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. |
|---|---|---|---|---|
| 15/447,160 | 03/02/2017 | Cheng-Hsiung Lin | DN2014-005-C01 | 8768 |

27280 7590 03/03/2020

THE GOODYEAR TIRE & RUBBER COMPANY
200 Innovation Way
AKRON, OH 44316-0001

| EXAMINER |
|---|
| KOTTER, KIP T |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3617 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 03/03/2020 | 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):

kathleen.swisher@goodyear.com
pair_goodyear@firsttofile.com
patents@goodyear.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* CHENG-HSIUNG LIN

---

Appeal 2019-004504
Application 15/447,160
Technology Center 3600

---

Before MURRIEL E. CRAWFORD, PHILIP J. HOFFMANN, and BRADLEY B. BAYAT, *Administrative Patent Judges.*

HOFFMANN, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1, 2, 7, 8, 10–14, and 17. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

---

[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 "The Goodyear Tire & Rubber Company." Appeal Br. 3.

According to Appellant, the "invention relates to a rim mounted system for directing air into a tire cavity of a pneumatic tire." Spec. ¶ 1. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A system for use with a pneumatic tire mounted on a wheel rim to keep the pneumatic tire from becoming underinflated, the system comprising:
>
> a plurality of pumps attached circumferentially to the wheel rim, each pump having pump parameters, each pump including one piston;
>
> a primary check valve disposed adjacent each pump; and
>
> a control valve for controlling inlet air into a tire cavity of the pneumatic tire, the control valve having valve parameters, the system predicting system performance under various configurations and conditions through use of the pump parameters and the valve parameters, each pump including one piston placed between two chambers connected by a narrow passage having a secondary check valve.

## REJECTIONS

The Examiner rejects the claims as follows:

I. Claims 1, 2, 7, 8, 10–14 and 17 under 35 U.S.C. § 112(a), as failing to comply with the written description requirement; and

II. Claims 1, 2, 7, 8, 10–14 and 17 under 35 U.S.C. § 112(b), as indefinite.

## ANALYSIS

*Rejection I—Written-description rejection*

The Examiner finds, as to independent claims 1 and 11, that "the [S]pecification does not describe 'the system predicting system performance under various configurations and conditions through use of the pump parameters and the valve parameters' in such a way as to reasonably convey

to one skilled in the relevant art that the inventor had possession of the claimed invention." Answer 3. The Examiner further finds

> [t]here are no drawings or description ***with sufficient details*** to show how the pump parameters and valve parameters are used to predict system performance under various configurations and conditions. Further, the specification fails to expressly disclose what these claimed various configurations and conditions are. As such, there is not sufficient reduction to practice either disclosed in the specification, or shown in the drawings, to show that the Appellant had possession of the claimed invention.

*Id.* The Examiner does not indicate what level of detail would be "sufficient."

Appellant argues that "[c]laims 1 and 11, as filed, both recite the system predicting system performance under various configurations and conditions through use of the pump parameters and the valve parameters." Appeal Br. 5. Appellant further argues that "systems with this function have been appropriately and definitely described in paragraphs 47, 48[,] and 54 of the Specification." *Id.*

Based on our review of the record, we agree with Appellant.

"The 'written description' requirement implements the principle that a patent must describe the technology that is sought to be patented; the requirement serves both to satisfy the inventor's obligation to disclose the technologic knowledge upon which the patent is based, and to demonstrate that the patentee was in possession of the invention that is claimed." *Capon v. Eshhar*, 418 F.3d 1349, 1357 (Fed. Cir. 2005). Whether a specification complies with the written description requirement of 35 U.S.C. § 112(a) is a question of fact. *See Regents of Univ. of Cal. v. Eli Lilly and Co.*, 119 F.3d

1559, 1566 (Fed. Cir. 1997) (*citing Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563 (Fed. Cir. 1991)).

The Manual of Patent Examining Procedure ("MPEP") explains that

> [t]o satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. *See, e.g.*, *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319 . . . (Fed. Cir. 2003) . . . . However, a showing of possession alone does not cure the lack of a written description. *Enzo Biochem, Inc. v. Gen-Probe, Inc*., 323 F.3d 956, 969–70 . . . (Fed. Cir. 2002). For example, it is now well accepted that a satisfactory description may be found in originally-filed claims or any other portion of the originally-filed specification. *See In re Koller*, 613 F.2d 819 . . . (CCPA 1980); *In re Gardner*, 475 F.2d 1389 . . . (CCPA 1973); *In re Wertheim*, 541 F.2d 257 . . . (CCPA 1976). However, that does not mean that all originally-filed claims have adequate written support. The specification must still be examined to assess whether an originally-filed claim has adequate written support.

MPEP § 2163(I). As further explained in the MPEP,

> issues of adequate written description may arise even for original claims, for example, when an aspect of the claimed invention has not been described with sufficient particularity such that one skilled in the art would recognize that the applicant had possession of the claimed invention at the time of filing. The claimed invention as a whole may not be adequately described if the claims require an essential or critical feature which is not adequately described in the specification and which is not conventional or known in the art.

*Id.* § 2163(II).

To this end, the Examiner has the initial burden of presenting evidence or reasoning to explain why persons skilled in the art would not

recognize in the original disclosure a description of the invention defined by the claims. *See In re Wertheim*, 541 F.2d 257, 263 (CCPA 1976); *see, e.g.*, MPEP § 2163(I)(A).

Here, the recitation on which the Examiner bases the rejection appears, verbatim, in the originally-filed claims. Regardless, the Examiner finds there are inadequate details "to show how the pump parameters and valve parameters are used to predict system performance." Answer 3. In response to Appellant citing paragraphs 47, 48, and 54 of its Specification, the Examiner merely finds "the [S]pecification fails to describe with sufficient details how the pump parameters and valve parameters are used to predict system performance." *Id.* at 4–5.

The invention features "an air maintenance feature within a pneumatic tire that will maintain recommended air pressure without requiring bothersome driver intervention." Spec. ¶ 3. The Specification describes that "[a]s the tire/wheel rotates, the piston body 16 may travel in a forward direction and an opposite backward direction per each revolution thereby producing a high pumping frequency." *Id.* ¶ 47. Additionally, the "parameters of the pumping action depend upon the mass and angular velocity of the tire/wheel assembly." *Id.*

Paragraph 54 of Appellant's Specification describes programming "an analytical pumping model. This model may design and predict system performance under various configurations and conditions for both consumer and commercial air maintenance tire systems." *Id.* ¶ 54. The Specification then lays out an analytical construct involving a number of variable having to do with a number of pumps and check valves, an angle of rotation of a wheel/tire, whether a check valve is open or closed, and a number of

measured pressures, including the pressure in the tire itself ($P_{tire}$). *Id.* ¶¶ 55–77. Additionally, "control valve 22 may include an adjustment for varying a set pressure for the tire cavity. *Id.* ¶ 50. Further, several examples of predictions are described, the results of which are shown in Appellant's Figures 9A, 9B, 10A, and 10B. Spec. ¶¶ 78–79. Given this extensive disclosure of pump parameters (e.g., number of pumps, check valve states) and valve parameters (e.g., tire cavity pressure), it is unclear to us the reason the Examiner finds there is not sufficient disclosure to show the ordinary artisan the Appellant had possession of "the system predicting system performance under various configurations and conditions through use of the pump parameters and the valve parameters," because the Specification describes various parameters, how they are used to make predictions, and shows the results of several example predictions. Answer 3.

Thus, without further explanation from the Examiner, the Examiner does not support adequately that the claims lack written-description support.

*Rejection II—Indefiniteness rejection*

With reference to independent claims 1 and 11, the Examiner finds that

> the term 'valve parameters' renders the claims indefinite because it is unclear what is encompassed by this limitation. While it is well-known that control valves have a number of known valve parameters, Appellant's [S]pecification fails to describe which of these known valve parameters are considered to be the claimed 'valve parameters' that are utilized to predict system performance under various configurations and conditions for Appellant's system.

Answer 4–5.

Appellant argues that a "broad claim is not indefinite merely because it encompasses a wide scope of subject matter provided the scope is clearly defined," and that "one of ordinary skill in the art would understand its scope." Appeal Br. 5–6 (citing MPEP § 2173.04).

The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986) (citations omitted). "All words in a claim must be considered in judging the patentability of that claim against the prior art. 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." *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

By the Examiner's own statement, the Examiner acknowledges "that control valves have a number of known valve parameters." Answer 4–5. The Specification describes that "[t]he control valve has valve parameters." Spec. ¶ 4. The ordinary and customary meaning of a "parameter" is "any of a set of physical properties whose values determine the characteristics or behavior of something." Merriam-Webster Online Dictionary, https://www.merriam-webster.com/dictionary/parameter (last retrieved February 24, 2020). A "valve parameter" is thus a physical property of a valve whose value can be used to determine the characteristics of something. The Specification mentions tire cavity pressure (Spec. ¶ 50) that the ordinary artisan would understand as one valve parameter, and the ordinary artisan also would understand whether the valve is open or closed is another parameter of a control valve (*id.* ¶¶ 8, 9). Based on the foregoing, we see no

uncertainty concerning what subject matter falls within the scope of the claims.

By not specifying which specific valve parameters are used for making predictions, the claims are merely broad, not indefinite. *See In re Johnson*, 558 F.2d 1008, 1016 n.17 (CCPA 1977) (breadth is not indefiniteness). This is in accordance with the Examiner's further statements in the Answer—that "it is well-known that control valves have a number of known valve parameters, [but] Appellant's [S]pecification fails to describe which of these known valve parameters are considered to be the claimed 'valve parameters' that are utilized." Answer 4–5.

For these reasons, the Examiner does not support adequately that the claims are indefinite.

## CONCLUSION

We reverse the Examiner's written-description and indefiniteness rejections.

In summary:

| Claims Rejected | 35 U.S.C. § | Reference(s)/Basis | Affirmed | Reversed |
|---|---|---|---|---|
| 1, 2, 7, 8, 10–14, 17 | 112(a) | Written Description | | 1, 2, 7, 8, 10–14, 17 |
| 1, 2, 7, 8, 10–14, 17 | 112(b) | Indefiniteness | | 1, 2, 7, 8, 10–14, 17 |
| **Overall Outcome** | | | | 1, 2, 7, 8, 10–14, 17 |

REVERSED