

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RESMED LIMITED, RESMED INC., and RESMED CORP.,
Petitioners,

v.

FISHER & PAYKEL HEALTHCARE LIMITED,
Patent Owner.

Case IPR2016-01716
Patent 8,550,072 B2

Before HYUN J. JUNG, CARL M. DEFRANCO, and
MICHAEL L. WOODS, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Fisher & Paykel Healthcare Limited (“FPH”) is the owner of U.S. Patent No. 8,550,072 B2 (Ex. 1002, “the ’072 patent”). ResMed Limited, ResMed Inc., and ResMed Corp. (collectively “ResMed”) filed a Petition (Paper 4, “Pet.”) requesting *inter partes* review of claims 6, 7, and 11 of the ’072 patent. FPH, in turn, filed a Preliminary Response (Paper 9, “Prelim. Resp.”), along with a statutory disclaimer of claim 6 under 35 U.S.C. § 253(a).

We instituted *inter partes* review of challenged claims 7 and 11 (Paper 12, “Inst. Dec.”). After institution, FPH filed a Patent Owner Response (Paper 14, “PO Resp.”), and ResMed followed with a Reply (Paper 17, “Pet. Reply”). We conducted an oral hearing with the parties on December 6, 2017, a transcript of which is in the record. Paper 27 (“Tr.”).

We have jurisdiction over these proceedings under 35 U.S.C. § 6. After considering the evidence and arguments of the parties, we determine that ResMed has proven by a preponderance of the evidence that claim 7 of the ’072 patent is unpatentable, but has failed to prove that claim 11 is unpatentable. See 35 U.S.C. § 316(e). We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a).

II. BACKGROUND

A. *Related Matters*

The ’072 patent is currently the subject of an infringement action, *Fisher & Paykel Healthcare Ltd. v. ResMed Corp.*, No. 3:16-cv-02068 (S.D. Cal.), which is stayed pending resolution of this and several related *inter partes* review (“IPR”) proceedings. Pet. 2–3; Ex. 3001, 7. One of the related proceedings, IPR2016-01717, involves our review of the same claims

of the '072 patent at issue here, only on different grounds. The other related proceedings involve U.S. Patent No. 6,398,197 B1 (IPR2016-01719), U.S. Patent No. 7,111,624 (IPR2016-01725, 01727), and U.S. Patent No. 8,091,547 (IPR2016-01729, 01730, 01731).

B. The '072 Patent

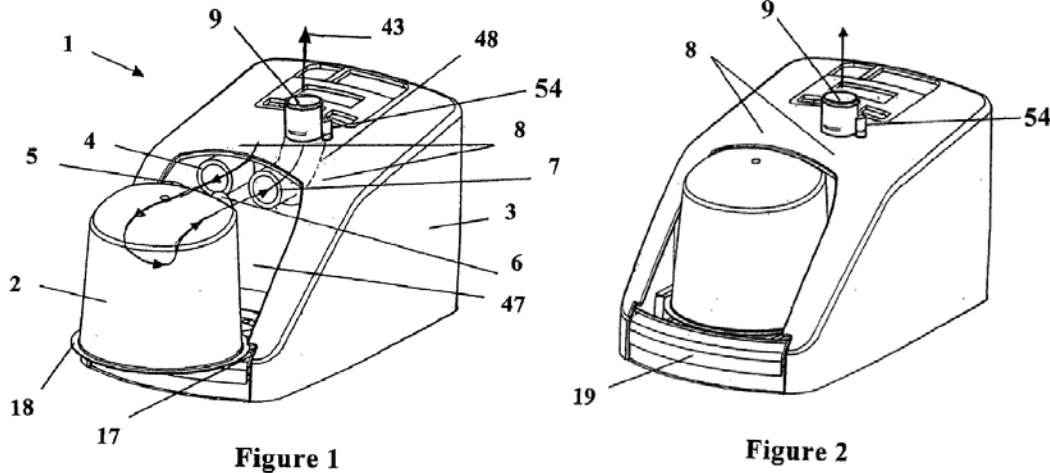
The '072 patent is titled “Apparatus for Delivering Humidified Gases” and “relates to a humidifier arrangement for use in standalone humidifiers used for example in providing respiratory assistance to patients receiving mechanical ventilation or respiratory support.” Ex. 1002, (54), 1:18–23. The '072 patent describes a “preferred embodiment” of the respiratory or ventilator device as comprising a “CPAP machine and corresponding water chamber.” *Id.* at 4:21–22. The '072 patent acknowledges that:

Humidification systems are known which include a heater base and a disposable humidifier [water] chamber which is fitted onto the heater base and within which a supply of water can be heated by the heater base. . . . Where the humidifier base is adapted for use with slide-on humidifier chambers, and *the connection of the chamber to the machine is accomplished with a single sliding movement, the inlet air port is provided horizontally through the side of the chamber.* Air enters the humidifier chamber through the inlet air port and the humidified air leaves the humidifier chamber into a breathing conduit through an exit port in the top of the humidifier chamber.

Id. at 1:26–45 (emphasis added).

Admitting that humidifier chambers that connect to CPAP machines in a “single sliding movement” are known in the art, the '072 patent explains that a “disadvantage” of these known chambers “is the need to disconnect the patient breathing conduit from the top of the humidifying chamber in a separate operation before removal of the chamber for the purpose of

refilling.” *Id.* at 1:46–49. According to the ’072 patent, this disadvantage is overcome by having “the breathing conduit connection 9 being located on the body of the CPAP machine and not connected to the top of the water chamber directly.” *Id.* at 5:11–18. Figures 1 and 2 of the ’072 patent, reproduced below, illustrate the manner in which water chamber 2 can be slid in and out of CPAP machine 1 without the need to interact with the breathing conduit (not shown) attached to patient outlet 9. *Id.* at 3:40–45, 4:30–32.



C. The Challenged Claims

As mentioned above, FPH has disclaimed claim 6, which leaves only claims 7 and 11 for review. Claims 7 and 11, each of which depends from base claim 6, recite:

7. An apparatus for use in humidified gases delivery treatment as claimed in claim 6 wherein said apparatus includes *a chamber heater and said single motion also urges a base of said chamber in contact with said heater.*

11. An apparatus for use in humidified gases delivery treatment as claimed in claim 6, wherein said patient outlet includes a connector for receiving a breathing hose *and at least one auxiliary electrical connection plug or socket or pneumatic connection plug or port, for a simultaneous connection when*

connecting a breathing circuit having complementary electrical or pneumatic connectors.

Ex. 1002, 11:8–11, 12:13–19 (emphases added).

D. The Instituted Grounds

We instituted *inter partes* review of claims 7 and 11 because ResMed demonstrated a reasonable likelihood that: (1) claim 7 is unpatentable as obvious over Netzer¹ and Levine²; and (2) claim 11 is unpatentable as obvious over Netzer and Bahr.³ Inst. Dec. 4, 10. In further support of these grounds, ResMed proffers a first and second declaration from Alexander Virr, an expert witness retained for purposes of this review. *See* Exs. 1012, 1028.

III. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). A presumption exists that a claim term should be construed in light of its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). Under the broadest reasonable construction standard, claim terms are generally given their ordinary and customary meaning, as would

¹ PCT WO 98/04311, pub. Feb. 5, 1998 (Ex. 1007, German language version of “Netzer”) (Ex. 1008, English language translation of “Netzer”).

² US Patent No. 5,943,473, iss. Aug. 24, 1999 (Ex. 1009, “Levine”).

³ US Patent App. Pub. No. US 2001/0017134 A1, pub. Aug. 30, 2001 (Ex. 1011, “Bahr”).

be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

In the preliminary proceeding, neither ResMed nor FPH proposed a particular claim term in need of construction, and we noted that no particular claim term required an express construction for purposes of institution. Inst. Dec. 5. In its Patent Owner Response, FPH now argues that certain claim limitations require our construction, namely, the claim 7 limitation reciting “said single motion also urges a base of said chamber in contact with said heater” (PO Resp. 16–22), and the claim 11 limitation reciting “auxiliary electrical connection plug or socket” (*id.* at 22–26). ResMed disputes FPH’s proposed constructions. Pet. Reply 1–13.

For purposes of this decision, we need only provide an express construction for the claim 7 limitation “urges . . . in contact with.” FPH argues that this limitation requires that the single motion “press” the chamber base against the chamber heater.” PO Resp. 1, 16; *see also id.* at 28 (arguing same). In other words, according to FPH, the term “‘urges’ requires more than simply maneuvering two components to touch each other.” *Id.* at 17. In support, FPH cites to the specification of the ’072 patent, the declaration testimony of its expert, Dr. Hartmut Schneider, and the prosecution history of a related patent. *See id.* at 16–21 (citing Ex. 1002, 8:10–13, Figs. 1, 2; Ex. 2004 ¶ 56; Ex. 2008, 43).

ResMed, on the other hand, contends that FPH’s proposed construction of the term “urges” is contrary to the broadest reasonable interpretation. Pet. Reply 2. ResMed argues that “pressing is not required by the claims and is never even mentioned in the specification.” *Id.* (citing

Ex. 1028 ¶ 7). ResMed submits a definition of “urge” as “to force or impel in an indicated direction or into motion or greater speed.” Ex. 1031, 4.

We begin our analysis with the specification of the ’072 patent. In support of its construction that “urges” means “press,” FPH relies on the following passage from the specification: “It is envisaged that *other configurations* of the present invention are possible where *the slide-on direction* employed to fit the water chamber *is not horizontal but at an angle* from the horizontal or vertical.” PO Resp. 16 (citing Ex. 1002, 8:10–13) (emphases added). With respect to that passage, FPH submits the declaration testimony of Dr. Schneider, who testifies, “[b]y orienting the slide-on direction at an offset from the horizontal and the chamber heater, the motion used to connect the water chamber to the housing would also *urge or press* the base of the water chamber against the chamber heater.” Ex. 2004 ¶ 56 (emphasis added).

We disagree with FPH that the term “urges” requires a pressing force that results from an angled slide-on direction for the water chamber. Rather, we understand FPH’s reference to the angled slide-on direction as applying only to “other configurations of the present invention,” and not to “preferred embodiments” where the slide-on direction for the water chamber is clearly *horizontal*, as shown in Figure 1 and required by “slot 17” in “chamber receiving bay 47.” *Compare* Ex. 1002, 8:10–13 (“other configurations” having angled slide-on motion for water chamber), *with id.* at 4:19–46 (“preferred embodiments” having horizontal slide-on motion for water chamber). Nowhere does the specification of the ’072 patent suggest that the horizontal slide-on motion for the preferred embodiments applies an additional bias or other pressing force to the water chamber. As such, we do

not find that the specification supports a definition of “urges” that differs from its plain and ordinary meaning, which *Merriam-Webster’s Dictionary* defines as “to force or impel in an indicated direction or into motion.” Ex. 1031, 4.

FPH attempts to characterize the specification’s use of the term “urges” in describing a “latch” on the edge of the housing’s receiving bay as somehow also pressing the water chamber against the heater base. PO Resp. 17–19 (citing Ex. 1002, 4:36–60, Figs. 1, 2). We disagree with FPH’s characterization of the relevant latch, which operates simply as a guard against removal of the water chamber from the housing. Indeed, the passage describing the latch provides that: “The front face of the latch is shaped such that during the single slide-on motion employed . . . *the flange 18 [on the water chamber] urges the securing latch 19* into the release position and allows the water chamber to be properly fitted.” Ex. 1002, 4:49–54 (emphasis added). That passage makes clear that *the water chamber* is what does the urging, and that the latch itself simply moves up or down under the weight of the chamber, without pressing against anything. Indeed, the specification states expressly that “[o]nce the water chamber is properly seated on the heater base . . . the flange 18 and base of the chamber will no longer be in contact with the securing latch 19.” *Id.* at 4:54–60. In other words, that the latch does not contact the base of the seated water chamber means that it also does not press against the water chamber. Thus, we do not find that the specification’s description of latch 19 sheds any light on the meaning of “urges” in the context of claim 7.

FPH also asserts that claim 6 of the related ’547 patent is further evidence that the “meaning of ‘urges’ . . . require[s] more than simply

bringing the chamber base into contact with the heater.” PO Resp. 20 (citing Ex. 2007). In particular, FPH relies on the following amendment of claim 6 during prosecution of the ’547 patent: “wherein said single motion ~~urging~~ disposes said heat conductive base adjacent ~~and in contact with~~ a heater of said humidified gases delivery apparatus.” *Id.* at 21 (citing Ex. 2008, 43). We do not find this claim amendment, which simply replaces “urging . . . and in contact with” with “disposes,” as supporting FPH’s argument that the claims require a “pressing” force. Even if the amendment evidences FPH’s intention that “urging . . . adjacent and in contact” and “disposes . . . adjacent” have “different meanings” (*id.* at 21–22), we discern that the only difference is that “disposes . . . adjacent” does not require contact, whereas “urging . . . adjacent and in contact with” does. The simple addition of “contact,” however, does not somehow amount to a pressing force.

Based on our review of the intrinsic record, we agree with ResMed that pressing the chamber base against the chamber heater is neither mentioned in the specification nor otherwise supported by the claim language. We do not credit the contrary testimony of FPH’s expert, Dr. Schneider, as the intrinsic record is clear and unambiguous that the ordinary and customary meaning of “urges” in the context of claim 7 requires simply a single motion that moves the chamber base in a direction so as to be in contact with the chamber heater. We do not agree with FPH’s proposed construction that the single motion also “*press[es]* the chamber base against the chamber heater.” PO Resp. 1, 16 (emphasis added).

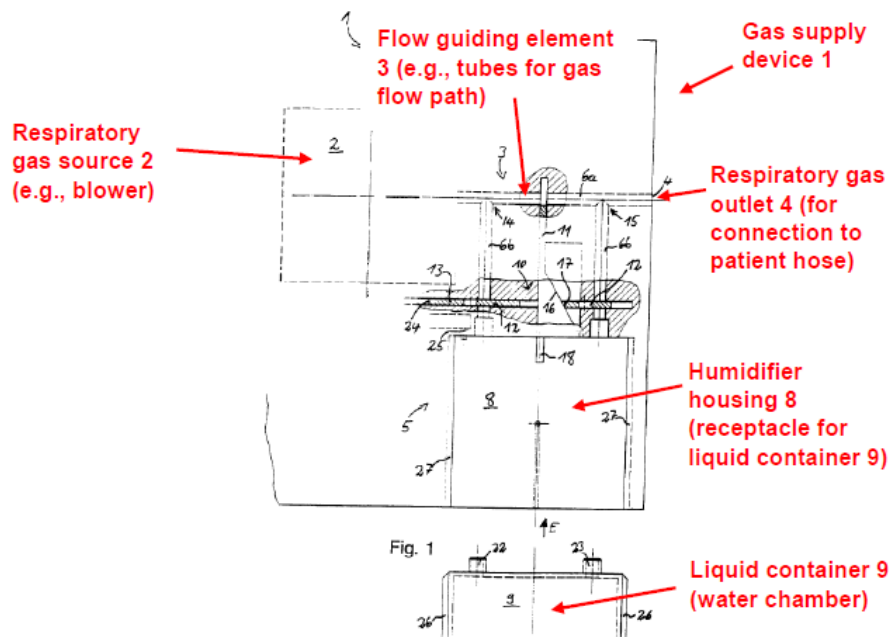
B. Obviousness of Claim 7 Over Netzer and Levine

ResMed submits that claim 7 is unpatentable as obvious over the combination of Netzer and Levine. Pet. 16–36. Claim 7 depends from

claim 6. As such, we focus initially on the limitations of base claim 6, although it has been disclaimed. Inst. Dec. 3 (citing Ex. 2002).

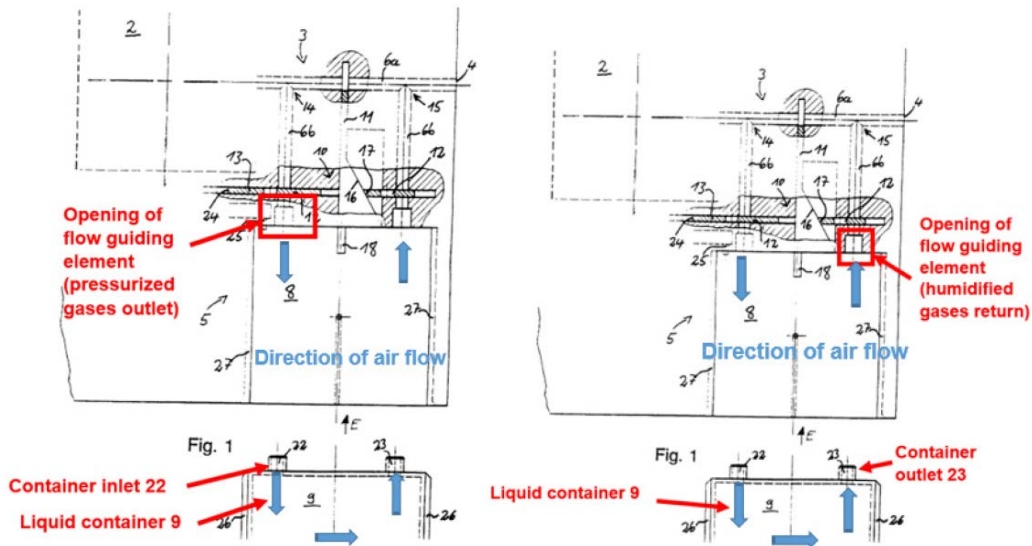
1. *Uncontested Teachings of Netzer*

As proof that Netzer meets the limitations of base claim 6, ResMed provides annotated Figure 1 from Netzer, reproduced below. Pet. 17 (citing Ex. 1008).



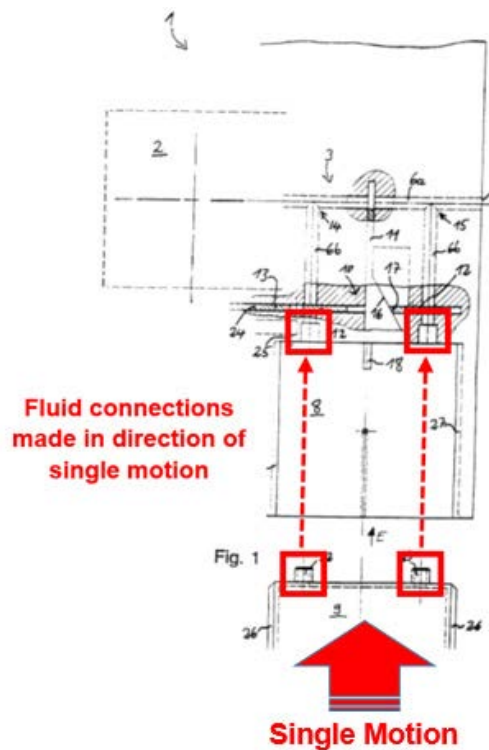
According to ResMed, the above annotated figure depicts Netzer’s gas supply device 1, which satisfies the claimed “apparatus,” Netzer’s respiratory gas source 2, which satisfies the claimed “blower for generating a supply of pressurized gases,” and Netzer’s liquid container 9, which satisfies the claimed “water chamber.” *Id.* at 21–23.

ResMed also submits additional annotations of Netzer’s Figure 1 to illustrate how Netzer discloses the claimed “pressurized gases outlet” and “humidified gases return” for making “separable fluid connection” with a “water chamber,” as required by base claim 6. *Id.* at 22–24.



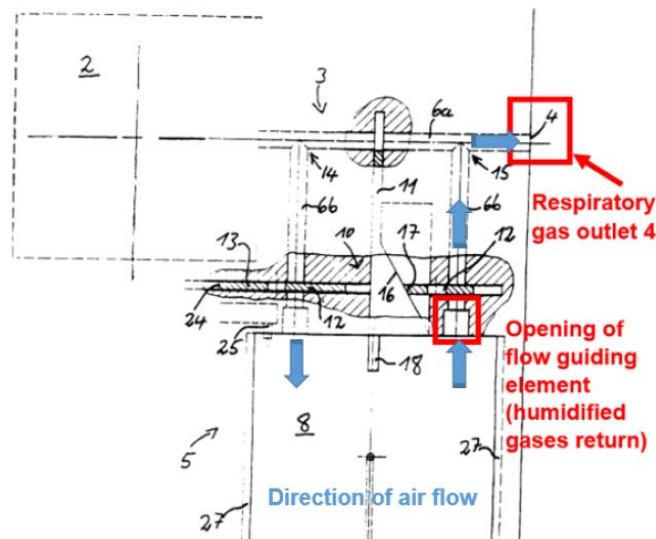
According to ResMed, the above-left figure depicts the supply flow path from Netzer’s “pressurized gases outlet” into “an inlet of a water chamber” (Pet. 22–23 (citing Ex. 1008, 8–9)), and the above-right figure depicts Netzer’s “humidified gases return” for receiving humidified gases from “an outlet [of] said chamber” (*id.* at 23–24 (citing Ex. 1008, 8–9)).

ResMed further asserts that Netzer’s insertion of liquid container 9 into respiratory gas source 2 satisfies the claimed “connections are made by a single motion,” and provides the following annotated figure to illustrate Netzer’s disclosure of this “single motion” connection. Pet. 24–25; *see also id.* at 19–20 (same).



According to ResMed, the above figure depicts “insertion direction (arrow E)” as indicating a slide-on motion to connect liquid container 9 with respiratory gas supply 2. *Id.* at 24 (citing Ex. 1008, 8, 10). ResMed also points to Netzer’s disclosure of “[l]ateral guide profiles 26 . . . on the liquid container 9, which engage in corresponding guide grooves 27 in the humidifier housing 8.” *Id.*; *see also id.* at 19–20 (same). “By this means,” Netzer explains, “the insertion of the liquid container 9 in the humidifier housing 8 is facilitated.” Ex. 1008, 10. ResMed contends that those disclosures by Netzer meet the “single motion” limitation of base claim 6. Pet. 24.

Finally, ResMed asserts that Netzer’s respiratory gas outlet 4 satisfies the claim 6 limitation of a “patient outlet” that connects the humidified gases return with “a breathing conduit,” and provides the following annotated figure to illustrate Netzer’s disclosure of this limitation. *Id.* at 25–26.

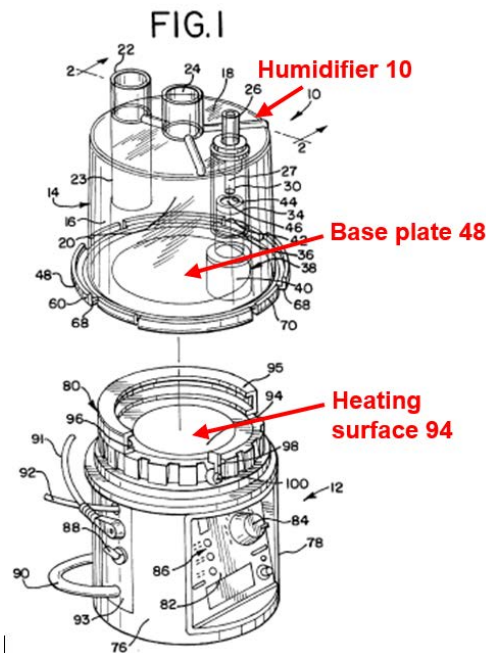


According to ResMed, the above figure depicts Netzer's respiratory gas outlet 4 as meeting the claimed "patient outlet." *Id.* (citing Ex. 1008, 7, 8). And ResMed points to Netzer's disclosure of "[a]n air hose, . . . [which] can be connected to the respiratory gas outlet 4, connecting device 1 to a . . . face mask, which can be placed on the nasal region of a patient" for meeting the claimed "breathing conduit." *Id.* at 26 (citing Ex. 1008, 8).

FPH does not dispute that Netzer discloses the limitations of base claim 6. In particular, with respect to the "single motion" limitation, FPH concedes that Netzer's "water chamber slides into the device in a horizontal direction. PO Resp. 29. Instead, FPH argues only that "Netzer and Levine do not teach or suggest that a single motion *urges* a water chamber base against a heater," a limitation required by claim 7. *Id.* at 2 (emphasis added); *see also id.* at 28 (arguing essentially same). Based on our review of ResMed's analysis (Pet. 16–28) and the record evidence (Exs. 1007, 1008, 1012 ¶¶ 46–54, 76), we find that Netzer discloses all the limitations of base claim 6.

2. The “Single Motion Also Urges . . . in Contact With”
Limitation of Claim 7

Claim 7, which depends from claim 6, further requires that the single motion “urges” the base of the water chamber “*in contact with*” the chamber heater. Ex. 1002, 11:8–11. ResMed acknowledges that, although Netzer discloses the claimed “water chamber” and “chamber heater,” Netzer may not disclose explicitly “a base of said chamber *in contact with* said heater.” Pet. 28–29 (citing Ex. 1008, 10) (emphasis added). To satisfy the missing limitation, ResMed argues that applying heat to a humidifier chamber through contact with a heater “was traditionally known in the field of medical devices and respiratory therapy” and cites Levine as an example of such knowledge. *Id.* at 29. In particular, ResMed provides annotated Figure 1 from Levine, reproduced below, for teaching the well-known concept of having the base of a humidifier chamber in contact with the surface of a heating unit “for delivering humidified respiratory gases to patients.” *Id.* (citing Ex. 1009, Abstract).



According to ResMed, the above figure shows that, when humidifier chamber 10 is slid into engagement with heating unit 12, base plate 48 contacts heating surface 94. *Id.* at 29–30 (citing Ex. 1009, 2:48–51, 3:30–32, 4:11–15, 4:31–38). In combining Netzer with Levine, ResMed reasons that a skilled artisan would have incorporated Levine’s heating surface 94 into Netzer’s humidifier 5 to be beneath liquid container 9 “in order to efficiently heat water” and to “minimize the heater’s energy consumption.” *Id.* at 32 (citing Ex. 1012 ¶¶ 78–80). In support of this reasoning, ResMed refers to Netzer’s stated objective of reducing high power consumption. *Id.* (citing Ex. 1008, 2).

In contesting ResMed’s challenge against claim 7, FPH argues that Netzer and Levine do not render claim 7 obvious because “[t]he cited art does not teach or make obvious the ‘urges . . . in contact’ limitation of Claim 7.” PO Resp. 28; *see also id.* at 2 (arguing essentially same). As support, FPH relies on its proposed construction of the term “urges,” arguing “the claim as properly construed requires the claimed single motion moves the chamber base in a direction so as to *press the chamber base against the chamber heater.*” PO Resp. 28 (emphasis added). Relying on that construction, FPH asserts that “Netzer and Levine do not teach or suggest that a single motion urges a water chamber base against a heater.” *Id.* at 2 (citing Ex. 2004 ¶¶ 81–85); *see also id.* at 29 (“Netzer also does not teach or suggest that the water chamber is inserted at an angle”); *see also id.* at 32 (“Levine does not teach or suggest that the water chamber is inserted into the heater base at an angle.”).

We agree with ResMed that FPH’s argument is premised on an overly narrow interpretation of the “urges . . . in contact with” limitation of claim 7.

See Pet. Reply 12. As discussed above, we construe this limitation as requiring a single motion that moves the chamber base in a direction so as to be in contact with the chamber heater. See *supra* section III.A. We do not agree with FPH’s construction that “urges . . . in contact with” also requires “press[ing] the chamber base against the heater.” PO Resp. 28.

Based on our interpretation of the claim 7 limitation “urges . . . in contact with,” we find that Netzer, when combined with Levine, satisfies this limitation. Specifically, we find that Netzer discloses the claimed “single motion” limitation by describing that the water chamber has “lateral guide profiles” and moves in “insertion direction (arrow E)” to engage with “corresponding guide grooves” in a chamber heater (Ex. 1008, 8, 10, Fig. 1), and Levine teaches the claimed “urges . . . in contact with” limitation by disclosing a conductive base of a water chamber that is “operationally engaged with” and “in operational alignment upon the heating surface” of a conventional heating unit for a humidifier (Ex. 1009, 2:48–51, 4:33–37). We further find that a skilled artisan would have combined these teachings in a manner that would result in Netzer’s horizontal slide-on chamber moving in a direction that “urges” a base of the water chamber “in contact with” a heater unit, as taught by Levine, in order “to implement the well-known and conventional means of applying heat to the base of a water container.” Ex. 1012 ¶¶ 78–80. Indeed, this combination “‘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.” *KSR Int’l v. Teleflex Inc.*, 550 U.S. 398, 417 (2007).

Based on those findings, we conclude that claim 7 would have been obvious over the combination of Netzer and Levine. The record evidence

fully supports that the combination of Netzer and Levine teaches all the limitations of claim 7 and that a skilled artisan would have combined those teachings in a manner resulting in the claimed invention. As such, we are persuaded that ResMed has demonstrated by a preponderance of the evidence that claim 7 is unpatentable as obvious over Netzer and Levine.

C. *Obviousness of Claim 11 Over Netzer and Bahr*

ResMed submits that claim 11 is unpatentable as obvious over Netzer and Bahr. Pet. 36. Claim 11, which depends from base claim 6, recites,

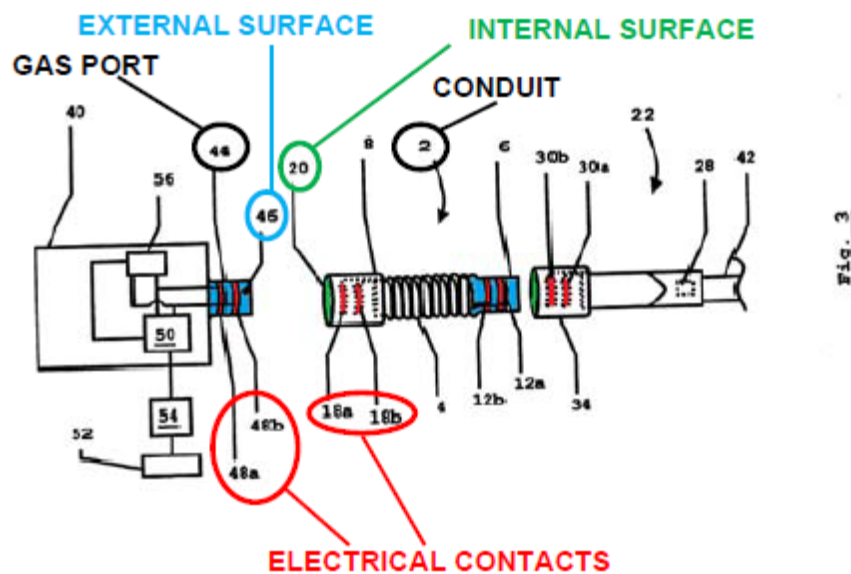
said patient outlet includes a connector for receiving a breathing hose and at least one auxiliary electrical connection plug or socket or pneumatic connection plug or port, for simultaneous connection when connecting a breathing circuit having complementary electrical or pneumatic connectors

Ex. 1002, 12:12–18.

In challenging claim 11, ResMed begins with Netzer’s CPAP device, which satisfies the claimed patient outlet (“respiratory gas outlet 4”) for connecting to a breathing conduit (“[a]n air hose . . . connecting the device 1 to a . . . face mask, which can be placed on the nasal region of a patient”). Pet. 36, 40–41 (citing Ex. 1008); *see also* Ex. 1012 ¶¶ 82, 84. ResMed acknowledges that Netzer is missing the claim limitation that the patient outlet have “at least one auxiliary electrical connection plug or socket or pneumatic connection plug or port, for simultaneous connection when connecting a breathing circuit having complementary electrical or pneumatic connectors,” as required by claim 11. Pet. 37. For that limitation, ResMed relies on Bahr’s teaching of a breathing conduit adapted for simultaneous fluid and electrical connection with a fluid transfer device, such as “a liquid

or gas ventilator or, a gas respirator.” *Id.* at 37–40 (citing Ex. 1011 ¶¶ 4, 21–22, Fig. 3).

At the outset, we note that FPH does not dispute that Bahr teaches a breathing conduit capable of establishing “simultaneous” gas and electrical connections with a respirator or ventilator device. See PO Resp. 13–14, 22–26, 33–35 (disputing only Bahr’s disclosure of “auxiliary electrical connection plug or socket”). Annotated Figure 3, reproduced below, illustrates how Bahr’s breathing conduit 2 achieves both a gas and an electrical connection with fluid transfer device 40. *Id.* at 13–14 (describing Bahr’s features).



Annotated Figure 3 above shows “gas port 44” with “external mating surface 46” for connecting with “internal mating surface 20” of “female interface 8.” Ex. 1011 ¶¶ 19, 21, 22. ResMed relies on Bahr’s disclosure of: (1) “gas port 44” for satisfying the claimed “patient outlet,” (2) “external mating surface 46” for satisfying the claimed “connector for receiving a breathing hose,” and (3) “electrical contacts 48a, 48b” on gas port 44 for satisfying the claimed “auxiliary electrical connection plug or socket.” Pet.

39–40; *see also id.* at 41–43 (mapping claim 11 to Bahr). ResMed further explains that a skilled artisan “would have understood that the electrical contacts 48a-b and 18a-b to be a ‘plug or socket,’ as required by claim 11.” Pet. Reply 16 (citing Ex. 1028 ¶ 18). Bahr describes electrical contacts 48a-b as being on “external mating surface 46” and electrical contacts 18a-b as being on “internal mating surface 20 of the female interface 8.” Ex. 1011 ¶¶ 19, 22. As for the undisputed “simultaneous” connection, Bahr teaches that interface 46 is “adapted for mating with a complementary interface [8] to simultaneously provide an electrical connection to the first terminals as well as a fluid coupling to the hollow body.” *Id.* ¶ 9.

ResMed reasons that it would have been obvious for a skilled artisan to implement Bahr’s patient outlet and breathing conduit on Netzer’s respiratory device “in order to minimize the work required for a patient to connect a breathing hose, and any electrical components of the hose, to a CPAP machine.” Pet. 40 (citing Ex. 1012 ¶¶ 82–83). In support, ResMed points to Bahr’s express objective of overcoming problems in prior ventilator and respirator devices in which additional transmission lines “produce additional installation work for the user, more difficult transportation of the patient, and an increased risk of accidental user or patient interaction with the lines which might cause involuntary disconnection of the external elements or a potential health hazard.” *Id.* at 40–41 (citing Ex. 1011 ¶ 6). ResMed contends that a skilled artisan would have been motivated to combine Netzer and Bahr to simplify the manner in which those fluid and electrical connections are made, for example,

rather than needing to establish a fluid connection between a patient hose and *Netzer’s* gas outlet 4 separately from an electrical connection for a heater wire in the hose, the teachings

of *Bahr*'s system would allow the patient to establish both the fluid connection and the electrical connection simultaneously.

Id. at 41 (citing Ex. 1012 ¶¶ 82–83).

In response, FPH argues that a skilled artisan would not have combined Bahr with Netzer because doing so would have added to the “cost and complexity” of the apparatus. PO Resp. 38–39. We agree. First, we note that ResMed does not cite to any portion of Netzer for teaching either “any electrical components of the hose” or “an electrical connection for a heater wire in the hose.” See Pet. 16–26 (asserted teachings of Netzer). Even if Netzer could be said to teach an electrical component or heater wire in the hose, upon weighing the declaration testimony of FPH's expert, Dr. Schneider (Ex. 2004 ¶¶ 104–105) and that of ResMed's expert, Mr. Virr (Ex. 1028 ¶ 21), we are not persuaded that a skilled artisan would have added such an electrical component or heater wire to the hose of Netzer as modified by Bahr.

FPH notes that “Bahr describes a detector attached to the electrical contacts to detect whether a sensor is connected.” PO Resp. 38 (citing Ex. 2004 ¶ 104). More specifically, Bahr teaches the electrical connections for “sensor 28, such as a solid state pressure transducer or a flow meter” (Ex. 1011 ¶ 20) “to provide a visible indication on a display 54 of monitored properties of the gas” (*id.* ¶ 24), or “detector 56 . . . in order to detect whether a sensor is connected” (*id.* ¶ 25). Unlike Bahr, however, Netzer does not disclose a sensor in the breathing hose for monitoring properties of the gas. As such, we are not persuaded that a skilled artisan would have further modified Netzer's respiratory device to include Bahr's electrical connections, as ResMed proposes, when doing so would needlessly add cost

and complexity to the modified device. As such, ResMed's reason to combine has insufficient rational underpinnings. Thus, ResMed fails to demonstrate by preponderant evidence that claim 11 is unpatentable over Netzer and Bahr.

IV. CONCLUSION

After considering the totality of the evidence and the respective arguments of the parties, we determine that ResMed has shown by a preponderance of the evidence that claim 7 is unpatentable over Netzer and Levine, but has *not* shown by a preponderance of the evidence that claim 11 is unpatentable over Netzer and Bahr.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claim 7 of the '072 patent is held unpatentable on ground of obviousness under 35 U.S.C. § 103; and

FURTHER ORDERED that, because this is a Final Written Decision, any party to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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