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BARLOW, JOSEPHS & HOLMES, LTD.
101 DYER STREET
5TH FLOOR
PROVIDENCE, RI 02903

EXAMINER	
LEE, CHEE-CHONG	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID J. AHEARN and EDWARD CAREY[1]

Appeal 2016-006440
Application 12/398,783
Technology Center 3700

Before STEFAN STAICOVICI, MICHAEL L. WOODS, and
LEE L. STEPINA, *Administrative Patent Judges*.

STEPINA, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

David J. Ahearn and Edward Carey (Appellants) seek our review under 35 U.S.C. § 134(a) of the Examiner's decision rejecting claims 19–22.[2] We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART and enter a NEW GROUND of REJECTION pursuant to our authority under 37 C.F.R. 41.50(b).

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[1] The Appeal Brief lists David J. Ahearn as the real party in interest. Appeal Br. 3.

[2] Claims 1–18 have been cancelled. Appeal Br. 12 (Claims App.).

THE CLAIMED SUBJECT MATTER

The claimed invention is directed to a method and system for controlling nitrous oxide flow. Spec. ¶ 2. Claim 19, reproduced below with emphases added, is illustrative of the claims on appeal.

> 19. A system for administering nitrous oxide, comprising:
> a nitrous oxide source having a first control valve;
> a vacuum source having a second control valve;
> a scavenging tube and a nitrous oxide tube fluidly connected to a delivery mask;
> the vacuum source fluidly being connected to the scavenging tube for scavenging excess gases, the vacuum source being capable of achieving *a predetermined parameter* selected from at least one of: a predetermined flow rate and a predetermined vacuum strength;
> *a variable safety control valve* connected to the nitrous oxide source and the vacuum source, the variable safety control valve configured to be pneumatically actuated when the vacuum source is operating to achieve the predetermined parameter,
> the variable safety control valve configured to be in a default closed position to prevent the flow of nitrous oxide from the nitrous oxide source into the delivery mask,
> *the variable safety control valve configured to pneumatically actuate open to allow the flow of nitrous oxide from the nitrous oxide source to the delivery mask only when the predetermined parameter is achieved.*

Appeal Br. 12 (Claims App.).

REFERENCES RELIED ON BY THE EXAMINER

Porter Instrument Company, Inc. (n.d.), PORTER Nitrous Oxide Sedation Systems ("Porter").

Gressel, Michael G. et al., *Analyzing Workplace Exposures Using Direct Reading Instruments and Video Exposure Monitoring Techniques*, U.S. Department of Health and Human Services, Aug. 1992 ("NIOSH").

THE REJECTIONS ON APPEAL[3]

I. Claims 20–22 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

II. Claims 19–21 are rejected under 35 U.S.C. § 102(b) as anticipated by Porter.

III. Claim 22 is rejected under 35 U.S.C. § 103(a) as unpatentable over Porter and NIOSH.

ANALYSIS

Rejection I; Indefiniteness

The Examiner determines that claims 20 and 22 depend from canceled claims, and, therefore, are indefinite. Final Act. 3. The Examiner also determines that claim 21 is indefinite because the limitation "the delivery mask" in line 14 lacks antecedent basis.

Appellants do not present arguments against Rejection I. *See* Appeal Br. 6 n.1; Reply Br. 8. Accordingly, we sustain the Examiner's rejection of claims 20–22 as indefinite.

Rejection II; Anticipation

The Examiner finds that Porter discloses all of the limitations recited in claim 19, and, with respect to the recited variable safety control valve and its configuration, refers to Porter's Automatic Vacuum Switch ("AVS").

[3] The Examiner objected to the Specification (Final Act. 2), and Appellants contest this objection on pages 9–10 of the Appeal Brief. We do not address the objection to the Specification because this is a petitionable matter. *See* Manual of Patent Examining Procedure (MPEP) §§ 1002 and 1201.

Final Act. 4 (citing Porter, 3); *see also* Ans. 7 (describing Porter's AVS as an "Automatic Vacuum Switch"). Specifically, the Examiner finds "the AVS [taught by Porter] automatically prevents the supply of nitrous oxide/oxygen without scavenging (without pressure or strength of the vacuum)." Ans. 8–9. The Examiner also refers to page 7 of Porter as supporting the finding that mixed gases (including nitrous oxide) are able to pass through the Porter's supply valve and to the breathing bag *only* when the main vacuum source is turned on. *See id.* at 9–10.

Appellants contend that Porter automatically turns on its vacuum source while nitrous oxide is supplied to the delivery mask, but Porter does not make the supply of nitrous oxide contingent on the supply of vacuum. *See* Appeal Br. 7–8. Specifically, according to Appellants, Porter does not allow the flow of nitrous oxide from the nitrous oxide source to the delivery mask *only when* the predetermined parameter (based on vacuum flow or vacuum strength) is achieved. *Id.*

Appellants have the better position on this point. Porter states, "the AVS automatically prevents nitrous oxide/oxygen from being administered without scavenging. Whenever the 'gas' flows, the vacuum is 'ON.' It's automatic and a real time saver!" Porter, 3. Porter also states, "The Porter AVS provides safety with certainty. It is automatic 'on' and automatic 'off.' Nothing is required of the system operator. The minute the gas begins to flow from the flowmeter, the Porter AVS activates the scavenger vacuum. When the procedure is finished, it automatically shuts down the vacuum." *Id.* at 7. Thus, although Porter intends to avoid a situation in which nitrous oxide is administered without vacuum also being administered, Porter appears to turn its vacuum on and off based on the flow of gas (nitrous

oxide); the flow of gas is not dependent on a parameter related to vacuum. Accordingly, we reverse the Examiner's rejection of claim 19 and claim 20 depending therefrom as anticipated by Porter.

As independent claim 21 recites a substantially similar limitation to the one discussed above regarding claim 19, we also reverse the Examiner's rejection of claim 21 as anticipated by Porter.

Rejection III; Unpatentability

The Examiner's use of NIOSH does not remedy the deficiency discussed above in Rejection I, and we therefore reverse the Examiner's rejection of claim 22 as unpatentable over Porter and NIOSH.

NEW GROUND OF REJECTION

We make the following new ground of rejection pursuant to 37 C.F.R. § 41.50(b).

Claims 19–22 are rejected under 35 U.S.C. § 103(a) as unpatentable over Porter and NIOSH.

Independent claims 19 and 21

We adopt as our own the Examiner's findings relative to claims 19 and 21 as outlined in the Final Action from which this appeal is taken and the Examiner's Answer, except for the finding that Porter discloses that its AVS, the claimed "variable safety control valve," is configured to pneumatically actuate open to allow the flow of nitrous oxide from the nitrous oxide source to the delivery mask *only* when the predetermined parameter is achieved.

Regarding claims 19 and 21, we find that NIOSH suggests remedying the above-noted deficiency in Porter. In this regard, NIOSH states,

> In many applications, especially dental anesthesia/analgesia applications, the flow rate of control fluid and the flow rate of the second fluid should be proportionally controlled. For example, the flow rate of anesthesia/analgesia delivered to the patient should be proportional to the flow rate of exhalation gases removed by the vacuum source. It would also be desirable to provide a pneumatically-actuated valve which is self-regulating so that the flow rate of the second fluid is automatically controlled in proportion to the low rate of the control fluid.

NIOSH 7. Thus, NIOSH teaches linking, via a pneumatically-actuated valve, the flow of nitrous oxide to the flow rate of gases removed by the vacuum source. NIOSH further states, "In a proportionally controlled system, it may also be desirable to have minimum critical levels, such as the NIOSH recommended 45 1/min. Specifically, *if the vacuum strength drops below a certain level, then the secondary fluid (anesthesia/analgesia gas) is shut off completely for safety*."[4] *Id.* (emphasis added). Thus, NIOSH teaches making the open/closed status of the valve that controls nitrous oxide contingent upon the strength of the vacuum. It would have been obvious to modify Porter to open, pneumatically, its AVS to allow the flow of nitrous oxide from the nitrous oxide source to the delivery mask only when the predetermined parameter (a vacuum strength or flowrate is achieved) in order to prevent the flow of nitrous oxide without the presence of sufficient vacuum strength. The reason for doing so is to improve safety. *See* NIOSH 7 (stating, "a very dangerous situation can exist where anesthesia/analgesia gas can be flowing without vacuum scavenging systems functioning."). Further, the concern for safety expressed in NIOSH aligns

[4] NIOSH teaches that nitrous oxide is used as an anesthetic and analgesic, and NIOSH is focused on reducing occupational exposure to waste nitrous oxide. NIOSH 1.

with the safety concerns expressed in the sections of Porter cited by the Examiner (*see* Ans. 8–9; *see also* Porter 3, 7), which, as discussed above regarding Rejection II, fall short of teaching that nitrous oxide is allowed to flow *only when* the predetermined vacuum parameter is achieved. *See* Porter 3, 7.

Dependent claims 20 and 22

The Examiner discusses providing a predetermined parameter of 45 L/min and provides reasoning for modifying Porter to include this feature, but only to reject dependent claim 22. *See* Final Act. 7. The Examiner's findings on page 7 of the Final Action are supported by a preponderance of the evidence (*see* NIOSH 4, 7), and we agree with the Examiner's reasoning for modifying Porter to include the 45 L/min flowrate for the predetermined parameter. Thus, claim 22 would have been obvious over the combined teachings of Porter and NIOSH.

Claim 20 depends from claim 19 and recites a substantially similar limitation to that recited in claim 22. *See* Appeal Br. 12, 14 (Claims App.). For the same reasons discussed above regarding claim 22, we determine that claim 20 would have been obvious over the combined teachings of Porter and NIOSH.

DECISION

I. We affirm the rejection of claims 20–22 as indefinite.

II. We reverse the rejection of claims 19–21 as anticipated by Porter.

III. We reverse the rejection of claim 22 as unpatentable over Porter and NIOSH.

We enter a new ground of rejection of claims 19–22 under 35 U.S.C. § 103(a) as unpatentable over Porter and NIOSH.

NEW GROUND OF REJECTION

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review." Section 41.50(b) also provides:

> When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:
>
> (1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.
>
> (2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the MPEP § 1214.01.

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

AFFIRMED-IN-PART; 37 C.F.R. § 41.50(b)