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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TOBIAS GLAW

Appeal 2014-006464¹
Application 12/101,287²
Technology Center 3700

Before: MICHAEL C. ASTORINO, KEVIN W. CHERRY, and
MATTHEW S. MEYERS, *Administrative Patent Judges*.

MEYERS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner’s final rejection of claims 1–13, 21, and 23–28. We have jurisdiction under 35 U.S.C. § 6(b). An Oral Hearing was held November 4, 2016.

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

¹ Our decision references Appellant’s Appeal Brief (“Appeal Br.,” filed January 27, 2014) and Reply Brief (“Reply Br.,” filed May 12, 2014), and the Examiner’s Answer (“Ans.,” mailed March 11, 2014) and Final Office Action (“Final Act.,” mailed August 29, 2013).

² Appellant identifies Dräger Medical GmbH, as the real party in interest (Appeal Br. 1).

CLAIMED INVENTION

Appellant's invention relates "to a process for operating a respirator (also known as a ventilator) and/or anesthesia device" (Spec. ¶ 2).

Claims 1, 8, and 23 are the independent claims on appeal. Claim 1, reproduced below with added bracketed notations, is illustrative of the subject matter on appeal:

1. A process for operating a respirator device and/or an anesthesia device, the process comprising the steps of:

[a] setting a percentage of a peak respiratory flow on the respirator and/or anesthesia device;

[b] initializing an automated airway pressure release respiration process at a first point in time, at which a measured respiratory flow reaches said percentage of said peak respiratory flow set on the device;

[c] providing at least a pressure release associated with said automated airway pressure release respiration process at a second point in time that is after the first point in time;

[d] measuring respiratory flow at the second point in time;

[e] calculating an actual percentage of said respiratory flow measured at the second point in time relative to said peak respiratory flow;

[f] continuously determining a delay between said initialization of said automated airway pressure release respiration process and said pressure release of said automated airway pressure release respiration process during one or more cycles of said automated airway pressure release respiration process, said pressure release corresponding to a change in pressure in a flow of fluid from a first pressure to a second pressure, said first pressure being greater than said second pressure; and

[g] continuously regulating the actual percentage of respiratory flow to the set percentage of respiratory flow or regulating the set percentage of respiratory flow to the actual percentage of respiratory flow, wherein said regulation is achieved by initiating one or more further cycles of said automated airway pressure release respiration process based on

said delay, wherein said pressure release associated with said automated airway pressure release respiration process begins at one of an earlier point in time and a later point in time in said one or more further cycles of said automated airway pressure release respiration process.

(Appeal Br. 53–54 (Claims App.)).

REJECTIONS

Claims 8–13 are rejected under 35 U.S.C. § 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement.

Claims 8–13 are rejected under 35 U.S.C. § 112 (pre-AIA), second paragraph, as being indefinite.

Claims 1–13, 21, and 23–28 are rejected under 35 U.S.C. § 103(a) as unpatentable over Bassin (US 2008/0283060 A1, pub. Nov. 20, 2008) and Farrugia (US 2005/0005937 A1, pub. Jan. 13, 2005).

ANALYSIS

Independent claim 1 and dependent claims 2–7 and 21

We are persuaded by Appellant’s argument that the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 103(a) because the combination of Bassin and Farrugia fails to disclose or suggest “initializing an automated airway pressure release respiration process at a first point in time, at which a measured respiratory flow reaches said percentage of said peak respiratory flow set on the device,” as recited by limitation [b] of independent claim 1 (*see* Appeal Br. 18–20; *see also* Reply Br. 5–7).

In rejecting claim 1 under 35 U.S.C. § 103(a), the Examiner finds Bassin discloses “an automated pressure release respiration process on the[]

respiratory device (inhalation/expiration as automated pressure release respiratory process which results in air pressure being released from the blower or valve into an air conduit towards the patient” (Final Act. 5 (citing Bassin ¶ 17, lines 1–25, ¶ 19, lines 1–5)). The Examiner also finds Bassin discloses, at paragraph 20, lines 10–15, “at a first point in time at which a measured respiratory flow measured reaches the percentage of peak respiratory flow” (*id.*, (citing Bassin ¶ 20, lines 10–15)). However, we agree with Appellant that the cited portions of Bassin fail to disclose or suggest the argued limitation (*see* Appeal Br. 18–20; *see also* Reply Br. 5–7).

In making this determination, we note that Bassin is directed to a method “for synchronizing [a] ventilator to cycle its pressure response in conjunction with the patient’s respiration cycle” (Bassin ¶ 1). Bassin discloses that its “pressure delivery device includes a servo-controlled blower **2**, a mask **6**, and an air delivery conduit **8** for connection between the blower **2** and the mask **6**” (*id.* ¶ 17). And, in order to measure to flow and pressure, Bassin discloses that its device includes

a flow sensor **4_f** and/or pressure sensor **4_p** may also be utilized in which case mask flow may be measured using a pneumotachograph and differential pressure transducer or similar device to derive a flow signal $F(t)$, and mask pressure is measured at a pressure tap using a pressure transducer to derive a pressure signal $P_{mask}(t)$.

(*Id.*). Bassin further discloses that its “device delivers varying pressure levels of continuous positive airway pressure which are generally higher during inspiration than expiration” (*id.* ¶ 19). More particularly, Bassin discloses

the synchronization threshold is varied within a single inspiratory breathing cycle as a function of time. In other words, the threshold does not remain constant during the cycle. Rather,

the threshold increases over time to make it more sensitive during the inspiratory cycle and thus render the threshold more likely to result in the cycling of the ventilator as the inspiratory cycle advances to expiration. For example, a variable cycling threshold may be continuously calculated by the device as the inspiratory time lapses and it can be changed during that time period until expiration is detected by the flow falling below the threshold.

(*Id.* ¶ 20). Bassin also discloses “[i]n one embodiment, the maximum and minimum thresholds may be a function of peak flow, such as a proportion or percentage of a previous breath’s peak flow, e.g., 50% and 10% respectively” (*id.* ¶ 22).

In response to Appellant’s arguments (*see* Appeal Br. 18–20), the Examiner merely restates

Bassin discloses initializing inhalation/expiration as automated pressure release respiratory process which results in air pressure being released from the blower or valve into an air conduit towards the patient, [0017] lines 1–25, [0019] lines 1–5, at a first point in time at which a measured respiratory flow measured reaches the percentage of peak respiratory flow (threshold), [0020] lines 10–15

(Ans. 14; *see also id.* at 16–17). However, we find nothing in the cited portions of Bassin that discloses or suggests “initializing an automated airway pressure release respiration process at a first point in time, at which a measured respiratory flow reaches said percentage of said peak respiratory flow set on the device,” as recited by limitation [b] of independent claim 1.

Instead, we agree with Appellant that “paragraph [0020] of Bassin only discloses a synchronization threshold that is varied within a single inspiratory breathing cycle as a function of time wherein the threshold does not remain constant during the cycle” (Reply Br. 7). In this regard, Bassin discloses that its “device is less likely to inadvertently switch into expiration

in an early stage of inspiration but, as inspiration advances, the threshold becomes more likely to cause the ventilator to switch into expiration” (Bassin ¶ 21), but does not disclose or suggest that “an automated airway pressure release respiration process of the present invention is started at a first point in time when a measured respiratory flow is equal to a percentage of peak respiratory flow,” as called for in limitation [b] of independent claim 1 (*see* Appeal Br. 19).

We acknowledge that Bassin discloses that “maximum and minimum thresholds may be a function of peak flow” (Bassin ¶ 22), however, Bassin discloses that its “synchronization threshold is varied within a single inspiratory breathing cycle as a function of time. In other words, the threshold does not remain constant during the cycle” (Bassin ¶ 20). Therefore, as Appellant points that “Bassin only discloses a ventilator that cycles from inspiratory to expiratory operation when a patient’s respiratory flow falls below the synchronization threshold, which increases from the beginning of inspiration to the end of inspiration” (Reply Br. 7). Accordingly, none of the cited portions of Bassin disclose or suggest the “automated airway pressure release respiration process” that is initialized at a first point in time when “a measured respiratory flow reaches said percentage of said peak respiratory flow set on the device,” as required by limitation [b] of independent claim 1. We note that the Examiner does not rely on Farrugia to cure this deficiency (*see* Ans. 16–17).

In view of the foregoing, we do not sustain the Examiner’s rejection of independent claim 1 under 35 U.S.C. § 103(a) as unpatentable over Bassin and Farrugia. For the same reasons, we also do not sustain the

Examiner's rejection of dependent claims 2–7 and 21 which depend from independent claim 1.

Independent claim 23 and dependent claims 24–28

Independent claim 23 includes a limitation substantially similar to independent claim 1's limitation [b] discussed above (*see* Final Act. 5; *see also* Ans. 21). Therefore, we do not sustain the Examiner's rejection under 35 U.S.C. § 103(a) of independent claim 23 and dependent claims 24–28 that depend therefrom, for the same reasons set forth above with respect to independent claim 1.

Independent claim 8 and dependent claims 9–13

Independent claim 8 is directed to a “[a]n anesthesia device and/or respirator device” and recites that the device comprises, *inter alia*, “a respiration process initiating device” (Appeal Br. 55–56 (Claims App.)).

The Examiner rejected independent claim 8 and dependent claims 9–13 as indefinite because the Examiner finds that “a respiratory process initiating device” “is indefinite as it is unclear what structure is defined by the respiratory process initiating device” (Final Act. 4; *see also* Ans. 14).

In response, Appellant identifies support for the claimed “respiration process initiating device 27” at “page 4, line 17 through page 5, line 11; page 16, lines 7–10; Figure 6” (Appeal Br. 5), and argues

[c]laim 8 clearly provides that the respiratory process initiating device initiates an airway pressure release respiration process when a set percentage of the peak respiratory flow is reached. As such, the respiratory process initiating device refers to any device

that starts an airway pressure respiration process when a set percentage of the peak respiratory flow is reached.

(*Id.* at 16–17; *see also* Reply Br. 3–4). We are not persuaded by Appellant’s argument.

We ultimately agree with the Examiner that “a respiratory process initiating device,” as recited by independent claim 8, renders claim 8 indefinite. However, in making this determination, we find the Examiner has failed to properly construe the identified limitation in accordance with 35 U.S.C. § 112, sixth paragraph. For the reasons discussed below, we conclude that independent claim 8 invokes 35 U.S.C. § 112, sixth paragraph, and is indefinite for failing to disclose adequate structure for “initiating an airway pressure release respiration process when said set percentage of the peak respiratory flow is reached.” *See Ergo Licensing, LLC v. CareFusion 303 LLC, Inc.*, 673 F.3d 1361 (Fed. Cir. 2012)

We first determine whether the limitation “a respiration process initiating device initiating an airway pressure release respiration process when said set percentage of the peak respiratory flow is reached” invokes 35 U.S.C. § 112, sixth paragraph. *See Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012).

The standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. When a claim term lacks the word “means,” the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to “recite sufficiently definite structure” or else recites “function without reciting sufficient structure for performing that function.”

Williamson v. Citrix Online, LLC, 792 F.3d 1339, 1349 (2015) (citations omitted). Here, Appellant appears to have replaced the term “means for”

with the “nonce” word “device” thereby connoting a generic “black box” for performing the intended function, i.e., “initiating an airway pressure release respiration process when said set percentage of the peak respiratory flow is reached,” as recited by independent claim 8. The term “device” like the word “module” in *Williamson*, is simply a generic description which imparts no meaning of structure. More particularly, we find the term “device”

is simply a generic description for software or hardware that performs a specified function. Generic terms such as “mechanism,” “element,” “device,” and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word “means” because they “typically do not connote sufficiently definite structure” and therefore may invoke § 112, para. 6.

Id. at 1350. We also find the prefix “respiration process initiating” fails to impart structure into the term “device” such that their combined meaning identifies a sufficiently definite structure in the claimed limitation. We note that there is nothing in the Specification “that might lead us to construe that expression as the name of a sufficiently definite structure as to take the overall claim limitation out of the ambit of § 112, para. 6” (*id.* at 1351). For example, the Specification merely discloses that “[t]he device 21 has . . . a means 27 for initiating a respiration process when the set percentage of the peak respiratory flow has been reached” (Spec. ¶ 46). The Specification further depicts element 27 of Figure 6 as box 27 which states “[i]nitiate respiration process” that is merely part of a larger box representing “respirator and/or anesthesia device 21” (*see* Fig. 6; *see also* Spec. ¶ 46). Thus, we find one of ordinary skill in art would not understand “a respiration process initiating device” as sufficiently definite structure for performing that function, i.e., “initiating an airway pressure release respiration process

when said set percentage of the peak respiratory flow is reached,” such that the limitation would not invoke 35 U.S.C. § 112, sixth paragraph.

Having concluded that the “respiration process initiating device” limitation is drafted in means-plus-function format,³ we next determine the corresponding structure disclosed in Appellant’s Specification. After reviewing the Specification as a whole, including the specifically cited passages and figures identified by Appellant (*see* Appeal Br. 5–6), we find no sufficient disclosure of “a respiratory process initiating device,” as recited by independent claim 8. The Specification does describe “a means 27 for initiating a respiration process when the set percentage of the peak respiratory flow has been reached” (*see, e.g.*, Spec. ¶ 46), but there is no structural detail as to what structure the “means 27” comprises. Thus, we find that one of ordinary skill in the art would be unable to determine what structure, if any, disclosed in the Specification corresponds to the claimed function. “[I]f a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim, a means-plus-function clause is indefinite.” *Noah*, 675 F.3d at 1312 (citing *AllVoice Computing PLC v. Nuance Commc’ns, Inc.*, 504 F.3d 1236, 1241 (Fed. Cir. 2007)).

For the foregoing reasons, we sustain the Examiner’s rejection under 35 U.S.C. § 112 (pre-AIA), second paragraph, of independent claim 8, and claims 9–13, which depend therefrom. However, because our rationale

³ We note that the remaining limitations of independent claim 8 which include “a setting device,” “a measuring device,” “a calculating device,” and “a regulating device” also invoke 35 U.S.C. § 112, sixth paragraph. We leave it up to the Examiner to determine whether the Specification discloses adequate structure for performing the corresponding functional limitations.

differs from that of the Examiner, we designate our affirmance as a new ground of rejection.

We do not reach the merits of the remaining rejections of independent claim 8 and dependent claims 9–13 under 35 U.S.C. §§ 112 and 103(a) at this time. Before a proper review of the rejections under 35 U.S.C. §§ 112 and 103(a) can be performed, the subject matter encompassed by the claims on appeal must be reasonably understood without resort to speculation. Because the claims fail to satisfy the requirements under 35 U.S.C. § 112, second paragraph, we are constrained to reverse, *pro forma*, the Examiner’s remaining rejections under 35 U.S.C. §§ 112 and 103(a). *See In re Steele*, 305 F.2d 859, 862 (CCPA 1962) (A prior art rejection cannot be sustained if the hypothetical person of ordinary skill in the art would have to make speculative assumptions concerning the meaning of claim language.); *see also In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970) (“If no reasonably definite meaning can be ascribed to certain terms in the claim, the subject matter does not become obvious-the claim becomes indefinite.”)

DECISION

The Examiner’s rejection of claims 1–7, 21, and 23–28 under 35 U.S.C. § 103(a) is reversed.

The Examiner’s rejection of claims 8–13 under 35 U.S.C. § 112 (pre-AIA), second paragraph, is affirmed. Insofar as the rationale for our affirmance of independent claim 8 differs from that set forth by the Examiner, we denominate this a NEW GROUND OF REJECTION.

The Examiner’s rejection of claims 8–13 under 35 U.S.C. § 112 (pre-AIA), first paragraph, is reversed *pro forma*.

The Examiner's rejection of claims 8–13 under 35 U.S.C. § 103(a) is reversed *pro forma*.

37 C.F.R. § 41.50(b) provides that “[a] new ground of rejection . . . shall not be considered final for judicial review.” 37 C.F.R. § 41.50(b) also provides that the Appellants, 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 proceeding will be remanded to the Examiner.

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record.

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).

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