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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RUTH E. MARTIN, JULIE THEURER, MICHAEL NUTTALL, BRYAN FINLAY, BART NOWAK, and JOHN ZEHR

Appeal 2019-003691
Application 13/040,048
Technology Center 3700

Before JENNIFER D. BAHR, MICHAEL J. FITZPATRICK, and BRANDON J. WARNER, *Administrative Patent Judges*.

FITZPATRICK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting claims 1–6 and 8–29. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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[1] Appellant is the "applicant" under 37 C.F.R. § 1.42(a) and identifies two real parties in interest: The University of Western Ontario and Trudell Medical International. Appeal Br. 1.

STATEMENT OF THE CASE

The Specification

The Specification's disclosure "relates generally to an air pulse delivery device used to administer a stimulus to a human or animal to elicit and/or facilitate a desired physiological response." Spec. ¶2.

The Claims

Claims 1–6 and 8–29 are rejected. Final Act. 1. No other claims are pending. *Id.* Claim 1 is illustrative and reproduced below.

> 1. A portable air pulse delivery device comprising:
>
> a housing;
>
> an air compressor comprising a motor disposed in said housing, said motor operable at speeds between 1200 and 4800 rpm, said air compressor comprising an air inlet and an air outlet;
>
> an untethered power source disposed in said housing and operably connected to said motor;
>
> an intake filter disposed in said housing, said intake filter in fluid communication with said air inlet of said air compressor;
>
> an outlet port coupled to said air outlet of said air compressor and communicating with an exterior of said housing;
>
> a mouthpiece comprising an inlet coupled to said outlet port and said mouthpiece further comprising an outlet comprising a gas exit port, wherein said air compressor is operative to produce a gas flow at said gas exit port at a pulsation frequency of between about 20 Hz to 80 Hz when said motor is on; and
>
> a controller operably coupled to said motor so as to repeatedly cycle said motor on and off in a predetermined sequence of predetermined time periods, wherein said predetermined sequence of predetermined time periods

> comprises a first predetermined time period and a second predetermined time period, wherein said controller is operable to repeatedly cycle said motor on for said first predetermined time period and off for said second predetermined time period over a third predetermined time period; and
>
> a switch operably coupled to said controller and moveable to on and off positions, wherein said controller is operable to repeatedly cycle said motor on and off in said predetermined sequence of predetermined time periods in response to a single movement of said switch to said on position, and wherein said controller is operable to prevent said motor from operating after said third predetermined time period without moving said switch a second time.

Appeal Br. 11–12.

The Examiner's Rejections

The following rejections, all pursuant to 35 U.S.C. § 103(a), are before us:

1. claims 1, 2, 4–6, 8, 13, 14, 18, 19, 21, 22, and 24–29 over Martin,[2] Bliss,[3] Loyd,[4] and Hansen[5] (Final Act. 2);

2. claims 3, 12, and 23 over Martin, Bliss, Loyd, Hansen, and O'Dea[6] (*id.* at 16);

3. claims 9 and 20 over Martin, Bliss, Loyd, Hansen, and Ward[7] (*id.* at 18);

[2] WO 2006/116843 A1, published Nov. 9, 2006 ("Martin").
[3] US 7,736,132 B2, issued June 15, 2010 ("Bliss").
[4] US 2004/0025244 Al, published Feb. 12, 2004 ("Loyd").
[5] US 2002/0016560 A1, published Feb. 7, 2002 ("Hansen").
[6] US 6,705,314 B1, issued Mar. 16, 2004 ("O'Dea").
[7] US 4,604,114, issued Aug. 5, 1986 ("Ward").

4. claim 10 over Martin, Bliss, Loyd, Hansen, O'Dea, and Trask[8] (*id.* at 19);

5. claim 11 over Martin, Bliss, Loyd, Hansen, O'Dea, and Hajianpour[9] (*id.*);

6. claims 15 and 16 over Martin, Bliss, Loyd, Hansen, and Zimlich Jr.[10] (*id.* at 20); and

7. claim 17 over Martin, Bliss, Loyd, Hansen, Zimlich Jr., and Trask (*id.* at 21).

DISCUSSION

Rejection 1

The rejection of independent claim 1 starts with Martin, which "discloses a portable oral air pulse delivery device." Final Act. 2 (citing Martin Figs. 8–9); *see also* Martin 4:13–17. The Examiner finds that Martin discloses, among other things, an air compressor operative to produce a gas flow rate at a gas exit port at a pulsation frequency up to 30 Hz, which overlaps the recited range of between about 20 Hz to 80 Hz when the compressor is being run. Final Act. 2–3 (citing Martin 10:20, 8:15–16, Figs. 2, 3, 8–9). The Examiner relies on a second reference, Bliss, for teaching an air compressor having a motor operable "between 1200 and 4800 rpm" and "an untethered power source," as recited in claim 1. *Id.* at 3–4 (citing Bliss 13:19–22, 20:46–50, 31:2–6, 33:24–25, Figs. 1A, 2, 3, 5A, 7). The Examiner relies on a third reference, Loyd, for teaching a "controller" within the scope of claim 1. *Id.* at 5–6 (citing Loyd ¶¶24, 26, and 29, Figs. 1, 2, and

[8] US 6,666,647 B1, issued Dec. 23, 2003 ("Trask").
[9] US 5,575,761, issued Nov. 19, 1996 ("Hajianpour").
[10] US 6,796,303 B2, issued Sept. 28, 2004 ("Zimlich Jr.").

4). Lastly, the Examiner relies on a fourth reference, Hansen, for teaching an additional feature required of the controller. *Id.* at 6–7 (citing Hansen ¶58, Fig. 3).

The Examiner sets forth substantially similar findings and reasoning in rejecting independent claim 13. *See* Final Act. 8–13.

Appellant's arguments focus on the Examiner's proposed modification of an already combined Martin/Bliss in view Loyd. Appeal Br. 6–10. Hence, our Decision focuses on the same.

Loyd discloses:

> an adjustable water therapy combination comprising . . . (b) a water pump having a suction side and a discharged side, . . . (d) an electric motor for driving the pump, (e) a controller capable of turning the motor on and off, the controller also having settings for adjusting the pulsing of water discharged from the pump, both as to frequency and duration, the controller being capable of pulsing the electric motor on and off so as to drive the pump in pulsing flow mode in a plurality of pulsing flow frequencies and durations.

Loyd ¶5. Figure 4 of Loyd is reproduced below.

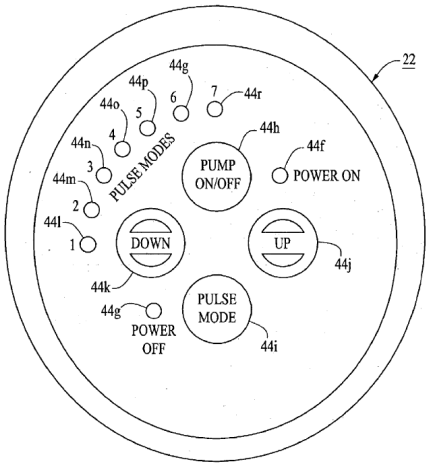

FIG. 4

Figure 4 of Loyd shows a "control panel" for use with Loyd's water therapy combination. Loyd ¶11.

> As illustrated in FIG. 4, the control panel 22 can have 13 buttons 44. A first button 44f turns the power on. A second button 44g turns the power off. A third button 44h turns the pump on and off. A fourth button 44i turns the pulse mode on and off. A fifth button 44j instructs the controller 20 to go forward through a series of pre-set massage modes, each typically varying in duration, frequency and amplitude. A sixth button 44k allows the user to go backwards through the massage modes. Buttons 44l-44r allow the user to select any of 7 different pulse modes.

Id. ¶28.

It is Loyd's controller/control panel teachings *only* that are incorporated into Martin/Bliss per the Examiner's rejection. Final Act. 6, 12; *see also* Ans. 23 ("Loyd was relied upon to merely modify the *controller*."). More specifically, the rejection states:

> it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the controller of Martin/Bliss to include a control panel with the functionality to cycle the motor on and off in a plurality of adjustable settings as taught by Loyd so that a user is able to quickly and easily select to operate the compressor motor at different on/off settings.

Final Act. 6, 12.

Appellant points out that Loyd "discloses a controller that turns a motor on and off to create pulses, not a controller that turns a motor on for a predetermined time, during which pulses are generated by a compressor." Appeal Br. 6; *see also id.* at 7 ("Yes, the controller of L[]oyd cycles a motor on and off, but is programmed to deliver only a *single* pulse when on."). Appellant's characterization of Loyd is accurate. *See* Loyd ¶23 ("Specifically, when the motor 18 is suddenly turned on, the motor 18 drives the pump 14 and projects a pulse of water from the water inlet openings 32.

When the motor 18 is suddenly turned off, the pump 14 suddenly stops, and no water flows from the water inlet openings 32."), ¶29 (disclosing seven exemplary pulse modes, the first such mode repeatedly cycling the compressor on for 0.5 seconds and then off for 2 seconds).

Appellant argues that a person of ordinary skill in the art would not have incorporated Loyd's controller feature of turning a motorized compressor on and off for brief predetermined periods of time, the purpose of which is to create pulses, into Martin/Bliss. Appeal Br. 5–8. We agree with Appellant.

Martin/Bliss already emits pulses of gas. *See* Martin 8:13–16; *see also* Ans. 22 (The Examiner acknowledges that Martin/Bliss "already . . . generates pulses while the motor is on."). Thus, on the record before us, a person of ordinary skill in the art would not have a reason to incorporate Loyd's controller feature of turning a motorized compressor on and off for brief predetermined periods of time (i.e., "PULSE MODES" (*see* Loyd Fig. 4)) into Martin/Bliss. Put differently, the Examiner's reason for incorporating anything from Loyd—"so that a user is able to quickly and easily select to operate the compressor motor at different on/off settings" (Ans. 24)—lacks rational underpinnings with respect to incorporating Loyd's pulse modes (during which the compressor is cycled on and off for brief predetermined periods of time). *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Further, the prior art itself does not provide a reason for incorporating Loyd's controller feature of turning a motorized compressor on and off for brief predetermined periods of time into Martin/Bliss. Loyd teaches such a feature for the sole purpose of creating pulses. Loyd ¶¶23, 29. Thus, Loyd does not provide a reason for incorporating such a feature into Martin, the compressor of which already generates pulses. Martin 8:13–16.

For the foregoing reasons, we reverse the rejection of claims 1 and 13. We likewise reverse the rejection of claims 2, 4–6, 8, 14, 18, 19, 21, 22, and 24–29, all which ultimately depend from either claim 1 or claim 13.

Rejections 2 – 7

Rejections 2–7 suffer from the same deficiency of lacking an adequate reason for why a person of ordinary skill in the art would have modified Martin/Bliss in view of Loyd. Although these rejections rely on additional prior art references, they do not do so in a manner that would cure the deficiency noted in the discussion of Rejection 1. Accordingly, we likewise reverse Rejections 2–7.

SUMMARY

Claims Rejected	35 U.S.C. §	References/Basis	Affirmed	Reversed
1, 2, 4–6, 8, 13, 14, 18, 19, 21, 22, 24–29	103(a)	Martin, Bliss, Loyd, Hansen		1, 2, 4–6, 8, 13, 14, 18, 19, 21, 22, 24–29
3, 12, 23	103(a)	Martin, Bliss, Loyd, Hansen, O'Dea		3, 12, 23
9, 20	103(a)	Martin, Bliss, Loyd, Hansen, Ward		9, 20
10	103(a)	Martin, Bliss, Loyd, Hansen, O'Dea, Trask		10
11	103(a)	Martin, Bliss, Loyd, Hansen, O'Dea, Hajianpour		11
15, 16	103(a)	Martin, Bliss, Loyd, Hansen, Zimlich Jr.		15, 16
17	103(a)	Martin, Bliss, Loyd, Hansen, Zimlich Jr., Trask		17
Overall Outcome				**1–6, 8–29**

REVERSED