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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ALLAN WALTER WILSON

Appeal 2017-010874
Application 14/271,482
Technology Center 3600

Before LINDA E. HORNER, STEFAN STAIKOVICI, and
ANNETTE R. REIMERS, *Administrative Patent Judges*.

REIMERS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's decision to reject under 35 U.S.C. § 103(a): (1) claims 1–16 as unpatentable over van den Berg (EP 1 245 150 A1, published Oct. 2, 2002) and van der Lely (US 5,697,324, issued Dec. 16, 1997); and (2) claims 1–16 as unpatentable over Oort (US 2002/0129771 A1, published Sept. 19, 2002) and van der Lely. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ 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 LELY PATENT N.V. Appeal Br. (“Appeal Br.”) 1, filed Apr. 20, 2017.

CLAIMED SUBJECT MATTER

The claimed subject matter “relates generally to a method and apparatus for monitoring a milking process, and more particularly, to monitoring a milking process by measuring at least one property of a vibrational signal within an airline [sic].” Spec. ¶ 2, Fig. 1. Claims 1, 15, and 16 are independent.

Claim 1 is illustrative of the claimed subject matter and recites:

1. A method of monitoring a milking process, the milking process performed by a milking apparatus including at least one teatcup with a pulsation space and at least one pulsation airline [sic] configured to deliver varying levels of pressure to the pulsation space, the method comprising the steps of: measuring at least one property of a vibrational signal within the airline [sic] with a vibration sensor; comparing a value of the measured property with a reference value; and determining a condition of the milking process based on the comparison.

ANALYSIS

Obviousness over van den Berg and van der Lely

Claims 1–16

Independent claim 1 is directed to a method of monitoring a milking process including the step of “measuring at least one property of a vibrational signal within the airline [sic] with a vibration sensor.” Appeal Br. 8 (Claims App.). The Examiner finds that van den Berg discloses the method of claim 1 substantially as claimed except that van den Berg does not disclose “the vibration sensor being located in the air[.]line.” Final Act. 2.²

² Final Office Action (“Final Act.”), dated Sept. 19, 2016.

The Examiner finds that van der Lely discloses “placing sensors within both the milk line and the air line.” Ans. 2³; *see also* Final Act. 3. The Examiner reasons that it would have been obvious “to have modified the air line of van den Berg with a sensor as taught by [v]an der Lely in order to monitor air flow” and “[i]t would have been obvious to employ the disclosed vibration sensor of van den Berg on the air line.” Final Act. 3.

In the Answer, the Examiner states that “the sound sensors of [v]an der Berg would in fact measure whether there is proper airflow, since if a diagnosis was made to ‘check the vacuum pump’ or ‘replace the pulsator’ then *inherently* the vacuum pressure is not correct there is not proper airflow coming through the air[]line.” Ans. 2 (emphasis added).

As an initial matter, Appellant correctly points out that “the Examiner offers no support for the position that a diagnosis of checking the vacuum pump or replacing the pulsator *inherently means* the vacuum pressure is not correct and there is not proper airflow coming through the air line.” Reply Br. 4⁴ (emphasis added). Appellant further points out that “[t]hese specific diagnoses *do not necessarily mean* that there is improper airflow in the air line. For example, a vacuum pump could be maintaining the proper pressure but working too hard to do so,” which “could lead to a change in the sound made by the pump *without* any change in airflow.” *Id.* (emphasis added). We are persuaded by Appellant’s arguments that the Examiner’s inherency finding is not supported by adequate evidence.

van den Berg discloses a milking system including “an air system connected therewith with air lines and valves” and sensors that may be used

³ Examiner’s Answer (“Ans.”), dated July 14, 2017.

⁴ Reply Brief (“Reply Br.”), filed Aug. 24, 2017.

“for measuring the electricity consumption of certain components, the *air consumption*, the water consumption, the milk discharge, the feed supply, the conductivity of cleaning liquid, the temperature in the milk cooling tank, the pulsation pattern in the teat cups, etc.” van den Berg Abstract; *id.* ¶¶ 13 (emphasis added), 16. van der Lely also discloses a milking system including “[m]ilk lines 48 and air lines 49 [that] are connected to the teat cups 45. The milk lines 48 and the air lines 49, (illustrated in FIGS. 2 and 5), include sensors 50 for monitoring the milk flow and air flow.” van der Lely 7:40–43, Figs. 2, 5.

Given that van den Berg discloses a milking system including “air lines” and sensors for measuring “air consumption” and van der Lely discloses a milking system including air lines with sensors for monitoring air flow, we agree with the Examiner that it would have been obvious “to have modified the air line of van den Berg with a sensor as taught by [v]an der Lely in order to monitor air flow.” Final Act. 3.⁵ However, claim 1 requires the step of measuring at least one property of a “vibrational signal” within an air line with “a vibration sensor” not an “air flow” sensor. Appeal Br. 8 (Claims App.) Although van den Berg discloses providing “a sound sensor by means of which it is possible to establish sounds that deviate from reference patterns” (van den Berg ¶ 13) and sensors for measuring “the pulsation pattern in the teat cups” (*id.*), the Examiner fails to provide sufficient evidence or technical reasoning to support the conclusion that

⁵ Appellant contends that van den Berg “*never* discloses measuring whether there is proper airflow through the airline.” Appeal Br. 4. However, the Examiner’s rejection is based on the *combined teachings* of van den Berg and van der Lely, not on the teachings of van den Berg alone.

modifying the air line of van den Berg with the “air flow” sensor of van der Lely further means that it would have been obvious to include the “vibration” sensor of van den Berg on the air line of van den Berg. *See* Final Act. 3. As Appellant correctly points out, neither van den Berg nor van der Lely “ever state or suggest *placing a sound sensor* in the air line.” Reply Br. 4 (emphasis added). Accordingly, the Examiner’s legal conclusion of obviousness is not supported by sufficient factual evidence, and thus, cannot stand. *See In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967) (holding that “[t]he legal conclusion of obviousness must be supported by facts. Where the legal conclusion is not supported by facts it cannot stand.”).

Similar to independent claim 1, independent claims 15 and 16 are directed to a control device and a robotic automatic milking implement, respectively, and each recite “a vibration sensor configured to measure at least one property of vibrations within the airline [sic].” *See* Appeal Br. 10 (Claims App.). The Examiner relies on the same unsupported findings in van den Berg and van der Lely discussed above in support of the rejection of these claims. *See* Final Act. 2–3. As such, the Examiner’s findings with respect to van den Berg and van der Lely are deficient for claims 15 and 16 as well.

Accordingly, we do not sustain the Examiner’s rejection of claims 1–16 as unpatentable over van den Berg and van der Lely.

Obviousness over Oort and van der Lely

Claims 1–12 and 14–16

Appellant does not offer arguments in favor of independent claims 15 and 16 or dependent claims 2–12 and 14 separate from those presented for independent claim 1. *See* Appeal Br. 3–6. We select claim 1 as the

representative claim, and claims 2–12 and 14–16 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv). We address claim 13 separately below.

The Examiner finds that “Oort discloses a sensor within the milk line which measures vibrations. The air[]line contains air which is also a fluid and the sensor would detect vibration in order to see if there is proper suction. Van der Lely discloses that it is known to have sensors in both the milk line and the air[]line.” Ans. 3; *see also* Final Act. 4–5. As such, the Examiner concludes that “this provides motivation to provide the sensor taught by Oort in both the milk line and the air[]line.” Ans. 3; *see also* Final Act. 4–5.

Oort discloses:

In the case of a milking process being monitored, it is possible to provide such *a sensor in one or more of the milk tubes* of a teat cup. When such a sensor has been disposed in each of the teat cups *or in each of the milk tubes*, it is possible to obtain information for each udder quarter regarding the milking process.

Oort ¶ 7 (emphases added). Oort further discloses that Figure 1 “diagrammatically shows a teat cup and *part of a milk line system* in which the *sensor* according to the invention is included” and that Figure 1 “shows a teat cup **1** that is provided with a pulsation tube [line] **2** and a milk tube [line] **3**. A sensor **4** *is included in* milk tube [line] **3** *for measuring amplitude differences or intensity values or both of sound.*” *Id.* ¶¶ 9, 12 (both emphases added), Figs. 1, 2.

As Oort discloses a vibration sensor 4 in milk line/tube 3, we disagree with Appellant that Oort “does not state that a sensor is located in the milk line.” Reply Br. 6. Further, although van der Lely fails to disclose placing a

“sound” sensor in a milk line or air line, the Examiner does not rely on van der Lely for this teaching. *See* Final Act. 4–5; *see also* Ans. 3; Reply Br. 6; Appeal Br. 5. Rather, as pointed out in the Answer, the Examiner relies on the teachings of van der Lely for disclosing that “it is known to have sensors in both the milk line and the air[]line.” Ans. 3; *see also id.* at 2 (The van der Lely reference teaches “placing sensors within both the milk line and the air line.”); Final Act. 4–5. Given that Oort discloses “measuring sound in a fluid” in the milk line and van der Lely discloses it is known to place sensors in both the milk line and the air line, Appellant fails to apprise us of error in the Examiner’s conclusion that in view of the combined teachings of Oort and van der Lely “[i]t would have been obvious to employ the same vibration sensor of Oort [] disclosed on the milk line onto the air line.” Final Act. 5; *see also* Ans. 3; Appeal Br. 5–6; Reply Br. 3. Additionally, in view of the combined teachings of Oort and van der Lely, Appellant fails to apprise us of error in the Examiner’s reasoning for incorporating the vibrational sensor of Oort onto the modified air line of Oort in view of van der Lely (i.e., “[t]he air[]line contains air which is also a fluid and the sensor would detect vibration in order to see if there is proper suction.”). *See* Ans. 3; *see also* Reply Br. 3.

For these reasons, we sustain the Examiner’s rejection of independent claim 1 as unpatentable over Oort and van der Lely. We further sustain the rejection of claims 2–12 and 14–16, which fall with claim 1.

Claim 13

Claim 13 depends from claim 1 and recites that “the condition is one of the teatcup being disconnected from a teat of the milking animal or the teatcup being incorrectly fitted to a teat of a milking animal.” Appeal Br. 9 (Claims App.). Appellant contends that the Examiner does not address the features of claim 13 “except to assert that all features of the dependent claims would have been predictable.” Appeal Br. 6; *see also* Reply Br. 6. The Examiner cites to paragraphs 1 through 5 of Oort in the rejection of the dependent claims. Final Act. 5. Paragraph 2 of Oort describes monitoring the milking process by means of a piezoelectric transducer disposed in the milk line, to measure the sound produced by the air flow in the milk line system, to determine whether a teat cup is disconnected abruptly from a teat or has not been connected properly to the teat. Further, similar to the subject invention, Oort discloses that when the vibration sensor is disposed in each of milk tubes/lines 3, “it is possible to obtain information for each udder quarter regarding the milking process. For example, each teat cup can be checked on whether it is leaking air because it has not properly been connected or has been unexpectedly kicked off.” Oort ¶ 7. As such, we agree with the Examiner that Oort as modified by van der Lely discloses the “features” of claim 13. *See* Final Act. 5.

Accordingly, we sustain the Examiner’s rejection of claim 13 as unpatentable over Oort and van der Lely.

DECISION

We REVERSE the decision of the Examiner to reject claims 1–16 as unpatentable over van den Berg and van der Lely.

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We AFFIRM the decision of the Examiner to reject claims 1–16 as unpatentable over Oort and van der Lely.

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

AFFIRMED