



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/668,619	08/03/2017	Petra HUBER	PTB-4750-0170	6555
23117	7590	02/07/2020	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			SIPPEL, RACHEL T	
			ART UNIT	PAPER NUMBER
			3785	
			NOTIFICATION DATE	DELIVERY MODE
			02/07/2020	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOMAIL@nixonvan.com  
pair\_nixon@firsttofile.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* PETRA HUBER, BERND CHRISTOPH LANG,  
ACHIM BEINER, and DIETER HEIDMANN

---

Appeal 2019-002021  
Application 15/668,619  
Technology Center 3700

---

Before DONALD E. ADAMS, CHRISTOPHER G. PAULRAJ, and  
KENNETH G. SCHOPFER, *Administrative Patent Judges*.

SCHOPFER, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 2–31. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

BACKGROUND

The Specification discloses that “[t]he invention relates to a respiratory gas tube arrangement for supplying a respiratory gas to a person.” Spec. ¶ 2.

---

<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as “RESMED LIMITED.” Appeal Br. 3.

## CLAIMS

Claims 2, 12, and 22 are the independent claims on appeal. Claim 2 is illustrative of the appealed claims and recites:

2. An apparatus for treatment of sleep-related respiratory problems by application of positive pressure gas to the respiratory passages of a patient, the apparatus comprising:

a CPAP device comprising:

a blower configured to deliver gas at a delivery pressure for CPAP therapy,

an electronic controller configured to adjust the delivery pressure of the gas,

a power supply socket provided on the CPAP device; and

a heatable respiratory gas tube arrangement, the tube arrangement comprising:

a heatable respiratory gas tube configured to deliver the positive pressure gas from the CPAP device to the patient,

a first connector at a first end of the tube and configured to connect to a breathing mask, and

a second connector at a second end of the tube and configured to connect to the CPAP device, wherein the second connector is configured to connect to the power supply socket provided on the CPAP device when the second connector is engaged into the power supply socket, and comprises a connector plug providing a respiratory gas passage cross-section and contact elements configured to supply the heatable respiratory gas tube with power.

Appeal Br. 14.

## REJECTIONS

1. The Examiner rejects claims 2, 5–7, 9–11, 22, 25–27, and 29–31 under 35 U.S.C. § 103(a) as unpatentable over Lopatinsky<sup>2</sup> in view of Truschel<sup>3</sup> and Pauler.<sup>4</sup>
2. The Examiner rejects claims 3 and 23 under 35 U.S.C. § 103(a) as unpatentable over Lopatinsky in view of Truschel, Pauler, and Sladek.<sup>5</sup>
3. The Examiner rejects claims 4 and 24 under 35 U.S.C. § 103(a) as unpatentable over Lopatinsky in view of Truschel, Pauler, Sladek, and Holden.<sup>6</sup>
4. The Examiner rejects claims 8 and 28 under 35 U.S.C. § 103(a) as unpatentable over Lopatinsky in view of Truschel, Pauler, and Sumner.<sup>7</sup>
5. The Examiner rejects claims 12, 15–17, and 19–21 under 35 U.S.C. § 103(a) as unpatentable over Lopatinsky in view of Truschel, Bowles,<sup>8</sup> and Pauler.
6. The Examiner rejects claim 13 under 35 U.S.C. § 103(a) as unpatentable over Lopatinsky in view of Truschel, Bowles, Pauler, and Sladek.
7. The Examiner rejects claim 14 under 35 U.S.C. § 103(a) as unpatentable over Lopatinsky in view of Truschel, Bowles, Pauler, Sladek, and Holden.

---

<sup>2</sup> Lopatinsky, US 5,600,752, iss. Feb. 4, 1997.

<sup>3</sup> Truschel, US 2002/0014240 A1, pub. Feb. 7, 2002.

<sup>4</sup> Pauler, et al., US 3,034,085, iss. May 8, 1962.

<sup>5</sup> Sladek, US 6,014,972, iss. Jan. 18, 2000.

<sup>6</sup> Holden, US 3,928,715, iss. Dec. 23, 1975.

<sup>7</sup> Sumner, US 6,092,557, iss. July 25, 2000.

<sup>8</sup> Bowles et al., US 4,621,633, iss. Nov. 11, 1986.

8. The Examiner rejects claim 18 under 35 U.S.C. § 103(a) as unpatentable over Lopatinsky in view of Truschel, Bowles, Pauler, and Sumner.

## DISCUSSION

### *Rejections 1–3 and 5–8*

With respect to claim 2, for example, the Examiner finds that Lopatinsky discloses an apparatus including a gas system “for delivering gas to a user, but is silent regarding a blower configured to deliver gas at a delivery pressure for CPAP therapy and an electronic controller configured to adjust the delivery pressure of the gas.” Final Act. 4. However, the Examiner determines that it would have been obvious to modify Lopatinsky to include these elements based on Truschel and Pauler. *Id.* at 4–5. The Examiner relies on similar analysis regarding claim 22. *Id.* at 6–8. Regarding claim 12, the Examiner relies on similar analysis regarding Lopatinsky, Truschel, and Pauler, and further relies on Bowles regarding the claimed configuration of a humidifier device. *Id.* at 12–15.

As discussed below, we are not persuaded of reversible error in the rejections of independent claims 2, 12, and 22.

With respect to claims 2 and 12, Appellant first argues that the Examiner erred in finding that Lopatinsky discloses an apparatus for treatment of sleep-related respiratory problems. Appeal Br. 8–9. Appellant asserts that “Lopatinsky discloses a flexible hose for use in military and civilian applications (col. 1, lns. 8-9), in particular for use with crewmembers in tanks and other military vehicles (col. 1, lns. 34-37).” *Id.* at 8. Appellant also notes that Lopatinsky only teaches the use of pressure below one atmosphere, which is not positive pressure, and is contrary to the Examiner’s findings. Reply Br. 1–2.

We are not persuaded of reversible error. In the rejection, the Examiner finds that “Lopatinsky discloses an apparatus for treatment of sleep-related respiratory problems by application of positive pressure gas to the respiratory passages of a patient.” Final Act. 4. However, we determine that this finding relates only to the intended use of the device presented in the claim preamble and does not relate to any structural requirements of the claim. To be clear, a claim’s preamble may be treated as a limitation of the claim in some circumstances. However, we determine that the preamble is not a limitation here because the claim recites a structurally complete invention in the claim body, and the preamble only recites an intended use. *See Catalina Marketing Int’l., Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). To the extent the Examiner makes findings regarding Lopatinsky’s application to the treatment of respiratory problems and the delivery of positive pressure, we find that any error in those findings is harmless because they relate to the non-limiting claim preambles, are not specific to any structure required by the claims, and thus, do not affect the merits of the overall rejection before us. Therefore, Appellant’s argument does not persuade us of reversible error.

Regarding claim 22, Appellant argues that the Examiner erred in finding that Lopatinsky discloses “a heatable respiratory gas tube configured to deliver positive pressure gas” because “[n]othing in Lopatinsky relates to patients or delivery of gas to patients.” Appeal Br. 9. However, in the rejection, the Examiner finds only that “Lopatinsky discloses a heatable respiratory gas tube arrangement . . . for delivering gas to a user.” Final Act. 6. The Examiner further relies on Truschel as teaching a system for

delivering “gas at a delivery pressure for CPAP therapy.” *Id.* Appellant has not identified any error in these findings.

Next, Appellant argues that the Examiner erred in rejecting each of the independent claims because “[t]here is no evidence to explain why one of ordinary skill would have been motivated to modify a hose in a military vehicle to treat sleep apnea or any other breathing disorder.” Appeal Br. 10. We are not persuaded of error for reasons provided by the Examiner. *See* Final Act. 18; Ans. 18. Specifically, we agree with the Examiner that Lopatinsky discloses that the invention is applicable to both military and civilian uses related to conveying gas through flexible hoses with adequate temperature control. *See* Lopatinsky col. 1, ll. 7–34. Lopatinsky discloses that military use is simply “[o]ne such application where these problems arise is in air supply hoses.” *Id.* at col. 1, ll. 34–36. This evidence suggests that Lopatinsky’s invention is applicable to civilian uses in which flexible hoses deliver gas at controlled temperatures, e.g., in a CPAP device. Thus, we are not persuaded of error by Appellant’s argument.

Based on the foregoing, we are not persuaded of reversible error in the rejections of independent claims 2, 12, and 22. Accordingly, we sustain the rejections of these claims. We also sustain the rejections of dependent claims 3, 5–7, 9–11, 13–21, and 23–31, for which Appellant does not provide separate arguments.

#### *Rejection 4*

This rejection partially relies on Sumner in determining that claims 8 and 28 would have been obvious. *See* Final Act. 10–12. Claims 8 and 28 each require a heat-insulating body that has a wall thickness of 1–7 mm. Appeal Br. 15, 18. The Examiner determines that the claimed thickness

would have been obvious in view of Sumner's disclosure of a gas pipeline with 3 mm thick thermal insulating layers. Final Act. 10–12.

Appellant argues that the Examiner erred in rejecting claims 8 and 28 because Sumner is not analogous art. Appeal Br. 10–12. Appellant asserts that Sumner is not in the same field of endeavor because “Sumner is directed to an offshore pipeline with waterproof thermal insulation.” *Id.* at 11. Appellant also asserts that Sumner is not reasonably pertinent to the problem faced by the present inventors. *Id.* at 11. More specifically, Appellant asserts that present application addresses problems related to respiratory gas tube arrangements being bothersome or inconvenient, and “Sumner addresses problems related to pipeline insulating materials” and “[n]one of these problems are relevant to a respiratory gas tube arrangement.” *Id.* at 11. Appellant indicates that the Examiner has not considered the problems addressed by the present application and the purpose of the prior art relied upon in assessing whether Sumner is analogous. *Id.* at 11–12.

The Specification discloses that prior art flexible tubing used in CPAP devices “is often found to be bothersome” and that the object of the invention here is to create a device with “increased convenience of use.” Spec. ¶¶ 4, 5. The Specification indicates that these problems are solved, at least in part, by a device that “avoid[s] direct contact of the tube with the patient[; that] conceal[s] the tube in a manner advantageous with respect to aesthetic considerations;” and that prevents condensation from forming in the tube. *Id.* at ¶ 7. The Specification also makes clear that the improved convenience of the device also advantageously includes appropriate heat insulation for the supply tube. *See, e.g., id.* at ¶¶ 9, 18, 22, 24. Thus, the one of ordinary skill in the art would understand from the Specification that

the invention addresses problems related to “bothersome” flexible tubing in CPAP devices, and that addressing these problems includes providing appropriate insulation around the tubing.

Given the considerations discussed above with respect to the problems addressed by the inventors, we agree with the Examiner that Sumner is reasonably related to those problems. Sumner discloses a pipeline with insulating layers applied thereon “that will substantially inhibit heat transfer between the contents of the pipeline and the environment.” Sumner, Abstract. Sumner is specifically concerned with providing “a waterproof insulating composition, cost-effective insulated pipelines, and insulating laminate compositions comprising a suitable substrate to which said composition is applied.” *Id.* col. 3, ll. 31–35.<sup>9</sup> Given this disclosure, we agree with the Examiner that Sumner is at least reasonably pertinent to the problems faced by the present inventors, i.e. Sumner is related to providing a suitable insulating layer for a conduit, and one of ordinary skill in the art would understand that a suitable insulating layer is advantageous to improve the convenience of a such conduit.

Based on the foregoing, we are not persuaded of reversible error in the rejection of claims 8 and 28. Accordingly, we sustain the rejections of these claims.

#### CONCLUSION

We AFFIRM the rejections of claims 2–31.

---

<sup>9</sup> Notably, the present Specification also discloses the use of an insulating layer formed from a suitable substrate onto which an outer layer is laminated. *See* Spec. ¶ 48.

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
2, 5-7, 9-11, 22, 25-27, 29-31	103(a)	Lopatinsky, Truschel, Pauler	2, 5-7, 9-11, 22, 25-27, 29-31	
3, 23	103(a)	Lopatinsky, Truschel, Pauler, Sladek	3, 23	
4, 24	103(a)	Lopatinsky, Truschel, Pauler, Sladek, Holden	4, 24	
8, 28	103(a)	Lopatinsky, Truschel, Pauler, Sumner	8, 28	
12, 15-17, 19-21	103(a)	Lopatinsky, Truschel, Bowles, Pauler	12, 15-17, 19-21	
13	103(a)	Lopatinsky, Truschel, Bowles, Pauler, Sladek	13	
14	103(a)	Lopatinsky, Truschel, Bowles, Pauler, Sladek, Holden	14	
18	103(a)	Lopatinsky, Truschel, Bowles, Pauler, Sumner	18	
<b>Overall Outcome</b>			2-31	

Appeal 2019-002021  
Application 15/668,619

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED