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In re Application of	:	
Application No.: 16/524,350	:	
Filed: July 29, 2019	:	DECISION ON PETITION
Attorney Docket Number: 50567-3-01-US	:	
For: DEVICES AND METHODS FOR	:	
ATTRACTING ENHANCED ATTENTION	:	

This is a decision on the petition filed January 20, 2020 under 37 CFR 1.181, requesting reconsideration of the decision issued December 17, 2019, which decision refused to vacate the August 8, 2019 Notice to File Missing Parts of Nonprovisional Application.[1]

The petition to vacate the August 8, 2019 Notice to File Missing Parts of Nonprovisional Application is **DENIED.**

RELEVANT BACKGROUND

The above-identified application was filed on July 29, 2019.

The application papers filed on July 29, 2019 were accompanied by:

- An application data sheet ("ADS") listing a single inventor with the given name "[DABUS]" and the family name "(Invention generated by artificial intelligence)." The ADS also identifies the Applicant as the Assignee "Stephen L. Thaler."

- A substitute statement under 37 CFR 1.64 in lieu of declaration under 35 U.S.C. § 115(d) listing "DABUS (the invention was autonomously generated by artificial intelligence)" as the inventor was executed by Stephen L. Thaler, who was identified as both the legal

[1] The instant petition under 37 CFR 1.181 was filed concurrently with a petition under 37 CFR 1.181 requesting expedited processing of the instant petition. The petition to expedite the processing is **dismissed** as moot in view of this decision.

representative of DABUS and the Applicant.

- A statement under 37 CFR 3.73(c) identifying Stephen L. Thaler as the assignee of the entire right, title, and interest in the application.

- An assignment document assigning the entire right, title and interest of "DABUS, the Creativity machine that has produced the…invention" to Stephen L. Thaler. Stephen L. Thaler executed the document on behalf of both DABUS, as legal representative of the assignor, and on behalf of himself as the assignee. [2]

- A "STATEMENT OF INVENTORSHIP" ("Inventorship Statement") which provides clarifying remarks on the inventorship of the '350 application. Briefly, the letter states the invention was conceived by a "creativity machine" named "DABUS" and it should be named as the inventor in the '350 application.

A Notice to File Missing Parts of Nonprovisional Application was issued on August 8, 2019 ("August 8, 2019 Notice"). The August 8, 2019 Notice indicated that the ADS "does not identify each inventor by his or her legal name" and an $80 surcharge is due for late submission of the inventor's oath or declaration.

A petition under 37 CFR 1.181 was filed on August 29, 2019, requesting supervisory review of the August 8, 2019 Notice, and to vacate the August 8, 2019 Notice for being unwarranted and/or void.

A second Notice to File Missing Parts of Nonprovisional Application was issued on December 13, 2019 ("December 13, 2019 Notice"), explaining the time period for reply runs from the mail date of the December 13, 2019 Notice.

The petition of August 29, 2019 was dismissed in a decision issued on December 17, 2019.

The instant petition under 37 CFR 1.181 was filed on January 20, 2020, requesting reconsideration of the decision issued December 17, 2019, which decision refused to vacate the August 8, 2019 Notice.

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[2] Petitioner states "It is accepted that an AI system such as DABUS cannot, under current law, own property…there is no law that confers on an AI system any rights to own property." Reconsideration Petition at 4. Thus, petitioner admits that DABUS cannot own any property including the property rights in inventions the machine itself created. This further calls into question whether the submitted assignment document satisfies the requirements of 37 CFR 3.73(c)(1) and petitioner's ability to file the above-identified application as applicant under 35 U.S.C. § 118 and 37 CFR 1.46.

STATUTES

35 U.S.C. § 100(f) provides:

> The term "inventor" means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.

35 U.S.C. § 100(g) provides:

> The terms "joint inventor" and "coinventor" mean any 1 of the individuals who invented or discovered the subject matter of a joint invention.

35 U.S.C. § 101 provides:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 115(a) provides:

> An application for patent that is filed under section 111(a) or commences the national stage under section 371 shall include, or be amended to include, the name of the inventor for any invention claimed in the application. Except as otherwise provided in this section, each individual who is the inventor or a joint inventor of a claimed invention in an application for patent shall execute an oath or declaration in connection with the application

35 U.S.C. § 115(b) provides, in pertinent part:

> An oath or declaration under subsection (a) shall contain statements that…such individual believes himself or herself to be the original inventor or an original joint inventor of a claimed invention in the application.

35 U.S.C. § 115(h)(1) provides, in pertinent part:

> Any person making a statement required under this section may withdraw, replace, or otherwise correct the statement at any time.

OPINION

Petitioner asserts the invention of the above-identified application was generated by a machine named "DABUS."[3] According to petitioner, this "creativity machine" is programmed as a series of neural networks that have been trained with general information in the field of endeavor to

[3] Inventorship Statement at 2.

independently create the invention.[4] Petitioner asserts that DABUS was not created to solve any particular problem, and it was not trained on any special data relevant to the instant invention.[5] Instead, it was the machine, not a person, which recognized the novelty and salience of the instant invention.[6] Petitioner contends that inventorship should not be limited to natural persons and, therefore, the naming of DABUS as the inventor in the above-identified application is proper.[7] Petitioner requests that the August 8, 2019 Notice be vacated for being unwarranted and/or void.

Under 35 U.S.C. § 115(a), "[a]n application for patent that is filed under section 111(a)...shall include, or be amended to include, the name of the inventor for any invention claimed in the application." An "inventor" is defined in 35 U.S.C. § 100(a) as "the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention."[8]

To the extent the petitioner argues that an "inventor" could be construed to cover machines, the patent statutes preclude such a broad interpretation. Title 35 of the United States Code consistently refers to inventors as natural persons. For example, 35 U.S.C. § 101 states "***Whoever*** invents or discovers any new and useful process, machine, manufacture, or composition of matter...may obtain a patent therefore, subject to the conditions and requirements of this title" (emphasis added). "Whoever" suggests a natural person.[9] 35 U.S.C. § 115 similarly refers to individuals and uses pronouns specific to natural persons—"himself" and "herself"—when referring to the "individual" who believes himself or herself to be the original inventor or an original joint inventor of a claimed invention in the application.[10] It further states that the inventor who executes an oath or declaration must be a "person."[11] Other sections of Title 35 take the same approach.[12] Therefore, interpreting "inventor" broadly to encompass machines would contradict the plain reading of the patent statutes that refer to persons and individuals.

In addition, the U.S. Court of Appeals for the Federal Circuit (Federal Circuit) has explained that the patent laws require that an inventor be a natural person. For example, in *Univ. of Utah v.*

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[4] *Id.*
[5] *Id.*
[6] *Id.*
[7] *Id.* at 3.
[8] *See also* 35 U.S.C. § 115(a) ("each individual who is an inventor...shall execute an oath or declaration"); 35 U.S.C. § 100(g) ("The terms "joint inventor" and "coinventor" mean any 1 of the individuals who invented or discovered the subject matter of a joint invention").
[9] *Merriam-Webster's Collegiate Dictionary* (10th ed. 2001).
[10] 35 U.S.C. § 115(b) ("An oath or declaration under subsection (a) shall contain statements that...such individual believes himself or herself to be the original inventor or an original joint inventor of a claimed invention in the application.").
[11] 35 U.S.C. § 115(h)(1) ("Any person making a statement required under this section may withdraw, replace, or otherwise correct the statement at any time.").
[12] *See e.g.* 35 U.S.C. § 102(a) ("A person shall be entitled to a patent unless..."); 35 U.S.C. § 116(c) ("Whenever through error a person is named in an application for patent as the inventor...."); 35 U.S.C. § 185 ("Notwithstanding any other provisions of law any person, and his successors, assigns, or legal representatives, shall not receive a United States patent for an invention if that person, or his..."); 35 U.S.C. § 256(a) ("Whenever through error a person is named in an issued patent as the inventor...").

Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V.,[13] the Federal Circuit explained that a state could not be an inventor, stating—

> The inventors of a patent are "the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention." 35 U.S.C. § 100(f). It is axiomatic, that inventors are the individuals that conceive of the invention:
>
> > Conception is the touchstone of inventorship, the completion of the mental part of invention. It is the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice. Conception is complete only when the idea is so clearly defined in the inventor's mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation. [Conception] is a mental act. . . .
>
> *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1227-28 (Fed.Cir.1994) (internal quotation marks and citations omitted). To perform this mental act, inventors must be natural persons and cannot be corporations or sovereigns.[14]

Similarly, when explaining the distinction between inventorship and ownership of an invention by a corporation, the Federal Circuit in an earlier decision, *Beech Aircraft Corp. v. EDO Corp.*, stated that: "only natural persons can be 'inventors.'"[15]

While these Federal Circuit decisions are in the context of states and corporations, respectively, the discussion of conception as being a "formation in the mind of the inventor" and a "mental act" is equally applicable to machines and indicates that conception—the touchstone of inventorship—must be performed by a natural person.

The United States Patent and Trademark Office's (USPTO's) understanding of the patent statutes and the Federal Circuit case law concerning inventorship to require that an inventor must be a natural person is reflected in the numerous references to the inventor as a "person" in Title 37 of the Code of Federal Regulations.[16] Furthermore, the Manual of Patent Examining Procedure

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[13] 734 F.3d 1315 (Fed. Cir. 2013).

[14] 734 F.3d at 1323.

[15] 990 F.2d 1237, 1248 (Fed. Cir. 1993).

[16] *See e.g.* 37 CFR 1.27(a)(1) ("A person, as used in paragraph (c) of this section, means any inventor or other individual"); 37 CFR 1.41(d) ("...the name and residence of each person believed to be an actual inventor should be provided when the application papers pursuant to § 1.53(b) or § 1.53(c) are filed."); 37 CFR 1.53(d)(4) ("...accompanied by a statement requesting deletion of the name or names of the person or persons who are not inventors of the invention being claimed in the new application"); 37 CFR 1.63(a)(3) ("An oath or declaration under this section must: Include a statement that the person executing the oath or declaration believes..."); 37 CFR 1.324(a) ("Whenever through error a person is named in an issued patent as the inventor..."); 37 CFR 1.324(b)(1) ("...A statement from each person who is being added as an inventor and each person who is currently named as an

("MPEP") follows the patent statutes and the Federal Circuit case law concerning inventorship, explaining that the threshold question for inventorship is "conception."[17] The MPEP defines "conception" as "the complete performance of the mental part of the inventive act" and it is "the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice."[18] Again, the use of terms such as "mental" and "mind" in the MPEP indicates that conception must be performed by a natural person.

Accordingly, because the above-identified application names a machine, "[DABUS] (Invention generated by artificial intelligence)," as the inventor, and because current statutes, case law, and USPTO regulations and rules limit inventorship to natural persons, the above-identified application does not comply with 35 U.S.C. § 115(a).[19] The USPTO therefore properly issued the August 8, 2019 Notice requiring the inventor to be identified by his or her legal name.

Petitioner argues that the December 17, 2019 petition decision presents a line of reasoning that suggests "the referenced statutes are intended to compel an applicant to name a natural person even where the person does not meet the inventorship criteria."[20] However, petitioner misunderstands the petition decision. The petition decision of December 17, 2019 explains that 35 U.S.C. § 100(f) defines the term "inventor" as the individual who invented or discovered the subject matter of the invention. Identifying a natural person, who did not invent or discover the subject matter of the invention, as the inventor in a patent application would be in conflict with the patent statutes. Accordingly, the petition decision of December 17, 2019 does not suggest that an applicant is compelled to list a natural person as an inventor who does not meet the inventorship criteria.

Petitioner also argues that the USPTO should take into account the position adopted by the European Patent Office ("EPO") and the UK Intellectual Property Office ("UKIPO") that DABUS created the invention at issue, but DABUS cannot be named as the inventor.[21] The above-identified application is currently undergoing review for completeness of the application. The USPTO has not made any determination concerning who or what actually created the invention claimed in the above-identified application.[22] Furthermore, the EPO and UKIPO are interpreting and enforcing their own respective laws (i.e., the European Patent Convention and the UK Patents Act 1977) as they apply to the applications before them. U.S. patent law does not permit a machine to be named as the inventor in a patent application.

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inventor…"). Note also, the requirement under 37 CFR 1.76(b)(1) that the inventor be identified by their "legal name."

[17] MPEP 2137.01(II); *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1227-28 (Fed. Cir. 1994).[18] MPEP 2138.04 (citing *Townsend v. Smith,* 36 F.2d 292, 295 (CCPA 1929)).

[18] MPEP 2138.04 (citing *Townsend v. Smith,* 36 F.2d 292, 295 (CCPA 1929)).

[19] Petitioner appears to admit that machines do not qualify as inventors under the patent statutes. For example, petitioner states, "it is noted that…there is no way to meet the requirements of the Statutes. That is, there is no cure for the issued Notice to File Missing Parts, while maintaining proper inventorship according to the Statutes." Reconsideration Petition at 7.

[20] Reconsideration Petition at 3.

[21] Reconsideration Petition at 6-7.

[22] *See* MPEP 506.

Petitioner further argues that "[i]n refusing to accept the naming of an AI system as an inventor, the USPTO is setting a further test for patentability that is not provided for in law, and contradicts the generally held principle that inventorship should not be a substantial condition for the grant of patents."[23] Petitioner's argument is not persuasive. Inventorship has long been a condition for patentability, and 35 U.S.C. § 115(a) expressly requires that an application include, or be amended to include, the name of the inventor for any invention claimed in the application. Before the Leahy-Smith America Invents Act (AIA) revised 35 U.S.C. § 102, improper inventorship was a grounds for rejection under pre-AIA 35 U.S.C. § 102(f).[24] Today, under the AIA, naming an incorrect inventor is a grounds for rejection under 35 U.S.C. § 101 and 35 U.S.C. § 115.[25]

Petitioner also argues that the USPTO has granted patents relating to the DABUS machine and, therefore, implicitly legalized the process by which DABUS arrives at an invention for the above-identified application.[26] The USPTO grants a patent if it appears that an applicant is entitled to a patent under the law pursuant to 35 U.S.C. § 151. The granting of a patent under 35 U.S.C. § 151 for an invention that covers a machine does not mean that the patent statutes provide for that machine to be listed as an inventor in another patent application—any more than a patent for a camera allows the camera hold a copyright. As noted above, a machine does not qualify as an inventor under the patent laws.

Lastly, petitioner has outlined numerous policy considerations to support the position that a patent application can name a machine as an inventor. For example, petitioner contends that allowing a machine to be listed as an inventor would incentivize innovation using AI systems,[27] reduce the improper naming of persons as inventors who do not qualify as inventors,[28] and support the public notice function by informing the public of the actual inventors of an invention.[29] These policy considerations notwithstanding, they do not overcome the plain language of the patent laws as passed by the Congress and as interpreted by the courts.[30]

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[23] Reconsideration Petition at 4.

[24] "A person shall be entitled to a patent unless…he did not himself invent the subject matter sought to be patented." *See PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc.*, 225 F.3d 1315 (Fed. Cir. 2000) ("Examiners are required to reject applications under 35 U.S.C. § 102(f) on the basis of improper inventorship").

[25] *See* MPEP 706.03(a)(IV).

[26] Reconsideration Petition at 6.

[27] Inventorship Statement at 3-4.

[28] *Id.* at 4.

[29] Reconsideration Petition at 4.

[30] *Glaxo Operations UK ltd. V. Quigg*, 894 F.2d 392, 399-400 (Fed. Cir. 1990) (holding that the USPTO and courts must honor the plain meaning of the patent statutes when Congress has spoken on an issue, as striking policy balances in legislative language is within the province of Congress).

CONCLUSION

For the reasons stated above, the petition is granted to the extent that the decision of December 17, 2019 has been reviewed, but the petition is **DENIED** with respect to vacating the August 8, 2019 Notice.

The time period to reply to the Notice to File Missing Parts of Nonprovisional Application of August 8, 2019 is reset in this decision. Petitioner is given a time period of **two (2) months** from the mailing date of this decision within which to file all required items identified in the December 13, 2019 Notice to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under 37 CFR 1.136(a). Petitioner, however, should expect no additional resetting of the time period for reply to the Notice to File Missing Parts of Nonprovisional Application of August 8, 2019 in the above-identified application or any other stay of proceedings in the above-identified application.

This decision is being published in view of the submission filed in the above-identified application on February 17, 2020 that provides the USPTO with authority under 35 U.S.C. § 122 and 37 CFR 1.14(e) to publish this decision.

This constitutes a final decision on this petition. No further requests for reconsideration will be entertained.

Telephone inquiries concerning this decision should be directed to Charles Kim, Director of the Office of Petitions, at (571) 272-7421.

Robert W. Bahr
Deputy Commissioner for
Patent Examination Policy