." TorPharm, Inc. v. Ranbaxy Pharm., Inc., 336 F.3d 1322, 1327 (Fed. Cir. 2003) (quoting Baker Oil Tools, Inc. v. Geo Vann, Inc., 828 F.2d 1558, 1563 (Fed. Cir. 1987)). Therefore, the hypothetical combination of the sensing means and means for controlling power with the non-equivalent control means was a prior-art reference.

"[W]hen a patent 'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious." KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 416 (2007). "One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims." Id. at 419-20. Whether a solution was obvious—i.e., whether a person of ordinary skill in the art would be motivated to combine the prior art—is a question of fact which requires expert testimony. Plantronics, 724 F.3d at 1354. Here, the only testimony is Dr. Sarles' opinion that the control means circuit would have been an obvious choice for people of ordinary skill in the art. (Doc. 80-4 at 9-10.)

If SET had produced any evidence to controvert Dr. Sarles, then there would have been a question of fact for the jury; however, SET did not produce any such evidence. In the end, speculative uncertainty wholly unsupported by any evidence is far too slender a reed to prop up SET's opposition to SES's properly supported motion for summary judgment. Even drawing all justifiable inferences in SET's favor, the Court is nevertheless left with an abiding conviction that it is highly probable that a single pre-critical date device embodied each and every limitation in Claim 2. It is equally clear that even if the pre-critical date Door Misers did not embody the control means, the devices sold rendered the claimed invention obvious by its addition to prior art. In sum, SES managed to provide clear and convincing evidence that the '078 Patent was invalid under § 102 or § 102/103. As a consequence, no reasonable jury could find that the '078 Patent was valid. This result is in accord with the

purpose underlying the on-sale bar: Mr. Mager commercially exploited his invention outside the period offered for legal monopoly.

Accordingly,

IT IS HEREBY ORDERED granting SES's Motion for Summary Judgment of Invalidity on the basis of the on-sale bar or the on-sale/obviousness bar. (Doc. 80.)

IT IS FURTHER ORDERED denying SES's motion in all other respects.

IT IS FURTHER ORDERED setting a status conference for **Monday, March 31, 2014, at 2:30 p.m.** in Courtroom 401, 401 West Washington Street, Phoenix, AZ before Senior Judge Stephen M. McNamee. The parties shall come prepared to discuss the shape of future proceedings in light of this Order and SES's amended counter-claims.

DATED this 19th day of March, 2014.

Stephen M. McNamee
Senior United States District Judge