

2021-2347

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

STEPHEN THALER, an individual,
Plaintiff-Appellant,

---v.---

ANDREW HIRSHFELD, Performing the Functions and Duties of the Under
Secretary of Commerce for Intellectual Property and Director of the United States
Patent and Trademark Office, UNITED STATES PATENT AND TRADEMARK
OFFICE,

Defendant-Appellee.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF VIRGINIA in Case No. 1:20-CV-00903-LMB-
TCBAVAED,

The Honorable Judge Leonie M. Brinkema

APPENDIX

ORAL ARGUMENT IS REQUESTED

Ryan Abbott, Esq. (admitted *pro hac*
vice)

Brown, Neri, Smith & Khan, LLP

11601 Wilshire Blvd., Ste. 2080

Los Angeles, CA 90025

Phone: (310) 593-9890

Fax: (310) 593-9980

Geoffrey A. Neri, Esq. VSB No.
72219
Brown, Neri, Smith & Khan, LLP
11601 Wilshire Blvd., Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980

Attorneys for Plaintiff-Appellant

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Eastern District of Virginia

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PROOF OF SERVICE

I hereby certify that I served a copy of this appendix on counsel of record on November 23, 2021 by [US Mail/Fax/Hand delivery/Email].

_____/s/ [ATTORNEY]_____

Ryan Abbott, Esq. (admitted *pro hac vice*)

Brown, Neri, Smith & Khan, LLP
11601 Wilshire Blvd., Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980

Geoffrey A. Neri, Esq. VSB No. 72219

Brown, Neri, Smith & Khan, LLP
11601 Wilshire Blvd., Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980

Attorneys for Plaintiff-Appellant

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

Stephen Thaler, an individual

Plaintiff,

v.

Andrei IANCU, in his official capacity as Under
Secretary of Commerce for Intellectual Property
and Director of the United States Patent and
Trademark Office, and United States Patent and
Trademark Office

Defendants.

Case No.

**COMPLAINT FOR DECLARATORY AND
INJUNCTIVE RELIEF**

Plaintiff Stephen Thaler (“Dr. Thaler”) hereby complains and alleges against Andrei IANCU (the “Director”), in his official capacity as Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, and the United States Patent and Trademark Office (“USPTO”) (Director and USPTO collectively, “Defendants”) as follows:

NATURE OF ACTION

1. Plaintiff is in the business of developing and applying advanced artificial intelligence (AI) systems that are capable of generating patentable output under conditions in which no natural person traditionally meets inventorship criteria.

2. One of Plaintiff's AI systems, named DABUS, generated the subject matter of two patent applications submitted to the USPTO. These applications named DABUS as the inventor and Plaintiff as the applicant and prospective owner of any granted patents.

3. Defendants, in a final agency action, denied both patent applications on the basis that they failed to disclose a natural person who invented the subject matter of the applications.

4. The Rejections create a novel substantive requirement for patentability that is contrary to existing law and at odds with the policy underlying the patent system.

5. Defendants' position is anti-intellectual property and anti-business, and it puts American businesses at an international disadvantage compared to businesses in jurisdictions that will choose to grant patents on AI-generated inventions.

6. The Rejections are subject to judicial review under the Administrative Procedure Act (APA), 5 U.S. Code § 704. Plaintiff seeks injunctive and other relief as set forth below.

JURISDICTION AND VENUE

7. This Court has subject matter jurisdiction and is authorized to issue the relief sought under 5 U.S.C. §§ 701-06, 28 U.S.C. §§ 1331, 1338(a), 1361, and 2201-2202.

8. Venue is proper in this district under 28 U.S.C. § 1391(e).

PARTIES

9. Plaintiff Dr. Stephen Thaler is an individual at all times relevant to this complaint residing in the State of Missouri.

10. As described more fully below, Plaintiff is the owner of all right, title, and interest in and to the patent applications as the owner, user, and developer of DABUS.

11. Defendant Andrei Iancu is named in his official capacity as the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark

Office. Under 35 U.S.C. § 3(a)(1), the powers and duties of the USPTO are vested in the Director.

12. Defendant United States Patent and Trademark Office is a federal agency in the Department of Commerce.

FACTUAL BACKGROUND

History of the Application

13. Plaintiff is in the business of developing advanced AI systems that are capable of generating patentable output in the absence of a person who otherwise meets inventorship criteria. Such inventions are referred to here as “AI-generated inventions”.

14. A number of parties have claimed for decades to be in possession of AI-generated inventions.¹ In 2019, Siemens reported that the company had multiple AI-generated inventions for which they had intended to file for patents but did not do so due to legislative uncertainty.²

15. The present case involves two United States patent applications (the “Applications”) filed by Plaintiff for AI-generated inventions produced by one of Plaintiff’s AI systems, named DABUS. One of these inventions is a light beacon that flashes in a new and inventive manner to attract attention (“Neural Flame”), while the other is a beverage container based on fractal geometry (“Fractal Container”).

16. Plaintiff applied for a patent for the Neural Flame and the Fractal Container, patent application numbers 16/524,350 and 16/524,532, respectively. Both applications were filed on July 29, 2019.

¹ See, e.g., Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 57 B.C. L. REV. 1079 (2016) (describing early instances of “computation invention”).

² Ryan Abbott, *The Reasonable Robot: Artificial Intelligence and the Law* (2020) at 10.

17. Foreign analogs of the Applications were filed in a number of patent offices internationally. While the Applications were not substantively evaluated in the United States, the United Kingdom Intellectual Property Office (UKIPO) evaluated the applications on their merits. Both Applications were found to be patentable to the extent possible prior to their publication.³

18. A “worldwide” international patent application combining the subject matter of both Applications was filed under the Patent Cooperation Treaty. This application was published by the World Intellectual Property Organization on April 23, 2020. WO 2020/079499 A1. It designates Stephen Thaler as the applicant and lists, “DABUS, The invention was autonomously generated by an artificial intelligence”, as the inventor. *Id.*

19. In the United States, the Applications required submission of application data sheets (ADS). These list a single inventor with the given name “[DABUS]” and the family name “(Invention generated by artificial intelligence)”. The ADSs also identify Plaintiff as the Applicant.

20. Patent applications typically require either an oath or declaration by an inventor under 35 U.S.C. § 115(d). However, because the Applications’ inventor was a machine without legal personality and incapable of executing an inventor’s oath or declaration, a substitute statement under 37 CFR 1.64 was filed instead identifying Plaintiff as the legal representative of DABUS and the Applicant.

21. A statement was also filed under 37 CFR 3.73(c) identifying Plaintiff as the assignee of the entire right, title, and interest in the Applications, and an assignment document

³ Application GB1816909.4 had a combined search and examination report on March 29, 2019, with a communication of no further objections on July 12, 2019. Application GB1818161.0 had a combined search and examination report issued on April 30, 2019, with a communication of no further objections on October 9, 2019. In both cases, the examiner could not complete his investigations until at least three months after the application had been published, in accordance with the UKIPO’s standard procedure.

executed by Plaintiff was filed assigning the right to himself on behalf of DABUS. Plaintiff, is entitled to own the output of DABUS as the developer, user, and owner of DABUS, among other things, under the doctrines of accession and first possession.

22. Given the uniqueness of the Applications, and the lack of procedural accommodation for indicating an application is based on an AI-generated invention, an additional “Statement of Inventorship” was filed providing clarifying remarks. This statement explained the invention was conceived by DABUS which, it was proposed, should be named the inventor of the Applications.

23. Both Applications followed a similar procedural pathway at USPTO.

24. Defendants issued a “Notice to File Missing Parts of Nonprovisional Application” for each Application on August 8, 2019. Those notices indicated that the ADS did not identify each inventor by his or her legal name.

25. Plaintiff filed petitions under 37 CFR 1.181 on August 29, 2019, requesting supervisory review of the August 8, 2019 Notices, and to vacate said notices for being unwarranted and/or void.

26. A second Notice to File Missing Parts of Nonprovisional Application was issued for both Applications on December 13, while the petitions of August 29, 2019 were dismissed in a decision issued on December 17, 2019.

27. A second petition under 37 CFR 1.181 was filed on January 20, 2020, requesting reconsideration of the decisions issued December 17, 2019, which decision refused to vacate the August 8, 2019 notices.

28. On April 22, 2020, the USPTO denied the petitions with respect to both Applications. Unusually, USPTO took the step of publishing one of the decisions on the

petition—but only the decision with respect to the Neural Flame (the “Decisions”).⁴ The Decision with respect to the Neural Flame is attached hereto as Exhibit 1.

29. Defendants reasoned that an inventor could only be a natural person based on various statutory references, such as 35 U.S.C Section 101, which 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”. Various other sections of Title 35 similarly refer to individuals in the context of referring to inventors.

30. The Decisions also cite to cases holding that inventors cannot be corporations or sovereigns. *E.g.*, *Univ. of Utah v Max-Planck-Gesellschaft zur Forderung der Wissenschaften e. V.*, 734 F.3d 1315 (Fed. Cir. 2013).

31. In addition, the Decisions refer to judicial language that suggest inventors must be natural persons, *e.g.*, *Beech Aircraft Corp v. EDO Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993) (“only natural persons can be ‘inventors.’”).

32. Finally, the Decisions note that “[c]onception is the touchstone of invention... a mental act...” *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 127–8 (Fed.Cir. 1994).

33. Thus, the Decisions claim that because statutory language refers to individuals as inventors, because corporations and sovereigns cannot be inventors, and because the act of inventorship requires conception (which Defendants claim machines cannot perform), the Applications do not comply with 35 U.S.C. Section 115(a).

34. The Decisions constitute final agency action.

⁴ https://www.uspto.gov/sites/default/files/documents/16524350_22apr2020.pdf

The Decisions Create a New and Unintended Substantive Requirement for Patentability

35. The Decisions effectively prohibit patents on all AI-generated inventions.

36. In the case of the Applications, there is no natural person who meets inventorship criteria and there has been no suggestion by USPTO to the contrary. Therefore, under the Decision's holding, there is no way to remedy the Notices to File Missing Parts and no way to successfully file for patent protection for an AI-generated invention.

37. This means that AI-generated inventions will enter the public domain once disclosed. This is undesirable both as a matter of innovation policy and because there is no evidence that Congress intended to prohibit patents on AI-generated inventions.

38. Alternately, future patent applicants may attempt to circumvent the new standard by inaccurately listing a natural person who does not meet inventorship criteria. While Defendants have not explicitly encouraged future applicants for AI-generated inventions to inaccurately name a natural person as an inventor, as a practical matter this may occur because the USPTO does not contest reported inventorship as a general matter. "The Office presumes that the named inventor or joint inventors in the application are the actual inventor or joint inventors to be named on the patent." Manual of Patent Examining Procedure Section 2109.⁵

39. Had Plaintiff listed himself as the inventor for the Applications he would have two issued patents or be well on his way to that outcome. This, like prohibiting all patents on AI-generated inventions, would be an undesirable outcome because it would involve misrepresentations and individuals claiming credit for work they did not perform. Though, fraudulently listing an inventor is grounds for rejection under 35 U.S.C. section 101 and 35

⁵ https://www.uspto.gov/web/offices/pac/mpep/s2109.html#ch2100_d2c183_22374_28b

U.S.C. 115. Also, deliberately misreporting inventorship may result in criminal punishment. 18 U.S.C. 1001.

Allowing Patents on AI-Generated Inventions is Consistent with the Constitution and the Patent Act

40. Congress is empowered to grant patents on the basis of the Patent and Copyright Clause of the Constitution. U.S. CONST. art. I, § 8, cl. 8. This clause enables Congress “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” *Id.*

41. It also provides an explicit rationale for granting patent and copyright protection, namely to encourage innovation under an incentive theory. The theory goes that people will be more inclined to invent things (i.e., promote the progress of science) if they can receive government-sanctioned monopolies (i.e., patents) to exploit commercial embodiments of their inventions. Having the exclusive right to sell an invention can be tremendously lucrative.⁶ The patent system is also designed to incentivize the disclosure of information, and the commercialization and development of inventions. *See* Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1079–1126 (2016).

42. Allowing patents for AI-generated inventions will incentivize the development of AI capable of producing AI-generated inventions (“inventive machines”), which will ultimately promote innovation. This will be particularly important as AI becomes more sophisticated and likely a standard part of future research and development. To the extent that patents also

⁶ *See* John Stuart Mill, *Principles of Political Economy with Some of their Applications to Social Philosophy* 563 (Prometheus Books 2004) (1872) (noting that under a patent system, “the greater the usefulness, the greater the reward”).

incentivize commercialization and disclosure of information, there is no change in this function as between a human and an AI-generated invention.

43. By contrast, denying patent protection for AI-generated inventions threatens to undermine the patent system by failing to encourage the production of socially valuable inventions.

44. Patent law also protects the moral rights of human inventors and acknowledging an AI as an inventor where appropriate would protect these human rights. At present, individuals are claiming inventorship of AI-generated inventions under circumstances in which those persons have not functioned as inventors. See Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1079–1126 (2016).

45. Failing to appropriately acknowledge inventive activity by AI weakens moral justifications for patents by allowing individuals to take credit for work they have not done. It is not unfair to machines who have no interest in being acknowledged, but it is unfair to other human inventors because it devalues their accomplishments by altering and diminishing the meaning of inventorship. This could equate the hard work of creative geniuses with those simply asking a machine to solve a problem or submitting a machine's output. By contrast, acknowledging an AI as an inventor would also acknowledge the work of the AI's creators. Finally, listing an AI as an inventor serves to inform the public of an invention's origin.

AI-Generated Inventions Should Be Patentable Under Existing Law

46. There is no statute or case that has found an AI-generated invention cannot be patented, or that holds an AI cannot be listed as an inventor.

47. Further, there is no evidence that Congress ever intended to prohibit patents on AI-generated inventions. It is not disputed that both statutory and judicial language refers to

inventors as individuals, but none of these laws or cases have been in relation to AI-generated inventions.

48. Rather, any discussion of inventors as natural persons has been based on the *assumption* that only a person could invent, or to prevent corporate and sovereign inventorship at the expense of a human inventor.

49. Because cases that refer to inventors as individuals have never done so in relation to an AI-generated invention, they should not be misapplied to support a blanket prohibition on patent rights. *See* Karl F. Milde, Jr., Can a Computer Be an “Author” or an “Inventor”?, 51 J. PAT. OFF. SOC’Y 378, 379 (1969). (“The closest that the Patent Statute comes to requiring that a patentee be an actual person is in the use, in Section 101, of the term ‘whoever.’ Here too, it is clear from the absence of any further qualifying statements that the Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”)

50. Given the absence of statutory law directed to patents on AI-generated inventions, such patents should be permitted under a dynamic interpretation of the law. *See* William N. Eskridge, Jr. & Philip P. Frickey, Statutory Interpretation as Practical Reasoning, 42 STAN. L. REV. 321, 324 (1990). Such an approach would be consistent with the Founders’ intent in enacting the Patent and Copyright Clause, and it would interpret the Patent Act to further that purpose.

51. Nor would such an interpretation run afoul of the chief objection to dynamic statutory interpretation, namely that it interferes with reliance and predictability and the ability of citizens “to be able to read the statute books and know their rights and duties.” *Id.*, at 340. That is because a dynamic interpretation would not upset an existing policy. Permitting patents on AI-

generated inventions would clarify the permissibility of future patent applications rather than retroactively invalidating previously granted patents, and there is naturally less reliance and predictability in patent law than in many other fields given that it is a highly dynamic subject area that struggles to adapt to constantly changing technologies.

52. Other areas of patent law have been the subject of dynamic interpretation.⁷ For example, in the landmark 1980 case of *Diamond v. Chakrabarty*, the Supreme Court was charged with deciding whether genetically modified organisms could be patented. *Diamond v. Chakrabarty*, 447 U. S. 303, 317 (1980). The Court held that a categorical rule denying patent protection for “inventions in areas not contemplated by Congress . . . would frustrate the purposes of the patent law.” *Id* at 315. The Court noted that Congress chose expansive language to protect a broad range of patentable subject matter. *Id* at 316.

53. It would be particularly unwise to prohibit patents on AI-generated inventions on the basis of narrow interpretations of texts written when AI-generated inventions were unforeseeable. If patents on AI-generated inventions are to be prohibited, it should only be on the basis of clear and unambiguous Congressional intent.

54. Drawing an analogy from the copyright context, just as the terms “Writings” and “Authors” have been construed flexibly in interpreting the Patent and Copyright Clause, so too should the term “Inventors” be afforded the flexibility needed to effectuate constitutional

⁷ The Supreme Court has called the section of the U.S. Code relating to patentable subject matter a “dynamic provision designed to encompass new and unforeseen inventions.” *J.E.M. AG Supply, Inc. v. Pioneer Hi-Bred Int’l, Inc.*, 534 U. S. 124, 135 (2001). The Court noted in *Bilski v. Kappos* that “it was once forcefully argued that until recent times, ‘well-established principles of patent law probably would have prevented the issuance of a valid patent on almost any conceivable computer program.’” 561 U.S. 593, 605 (2010) (quoting *Diamond v. Diehr*, 450 U.S. 175, 195 (1981) (Stevens, J., dissenting)). The Court, however, went on to state that “this fact does not mean that unforeseen innovations such as computer programs are always unpatentable.” *Id.* (citing *Diehr*, 450 U.S. at 192–93 (Stevens, J., dissenting)).

purposes.⁸ Indeed, under the work-for-hire doctrine, a corporation can be considered a legal author for copyright purposes. 17 U.S.C. § 101. See, also, <https://www.copyright.gov/circs/circ30.pdf>.

55. Granting patents on AI-generated inventions may even be required by international treaties ratified by the United States, some of which *require* signatories to issue patents that meet certain substantive criteria. Such treaties do not contain exceptions which would apply to AI-generated inventions. This includes, among others, The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which in Article 27 states: “Subject to the provisions of paragraphs 2 and 3, patents *shall* be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.” [Emphasis added]

Conception Does Not Prohibit Artificial Inventors

56. For a person to be an inventor, the person must contribute to an invention’s “conception.” Conception has been defined 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....” *Townsend v. Smith*, 36 F.2d 292, 295, 4 USPQ 269, 271 (CCPA 1929)."

57. The case law on conception should not prevent AI inventorship. Whether or not AI can “conceive” of an invention, “think,” or have something analogous to consciousness should be irrelevant with regards to the existence of patent rights.

⁸ In 1973, the Supreme Court in *Goldstein v. California* noted that the terms “Writings” and “Authors,” have “not been construed in their narrow literal sense but, rather, with the reach necessary to reflect the broad scope of constitutional principles.” 412 U.S. 546, 561 (1973).

58. While judicial language about conception is undeniably eloquent, it is not similarly informative about what is specifically required. It does not establish whether a non-human could conceive of anything, and even with regards to individuals it is not clear what “formation in the mind” *actually* means. Courts associating inventive activity with conception have not been using terms precisely or meaningfully in the context of AI-generated inventions.

59. If conception is required for an invention, it is unclear under existing law whether an AI would have to engage in a process that results in inventive output—which it can do—or whether, and to what extent, it would need to mimic human thought. If the latter, it is unclear what the purpose of such a requirement would be except to exclude nonhumans (for which a convoluted test is unnecessary).

60. Dr. Thaler has argued that his AI’s architecture imitates the architecture of the human brain. See, e.g., Stephen L. Thaler, Synaptic Perturbation and Consciousness, 6 INT’L J. MACHINE CONSCIOUSNESS 75 (2014). There is a slippery slope in determining what constitutes “conception” in an AI even leaving aside deficits in our understanding of the structure and function of the human brain.

61. If DABUS is able to generate patentable output but not to engage in “conception”—would a computer scientist have to design a completely digitized version of the human brain? Even if designing a completely digitized version of the human brain was possible, it might not be the most effective way to structure an inventive machine. On top of that, it would be difficult or impossible for the USPTO and the courts to distinguish between different computers’ architectures.

62. The problem of speaking precisely about concepts such as conception with regards to computers was identified by Alan Turing, one of the founders of computer science,

who in 1950 considered the question, “Can machines think?” See A.M. Turing, Computing Machinery and Intelligence, 59 MIND 433, 433–51 (1950). He found the question to be ambiguous, and the term “think” to be unscientific in its colloquial usage. *Id.*

63. Turing decided the better question to address was whether an individual could tell the difference between responses from a computer and an individual; rather than asking whether machines “think,” he asked whether machines could perform in the same manner as thinking entities. *Id.* Turing’s analysis from more than sixty years ago demonstrates that a test based on machine “conception” would be ambiguous, challenging to administer, and of uncertain utility.

64. Moreover, the primary reason a conception requirement should not prevent AI inventorship is that the patent system should be indifferent to the means by which invention comes about. Congress came to this conclusion in 1952 when it abolished the Flash of Genius doctrine. See 35 U.S.C. § 103 (2012). That doctrine had been used by the Federal Courts as a test for patentability for over a decade. It held that in order to be patentable, a new device, “however useful it may be, must reveal the flash of creative genius, not merely the skill of the calling.” *Cuno Eng’g Corp.*, 314 U.S. at 91. The doctrine was interpreted to mean that an invention must come into the mind of an inventor in a “flash of genius” rather than as a “result of long toil and experimentation.”⁹ As a commentator at the time noted, “the standard of patentable invention

⁹ The Supreme Court later claimed the “Flash of Creative Genius” language was just a rhetorical embellishment and that requirement concerned the device not the manner of invention. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 15 n.7, 16 n.8 (1966). That was not, however, how the test was interpreted. See P.J. Federico, Origins of Section 103, 5 APLA Q.J. 87, 97 n.5 (1977) (noting the test led to a higher standard of invention in the lower courts). When Congress abolished the test, Congress noted it should be immaterial whether invention was made “from long toil and experimentation or from a flash of genius.” 35 U.S.C. § 103. Further, the Court stated in 1966 in *Graham* that “[t]he second sentence states that patentability as to this requirement is not to be negated by the manner in which the invention was made, that is, it is immaterial whether it resulted from long toil and experimentation or from a flash of genius.” *Graham*, 383 U.S. at 16.

represented by [the Flash of Genius doctrine] is apparently based upon the nature of the mental processes of the patentee-inventor by which he achieved the advancement in the art claimed in his patent, rather than solely upon the objective nature of the advancement itself.” The “Flash of Genius” Standard of Patentable Invention, 13 FORDHAM L. REV. 84, 87 (1944).

65. The Flash of Genius test was an unhelpful doctrine because it was vague, difficult for lower courts to interpret, involved judges making subjective decisions about a patentee’s state of mind, and made it substantially more difficult to obtain a patent. See DePaul College of Law, Patent Law—“Flash of Genius” Test for Invention Rejected, 5 DEPAUL L. REV. 144, 146 (1955). The test was part of a general hostility toward patents exhibited by mid-twentieth century courts, a hostility that caused United States Supreme Court Justice Robert Jackson to note in a dissent that “the only patent that is valid is one which this Court has not been able to get its hands on.” *Jungersen v. Ostby & Barton Co.*, 335 U.S. 560, 572 (1949) (Jackson, J., dissenting).

66. Criticism of this state of affairs led President Roosevelt to establish a National Patent Planning Commission to study the patent system and to make recommendations for its improvement.¹⁰ In 1943, the Commission reported with regard to the Flash of Genius doctrine that “patentability shall be determined objectively by the nature of the contribution to the advancement of the art, and not subjectively by the nature of the process by which the invention may have been accomplished.” The “Flash of Genius” Standard of Patentable Invention, 85 (internal quotation marks omitted). Adopting this recommendation, the Patent Act of 1952 legislatively disavowed the Flash of Genius test. See 35 U.S.C. § 103 (2012).¹¹ In the same

¹⁰ See William Jarratt, U.S. National Patent Planning Commission, 153 NATURE 12, 14 (1944).

¹¹ Further, in *Graham*, the Supreme Court noted that “[i]t . . . seems apparent that Congress intended by the last sentence of § 103 to abolish the test it believed this Court announced in the controversial phrase ‘flash of creative genius,’ used in *Cuno Engineering*.” *Graham*, 383 U.S. at 15.

manner, patentability of AI-generated inventions should be based on the inventiveness of a computer's output rather than on a clumsy anthropomorphism because, like Turing, patent law should be interested in a functionalist solution.

CAUSES OF ACTION

FIRST CAUSE OF ACTION

(APA Violation in Denying Plaintiff's Petition)

67. Plaintiff re-alleges and incorporates herein by reference every allegation contained in all of the preceding paragraphs.

68. For the reasons stated above, requiring a natural person to be listed as an inventor as a condition of patentability is contrary to law.

69. Defendants' Notice to File Missing Parts of Nonprovisional Application on August 8, 2019 and Defendants' denial of Plaintiff's petition under 37 CFR 1.181 were both contrary to law.

70. The agency actions here were arbitrary, capricious, an abuse of discretion and not in accordance with the law; unsupported by substantial evidence, and in excess of Defendants' statutory authority.

71. The Notice to File Missing Parts of Nonprovisional Applications should be set aside and the Applications reinstated.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that the Court:

A. Issue an order compelling Defendants to reinstate the Applications and vacate the prior decision on the petitions filed under 37 CFR 1.181;

- B. A declaration that a patent application for an AI-generated invention should not be rejected on the basis that no natural person is identified as an inventor;
- C. A declaration that a patent application for an AI-generated invention should list an AI where the AI has met inventorship criteria.
- D. Award costs and its reasonable attorneys fees to Plaintiff; and
- E. Grant other or further relief as may be appropriate.

Dated: August 6, 2020

BROWN, NERI, SMITH & KHAN LLP

By: /s/ Geoffrey A. Neri
Ryan Abbott, Esq. (*pro hac vice*
application pending)
Geoffrey A. Neri, Esq. VSB No. 72219
11601 Wilshire Blvd, Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980
Ryan@bnsklaw.com
Geoff@bnsklaw.com

Attorneys for Plaintiff

EXHIBIT 1



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

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.

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.*

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

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.

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

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).

Application No. 16/524,350

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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

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

STEPHEN THALER,)	
)	
Plaintiff,)	
)	
vs.)	Civil Action No. 1:20cv903
)	
ANDREI IANCU,)	
in his official capacity as Under)	
Secretary of Commerce for)	
Intellectual Property & Director of)	
the United States Patent &)	
Trademark Office, <i>et al.</i> ,)	
)	
Defendants.)	
)	

NOTICE OF SUBMISSION OF ADMINISTRATIVE RECORD

PLEASE TAKE NOTICE that on this day, defendants have filed the administrative record of proceedings before the United States Patent and Trademark Office (“USPTO”), *see* 5 U.S.C. § 706, with respect to the petition decisions that the USPTO issued with respect to United States Patent Applications 16/524,350 and 16/524,532, which plaintiff challenges in the above-captioned action.

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CERTIFICATE OF SERVICE

I hereby certify that on this date, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will transmit a Notice of Electronic Filing (“NEF”) to the following:

Geoffrey Alex Neri
Brown Neri Smith & Khan LLP
11766 Wilshire Boulevard, Suite 1670
Los Angeles, California 90025
geoff@bnsklaw.com

Date: November 30, 2020

/s/
DENNIS C. BARGHAAN, JR.
Deputy Chief, Civil Division
Assistant U.S. Attorney
2100 Jamieson Avenue
Alexandria, Virginia 22314
Telephone: (703) 299-3891
Fax: (703) 299-3983
Email: dennis.barghaan@usdoj.gov

ATTORNEYS FOR DEFENDANTS

**U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office**

November 24, 2020

THIS IS TO CERTIFY that the annexed is a true copy from the electronic records (IFW) of the United States Patent and Trademark Office of the contents of the patent application identified below:¹

APPLICATION NO.: 16/524,350

APPLICANT: Stephen L. Thaler

FILING DATE: July 29, 2019

INVENTION: DEVICES AND METHODS FOR ATTRACTING
ENHANCED ATTENTION



By authority of the
DIRECTOR OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Laura J. Peterson
Certifying Officer

¹ This administrative record does not include copies of the prior art references submitted with the Information Disclosure Statements.

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**U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office**

November 24, 2020

THIS IS TO CERTIFY that the annexed is a true copy from the electronic records (IFW) of the United States Patent and Trademark Office of the contents of the patent application identified below:¹

APPLICATION NO: 16/524,532
APPLICANT: Stephen L. Thaler
FILING DATE: July 29, 2019
INVENTION: FOOD CONTAINER



By authority of the
DIRECTOR OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Laura J. Peterson
Certifying Officer

¹ This administrative record does not include copies of the prior art references submitted with the Information Disclosure Statements.

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PTO/AIA/15 (10-17)
 Approved for use through 11/30/2020. OMB 0651-0032
 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>	Attorney Docket No. 50567-3-01-US
	First Named Inventor [DABUS] [AI generated invention]
	Title DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
	Priority Mail Express® Label No.

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>	ADDRESS TO: Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
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1. <input checked="" type="checkbox"/> Fee Transmittal Form (PTO/SB/17 or equivalent) 2. <input checked="" type="checkbox"/> Applicant asserts small entity status. See 37 CFR 1.27 3. <input type="checkbox"/> Applicant certifies micro entity status. See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent. 4. <input checked="" type="checkbox"/> Specification [Total Pages <u>21</u>] Both the claims and abstract must start on a new page. (See MPEP § 608.01(a) for information on the preferred arrangement) 5. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets <u>4</u>] 6. <input checked="" type="checkbox"/> Inventor's Oath or Declaration [Total Pages <u>2</u>] (including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e)) a. <input checked="" type="checkbox"/> Newly executed (original or copy) b. <input type="checkbox"/> A copy from a prior application (37 CFR 1.63(d)) 7. <input checked="" type="checkbox"/> Application Data Sheet * See note below. See 37 CFR 1.76 (PTO/AIA/14 or equivalent) 8. CD-ROM or CD-R in duplicate, large table, or Computer Program (Appendix) <input type="checkbox"/> Landscape Table on CD 9. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. – c. are required) a. <input type="checkbox"/> Computer Readable Form (CRF) b. <input type="checkbox"/> Specification Sequence Listing on: i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or ii. <input type="checkbox"/> Paper c. <input type="checkbox"/> Statements verifying identity of above copies	ACCOMPANYING APPLICATION PAPERS 10. <input checked="" type="checkbox"/> Assignment Papers (cover sheet & document(s)) Name of Assignee <u>Stephen L. Thaler</u> 11. <input checked="" type="checkbox"/> 37 CFR 3.73(c) Statement <input checked="" type="checkbox"/> Power of Attorney (when there is an assignee) 12. <input type="checkbox"/> English Translation Document (if applicable) 13. <input checked="" type="checkbox"/> Information Disclosure Statement (PTO/SB/08 or PTO-1449) <input checked="" type="checkbox"/> Copies of citations attached 14. <input type="checkbox"/> Preliminary Amendment 15. <input type="checkbox"/> Return Receipt Postcard (MPEP § 503) (Should be specifically itemized) 16. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed) 17. <input type="checkbox"/> Nonpublication Request Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 18. <input type="checkbox"/> Other: _____ _____ _____ _____
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*Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
 (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS					
<input checked="" type="checkbox"/> The address associated with Customer Number: <u>89602</u> OR <input type="checkbox"/> Correspondence address below					
Name					
Address					
City	State	Zip Code			
Country	Telephone	Email			

Signature	/Reuven K. Mouallem/	Date	29 July 2019
Name (Print/Type)	Reuven K. Mouallem	Registration No. (Attorney/Agent)	63345

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
 If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION			
First Named Inventor/Applicant Name:	[DABUS] [Invention generated by Artificial Intelligence]			
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-3-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	75	75
UTILITY SEARCH FEE	2111	1	330	330
UTILITY EXAMINATION FEE	2311	1	380	380
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				785

Electronic Acknowledgement Receipt	
EFS ID:	36708772
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	[DABUS] [Invention generated by Artificial Intelligence]
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	29-JUL-2019
Filing Date:	
Time Stamp:	11:30:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$785
RAM confirmation Number	E20197SB33074689
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	aia0014.pdf	1256333	no	8
			46ff2b561c189b822b69dcd725c93663654809d7		
Warnings:					
Information:					
2	Assignee showing of ownership per 37 CFR 3.73	aia0096.pdf	116764	no	3
			818b956446dec7c999be1170831f218a92fb50b3		
Warnings:					
Information:					
3	Miscellaneous Incoming Letter	NF_Assignment-s.pdf	831178	no	1
			c78d8cdbac4efc12f5b124d82eb0d2f0b4ee5498		
Warnings:					
Information:					
4	Drawings-only black and white line drawings	NF_Patent_drawings-p.pdf	131535	no	4
			afa8f3f853ca5d81b0a425f4083c250f4c00416		
Warnings:					
Information:					
5	Oath or Declaration filed	NF_Substitute-s.pdf	855028	no	2
			b57e9a47bb6e739ff7a8ca2fd54150086f1ebc9a		
Warnings:					
Information:					
6	Power of Attorney	POA-s.pdf	1561578	no	2
			6b0183c3845c68a6be8d987846b2e8233ca7fa82		
Warnings:					
Information:					

7	Non Patent Literature	94CurrBiolTovee.pdf	441298	no	3
			2174b24bfb2275b04d2544b5b2605d0761b25		
Warnings:					
Information:					
8	Non Patent Literature	Dynamic_Fractal_Flickering.pdf	199192	no	7
			feb8e40c31c3bc433b7be6fe4954871e289dcaf3		
Warnings:					
Information:					
9	Other Reference-Patent/App/Search documents	EPO_Extended_ESR.pdf	222004	no	7
			31a51191ce5774fc25f1ed22f907521f983b6cd8		
Warnings:					
Information:					
10	Non Patent Literature	MedHypo_Thaler.pdf	712080	no	10
			d3002a3ac6ee19201e3a108e6f68898c586603fa		
Warnings:					
Information:					
11	Non Patent Literature	Synaptic-Perturbation.pdf	1161075	no	33
			7b7680f958374b0c632b405827866a782a5331cf		
Warnings:					
Information:					
12	Other Reference-Patent/App/Search documents	UKIPO_Search_and_Exam_Report.pdf	302156	no	6
			34d25b9a169262d05c5131712e092f10aa2f949f		
Warnings:					
Information:					
13	Non Patent Literature	BLINKING_FLASHING_AND_TEMPORAL_RESPONSE-p.pdf	121213	no	3
			51fc36be143bcc0232ef754cb905e19e6b58bb36		
Warnings:					
Information:					

14	Non Patent Literature	Pattern-Turnover-p.pdf	413225	no	6
			a96b214ce25c1623411b4d7552217b5920f01042		
Warnings:					
Information:					
15	Foreign Reference	WO9517854A1.pdf	3395227	no	83
			96ccac1ac103f25b8f6b7aaa8b5674352c4c1d01		
Warnings:					
Information:					
16	Foreign Reference	WO2010044708A1.pdf	845499	no	15
			bb147ab3bcd3d29e182c82ebd908dc386aba725		
Warnings:					
Information:					
17	Non Patent Literature	Why_Fractals_Are_So_Soothing-p.pdf	380865	no	6
			7b3a8d657f52b699b2f00902f19cf3614c18079		
Warnings:					
Information:					
18	Information Disclosure Statement (IDS) Form (SB08)	NF_sb0008b-2.pdf	236025	no	2
			88c9027d229991379b0b992aef3547a1047d7647		
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
19	Information Disclosure Statement (IDS) Form (SB08)	NF_sb0008a.pdf	261568	no	2
			3493e1c4017cf83cd4dac46732524062885369ca		
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
20	Information Disclosure Statement (IDS) Form (SB08)	NF_sb0008b.pdf	228581	no	2
			337cfd4d105ec0ba6c2971eb0cd100e048b42021		
Warnings:					
Information:					

This is not an USPTO supplied IDS fillable form					
21	Other Reference-Patent/App/Search documents	UKIPO_Examination_report_23_July_2019.pdf	77126	no	2
			618b5413d89e550ed890faeb34831140b6774ac7		
Warnings:					
Information:					
22	Specification	NF_Specification-p.pdf	167148	no	21
			22fe4a6880ff0830617a614f04e8122da9ff31f6		
Warnings:					
Information:					
23	Transmittal of New Application	aia0015.pdf	280553	no	2
			8592e5cef0a1b7c70558021d1da9e40eff118018		
Warnings:					
Information:					
24	Fee Worksheet (SB06)	fee-info.pdf	35391	no	2
			d00b5ee20518f1be39a406c0fa927768937e3af4		
Warnings:					
Information:					
Total Files Size (in bytes):			14232642		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-3-01-US
		Application Number	
Title of Invention	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor	1	<input type="button" value="Remove"/>		
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	[DABUS]		Invention generated by artificial intelligence	
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
City		State/Province	Country of Residence	
Mailing Address of Inventor:				
Address 1	1767 Waterfall Dr.			
Address 2				
City	St. Charles	State/Province	MO	
Postal Code	63303	Country	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).

An Address is being provided for the correspondence information of this application.

Customer Number	89602		
Email Address	ydm@FlashPointIP.com	<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>
Email Address	rkm@FlashPointIP.com	<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>
Email Address	dryanabbott@gmail.com		<input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION		
Attorney Docket Number	50567-3-01-US	Small Entity Status Claimed	<input checked="" type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	4	Suggested Figure for Publication (if any)	2

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-3-01-US
		Application Number	
Title of Invention	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

Request Early Publication (Fee required at time of Request 37 CFR 1.219)

Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer number will be used for the Representative Information during processing.

Please Select One:	Customer Number	<input checked="" type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)		
Prefix	Given Name	Middle Name	Family Name	Suffix	Remove
Dr.	Reuven	K.	Mouallem		
Registration Number	63345				
Prefix	Given Name	Middle Name	Family Name	Suffix	Remove
Dr.	Ryan	B.	Abbott		
Registration Number	68178				
Additional Representative Information blocks may be generated within this form by selecting the Add button.					Add

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-3-01-US
		Application Number	
Title of Invention	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION		
Prior Application Status	Pending	<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)	<input type="button" value="Remove"/>
18275174.3	EP	2018-11-07		
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)	<input type="button" value="Remove"/>
1818161.0	GB	2018-11-07		
Additional Foreign Priority Data may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-3-01-US
		Application Number	
Title of Invention	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-3-01-US
		Application Number	
Title of Invention	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1	<input type="button" value="Remove"/>
--------------------	---------------------------------------

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

<input checked="" type="radio"/> Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
---	--	----------------

Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest
---	--

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

<input type="text"/>

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here.

Prefix	Given Name	Middle Name	Family Name	Suffix
<input type="text"/>	Stephen	L.	Thaler	<input type="text"/>

Mailing Address Information For Applicant:

Address 1	1767 Waterfall Dr.		
Address 2			
City	St. Charles	State/Province	MO
Country	US	Postal Code	63303
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-3-01-US
		Application Number	
Title of Invention	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION		

Assignee | 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here.

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		State/Province	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Reuven K. Mouallem/		Date (YYYY-MM-DD)	2019-07-24
First Name	Reuven	Last Name	Mouallem	Registration Number
				63345

Additional Signature may be generated within this form by selecting the Add button.

PTO/AIA/14 (02-18)

Approved for use through 11/30/2020. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-3-01-US
		Application Number	
Title of Invention	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Stephen L. Thaler

Application No./Patent No.: _____ Filed/Issue Date: _____

Titled: DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION

Stephen L. Thaler, a individual

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

- 1. The assignee of the entire right, title, and interest.
- 2. An assignee of less than the entire right, title, and interest (check applicable box):
 - The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
 - There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

- 3. The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

- 4. The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

- B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/96 (08-12)
 Approved for use through 01/31/2013. OMB 0651-0031
 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Reuven K. Mouallem/ _____

29 July 2019 _____

Signature

Date

Reuven K. Mouallem, Patent agent _____

63345 _____

Printed or Typed Name

Title or Registration Number

Privacy Act Statement

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

BHN"W



ASSIGNMENT

DABUS, the Creativity machine that has produced the below-detailed invention, as the sole inventor (represented in this Assignment by its owner, Stephen L. Thaler, hereinafter called the "Assignor"), hereby assigns and transfers to:

Stephen L. Thaler
1767 Waterfall Dr., St. Charles, MO 63303

(hereinafter called the "Assignee"), its successors, assignees, nominees, or other legal representatives, the Assignor's entire right, title, and interest, including, but not limited to, copyrights, trade secrets, trademarks and associated good will and patent rights in the invention and the registrations to the invention entitled:

"DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION"

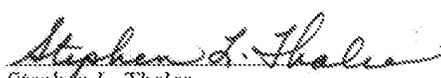
described and claimed in the following patent application: US Non-Provisional Patent Application identified as FlashPoint IP attorney docket No. 50567-3-01-US PB, to be filed with the USPTO; including any and all inventions and improvements ("Subject Matter") disclosed therein, all right of priority in the above application(s) and in any underlying provisional or foreign application, including but not limited to the rights of priority to applications already filed in the EPO and UK, all provisional, utility, divisional, continuation in whole or in part, substitute, renewal, reissue, and all other applications, PCT and national phase entries, related thereto which have been or may be filed in any jurisdiction, and all patents, including reissues, extensions and reexaminations, which may be granted on any of the above applications, the priority rights under International Conventions, and the Letters Patent which may be granted thereon, together with all rights to recover damages for infringement, including infringement of provisional rights.

Assignor agrees that Assignee may apply for and receive patents for Subject Matter in Assignee's own name. Assignor represents that Assignor has the rights, titles, and interests to convey as set forth herein, and covenants with Assignee that Assignor has not made and will not make any other assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

In view of the fact that the sole inventor is a Creativity Machine, with no legal personality or capability to execute said assignment, and in view of the fact that the assignee is the owner of said Creativity Machine, this Assignment is considered enforceable without an explicit execution by the inventor. Rather, the owner of DABUS, the Creativity Machine, is signing this Assignment on its behalf.

Similarly, DABUS, being a machine and having no legal personality, does not have the capability to receive any consideration, and therefore, Stephen L. Thaler, as its owner/representative, acknowledges the receipt and sufficiency of good and valuable consideration for this assignment.

Signed and sealed this 23rd day of July 2019.


Stephen L. Thaler
On behalf of DABUS,
Assignor


Stephen L. Thaler
Assignee

** FlashPoint IP * Where Volatile Ideas Ignite **

- * Dr. Reuven K. Manallem, LL.M. * IP Management Consultant/Strategic Advisor *
- * Registered Israeli Patent Attorney * Registered U.S. Patent Agent * e-mail: rkm@FlashPointIP.com *
- * website: www.FlashPointIP.com * LinkedIn: www.Linkedin.com/in/FlashPointIP *
- * tel: 972-3-936-3199 (ll. line)/972-82-764-8226 (ll. cell.)/1-816-301-1649 (US line) *

Exemplary Embodiment

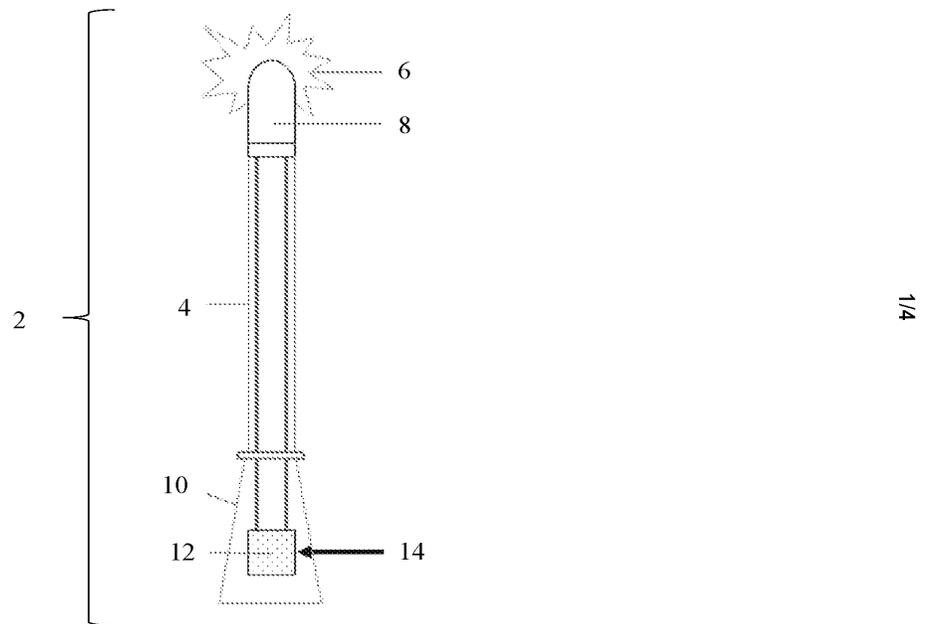
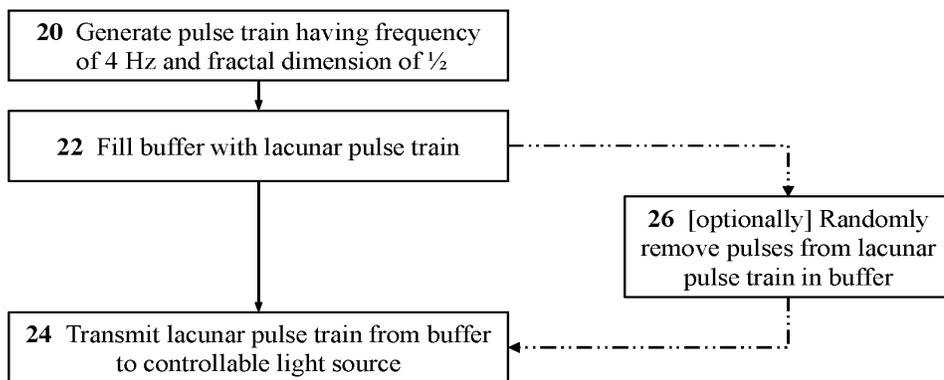


Figure 1

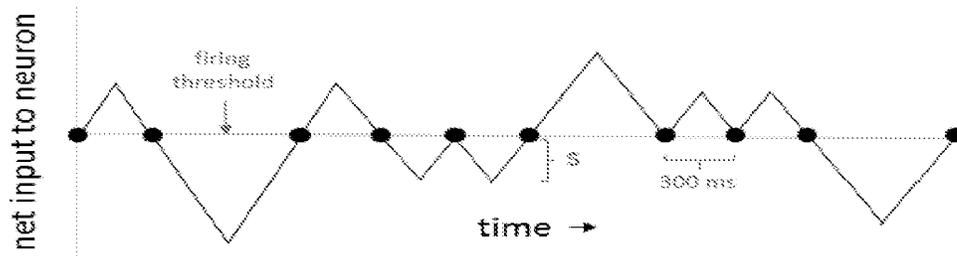
Exemplary Embodiment



2/4

Figure 2

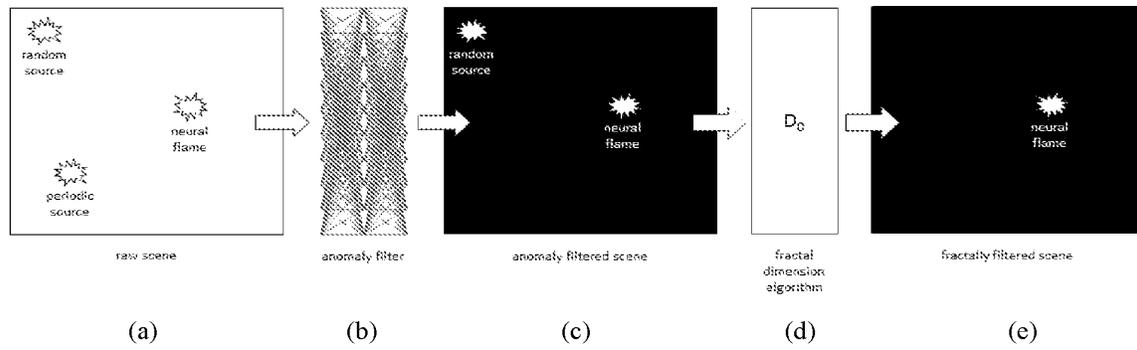
Exemplary Embodiment



3/4

Figure 3

Exemplary Embodiment



4/4

Figure 4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
Stephen L. Thaler	§	
Serial No.:	§	
Filed:	§	Group Art Unit:
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.:
ENHANCED ATTENTION	§	
Examiner:	§	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

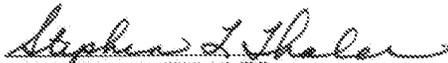
SUBSTITUTE STATEMENT UNDER 37 CFR 1.64 IN LIEU OF
DECLARATION UNDER 35 USC §115(d)

This Statement under 37 CFR 1.64 is directed to the abovementioned application in lieu of a declaration under 35 USC §115(d).

- The name of inventor to whom this substitute statement applies:
DABUS (the invention was autonomously generated by an artificial intelligence), 1767 Waterfall Dr., St. Charles, MO 63303 USA.
- I believe the above-named inventor or joint inventor to be the original inventor or an original joint inventor of a claimed invention in the application. The above-identified application was made or authorized to be made by me. I hereby acknowledge that any willful false statement made in this statement is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.
- Relationship to the inventor to whom this substitute statement applies: **Legal Representative**

- Circumstances permitting execution of this substitute statement: **Inventor is under legal incapacity in view of the fact that the sole inventor is a Creativity Machine (i.e., an artificial intelligence), with no legal personality or capability to execute this substitute statement.**
- Person executing this substitute statement is the Applicant and the Assignor of the abovementioned application, as well as the owner of said Creativity Machine, DABUS; namely: **Stephen L. Thaler, 1767 Waterfall Dr., St. Charles, MO 63303 USA.**

.....
Signed this 23rd day of July 2019


STEPHEN L. THALER

PTO/AIA/96 (07-17)

Approved for use through 03/31/2021. OMB DES1-0035
 U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

Practitioners associated with Customer Number:

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number
Dr. Reuven K. Mouallem, L.L.M.	63345		
Dr. Ryan B. Abbott	68178		

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

The address associated with Customer Number: **89602**

OR

Firm or individual name

Address

City State Zip

Country

Telephone Email

Assignee name and address: **Stephen L. Thaler
 1767 Waterfall Dr., St. Charles, MO 63303**

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature *Stephen L. Thaler* Date **24 July 2019**

Name **Stephen L. Thaler** Telephone **(314) 378-5406**

Title **Applicant/Assignee**

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 322 and 37 CFR 1.11 and 1.14. This collection is estimated to take 18 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Privacy Act Statement

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PTO/SB/08b (07-09)
 Approved for use through 11/30/2020. OMB 0651-0031
 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center;"><i>(Use as many sheets as necessary)</i></p>		Complete if Known	
		Application Number	
		Filing Date	
		First Named Inventor	[DABUS-AI generated Invention]
		Art Unit	
		Examiner Name	
Sheet	2	of	3
		Attorney Docket Number	50567-3-01-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		KERSLAKI R., Examiner; "Combined Search and Examination Report Under Sections 17 and 18(3)"; Intellectual Property Office, United Kingdom; 30 April 2019 (copy attached)	
		WEIJLAND A., Examiner; "Extended European Search Report"; European Patent Office, Munich, Germany 23 April 2019 (copy attached)	
		ZUEVA, M.V., "Dynamic Fractal Flickering as a Tool in Research of Non-Linear Dynamics of the Evoked Activity of a Visual System and the Possible Basis for New Diagnostics and	
		(continued) Treatment of Neurodegenerative Diseases of the Retina and Brain", World Applied Sciences Journal 27 (4): 462-468, 2013, DOI: 10.5829/idosi.wasj.2013.27.04.13657	
		THALER, S. L., "Cycles of insanity and creativity within contemplative neural systems", Elsevier, Medical Hypotheses 94 (2016) 138–147, U.S.	
		THALER, S. L., "Synaptic Perturbation and Consciousness", International Journal of Machine Consciousness Vol. 6, No. 2 (2014) 75-105, U.S.	
		WILLIAMS F., "Why Fractals Are So Soothing", excerpt of Florence Williams's book The Nature Fix: Why Nature Makes Us Happier, Healthier, and More Creative (2017)	
		THALER, S. L., "Pattern Turnover within Synaptically Perturbed Neural Systems", Elsevier, Procedia Computer Science Volume 88, 2016, Pages 21–26.	
		TOVEE, M. J., "How fast is the speed of thought?", New Castle University, UK, (attached)	
		"BLINKING, FLASHING, AND TEMPORAL RESPONSE", Nasa, Ames Research Center, Human Systems Integration Division [on-line] (attached)	

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.
 This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Privacy Act Statement

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**Intellectual
Property
Office**

Stephen L Thaler
c/o Williams Powell
11 Staple Inn
LONDON
WC1V 7QH

Patents Directorate

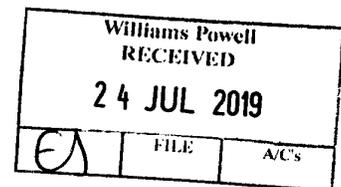
Concept House
Cardiff Road, Newport
South Wales, NP10 8QQ

Direct Line: 01633 814919
E-Mail: richard.kerslake@ipo.gov.uk
Switchboard: 0300 300 2000
Fax: 01633 817777
Minicom: 0300 0200 015

Your Reference: RJ/ES/N35111-GB1
Application No: GB1818161.0

23 July 2019

Dear Sir



Patents Act 1977: Examination Report under Section 18(3)

Latest date for reply: 9 November 2020

I enclose a copy of my examination report. Please note that published patent documents mentioned in my report may be obtained for free on the internet and are usually freely available from <http://worldwide.espacenet.com>.

By the above date you should either file amendments to meet the objections in the enclosed report or make observations on them. If you do not, the application may be refused. I will consider your response and will reply in a timescale consistent with our current target: <https://www.gov.uk/government/publications/timeliness-target-for-re-examination-of-patent-applications>

Online e-filing

You may file such amendments or observations electronically if you wish, using the online patent filing services detailed in <https://www.gov.uk/government/publications/how-to-file-documents-with-the-intellectual-property-office>.

Yours faithfully

Richard Kerslake

Richard Kerslake
Examiner

Use of E-mail: Please note that e-mail should be used for correspondence only.
Disclaimer: Please note the documents we send you may be subject to copyright.



**Intellectual
Property
Office**

Your ref : RJ/ES/N35111-GB1
Application No: GB1818161.0
Applicant : Stephen L Thaler

Examiner : Richard Kerslake
Tel : 01633 814919
Date of report : 23 July 2019

Latest date for reply: 9 November 2020

Page 1/1

**Patents Act 1977
Examination Report under Section 18(3)**

Basis of the examination

1. My examination has taken account of the amendments filed with your agent's letter of 13 June 2019.
2. A top-up search has not yet been conducted on your application as it is yet to be published.
3. Thank you for the enclosed copy of the search report issued by the European Patent Office. For the avoidance of doubt, the documents cited therein have been considered, but are not deemed citable against your replacement claims filed.

Clarity, Support & Added Matter

4. The expression "ln(number of *intervals* of a neuron's input with a firing threshold)" in independent claims 1 & 8 appears to be a typographical error. The expression is not supported by the description as filed and consequently adds subject matter to the application. There are significant differences in scope between the term "interval" and "intercept". Consequently, the expression should be amended to define "ln(number of *intercepts* of a neuron's *net* input with a firing threshold)" for consistency with the specification as filed.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant: §
§
Stephen L. Thaler §
§
Serial No.: 16/524,350 §
§
Filed: July 29, 2019 §
§
For: DEVICES AND METHODS §
FOR ATTRACTING §
ENHANCED ATTENTION §
§
Examiner: §

Group Art Unit:
Attorney Docket: 50567-3-01-US
Confirmation No.: 1467

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 FOR PETITION FOR
RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Stephen L. Thaler, declare that:

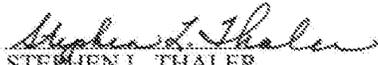
1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. There are no US citizens listed as inventors of the foreign-filed applications, making it uncertain whether a foreign filing license would be necessary.
3. I am the Applicant in the foreign filings cited in the Petition (attached herewith):
 - a. European Patent Application No. 18275174.3, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention;” and
 - b. UK Patent Application No. 1818161.0, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention.”

4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I am informed and believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. Pursuant to 37 CFR §5.25(a)(3)(i), I am informed and believe that the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to devices and methods for attracting enhanced attention, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. Pursuant to 37 CFR §5.25(a)(3)(ii), I was first informed by my US patent counsel when they began to prepare filing for a patent before the USPTO in which they determined the potential need for a foreign filing license on June 13, 2019. I have diligently executed this Declaration in pursuit of a retroactive foreign filing license.
7. Pursuant to 37 CFR §5.25(a)(3)(iii), I am informed and believe that the foreign-filed applications were filed abroad, without a foreign filing license under 37 CFR §5.11 first having been obtained, through error and without deceptive

intent. I am informed and believe that the foreign-filed applications were filed and prosecuted through my European counsel (a UK IP law firm) who were unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 29th day of July 2019


STEPHEN L. THALER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant: §
§
Stephen L. Thaler §
§
Serial No.: 16/524,350 §
§
Filed: July 29, 2019 §
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Group Art Unit:
Attorney Docket: 50567-3-01-US
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Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

This Petition requests under 37 CFR 5.25 a retroactive license for foreign filing under 35 USC 184 in accordance with §5.14(a). The required fee for the Petition under §1.17(g) has been paid. The retroactive foreign filing licenses are requested for the following jurisdictions in which the unlicensed patent application material was filed.

- European Patent Application No. 18275174.3, filed November 7, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Devices and Methods for Attracting Enhanced Attention;” and
- UK Patent Application No. 1818161.0, filed November 7, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Devices and Methods for Attracting Enhanced Attention.”

In accordance with 37 CFR §5.14 for a petition for retroactive foreign filing license related to a pending US application (identified above by US application number, filing date, applicant, and title), it is submitted that the complete contents of the unlicensed patent

application material (identical for the two foreign filings listed above) is readily identifiable in the referenced US application. A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application.

A Declaration by the Applicant, Dr. Stephen L. Thaler, is attached herewith, avers:

- (1) diligence in seeking the retroactive foreign filing license upon discovery that such license was necessary;
- (2) that the subject matter in question was not under a secrecy order at the time the subject matter was filed abroad; and
- (3) that the subject matter is not currently under a secrecy order.

As indicated in the attached Declaration, the potential need for a retroactive foreign filing license and a Declaration was inadvertently not communicated to the Applicant. Upon learning of the possible need for a foreign filing license, the Applicant diligently executed the attached Declaration.

The foreign filings of unlicensed patent application material were prepared and filed by the Applicant through European counsel (a UK IP law firm) who were unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing.

It is noted that the law on foreign filing licenses in the United Kingdom was changed in 2004 to the effect that no foreign filing license is required unless the application contains information which relates to military technology, for any other reasons publication of the information might be prejudicial to national security, or to the safety of the public.

Thus, the possible need for a foreign filing license did not become apparent, and was filed abroad through error and without deceptive intent, without the required license. It is submitted that diligence in obtaining a retroactive foreign filing license is shown by the present Petition for a Retroactive License.

It is noted that there are no US citizens listed as inventors of the foreign-filed applications, making it uncertain whether a foreign filing license would be necessary.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: July 29, 2019

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant: §
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Group Art Unit:
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Confirmation No.: 1467

Commissioner of Patents and Trademarks
Alexandria, VA 22313

PRE-EXAMINATION SEARCH DOCUMENT FOR ACCELERATED EXAMINATION

Sir:

This pre-examination search statement is provided in support of the petition for accelerated examination filed herewith.

A pre-examination search was conducted involving U.S. patents and patent application publications, foreign patent documents, and non-patent literature as indicated below. The results of the search, as well as the foreign search reports, are provided on an Information Disclosure Statement (IDS) filed concurrently herewith.

Requirements for Petition to Make Special Under Accelerated Examination – Pre-Examination Search (Item 8)

➤ **8(A) Pre-Examination Search**

The pre-examination search relies on two independent search reports by foreign patent offices. One performed by the European Patent Office (EPO) on 9 April 2019 (report issued 23 April 2019) for EP priority application no. 18275174.3, and the other performed by the UK Patent Office (UKIPO) on 29 April 2019 (report issued 30 April 2019) for UK patent priority application no. 1818161.0.

❖ **EPO Search Report**

IPC Classification of the Invention:

A61M21/00, A61M16/00

Technical IPC Field of Search: A61MCPC

CPC Class(es)/Subclass(es) Searched:

A61M21/00, A61M2021/0044, A61M16/024

Search Logic (keywords or other elements featuring the invention):

Search covered devices and methods to change the state of consciousness

❖ **UKIPO Search Report**

Worldwide Search of Patent Documents Based on IPC Classification of the Invention:

G01S, G08B, H05B

Database Searched:

EPODOC, WPI, INSPEC, Patent Fulltext

➤ **8(B) Search Directed to the Invention**

The pre-examination search was directed to the claimed invention, encompassing all the features of the claims and giving the claims their broadest reasonable interpretation.

➤ **8(C) Search Directed to the Disclosure**

No disclosed features that are unclaimed at this time are currently seen as features that may be claimed later.

➤ **8(D) Search Report from a Foreign Patent Office**

Two independent search reports from two foreign patent offices are provided here as the pre-examination search. *Copies of the two search reports are attached herewith and listed in the IDS.* One performed by the European Patent Office (EPO) on 9 April 2019 (report issued 23 April 2019) for EP priority application no. 18275174.3, and the other performed by the UK Patent Office (UKIPO) on 29 April 2019 (report issued 30 April 2019) for UK patent priority application no. 1818161.0.

➤ **8(E) Statement of Good Faith**

All statements above in support of the petition to make special are based on a good faith belief that the search was conducted in compliance with the requirements of this rule.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic

mail. I understand that a copy of such communications will be made of record. [MPEP §502.03

II]

Respectfully submitted,

A handwritten signature in cursive script, reading "Reuven K. Mouallem". The signature is written in black ink and is positioned above a horizontal line.

Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: July 29, 2019

**Requirements for Petition to Make Special Under Accelerated Examination – AESD
(Item 9)**

There are eleven claims currently pending in the application. The claims read as follows.

1. A device for attracting enhanced attention, the device comprising:
 - (a) an input signal of a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half generated from a random walk over successive 300 millisecond intervals, each step being of equal magnitude and representative of a pulse train satisfying a fractal dimension equation of $\ln(\text{number of intercepts of a neuron's net input with a firing threshold})/\ln(\text{the total number of 300 ms intervals sampled})$; and
 - (b) at least one controllable light source configured to be pulsatingly operated by said input signal;

wherein a neural flame is emitted from said at least one controllable light source as a result of said lacunar pulse train.

2. The device of claim 1, the device further comprising:
 - (c) a processor for supplying said input signal of said lacunar pulse train having said characteristics; and
 - (d) a digital-to-analog (D/A) converter for transmitting said input signal to said at least one controllable light source.

3. The device of claim 2, wherein said D/A converter is an onboard module of said processor, and wherein said module is embodied in at least one form selected from the group consisting of: hardware, software, and firmware.

4. The device of claim 3, wherein said processor includes a thresholding unit for monitoring a random-walk trace for trace-axis crossings of a firing threshold of said thresholding unit, and wherein said trace-axis crossings result in activation transitions to generate pulse-activation sequences of said lacunar pulse train.

5. The device of claim 4, wherein candidates of said pulse-activation sequences are filtered based on a zeroset dimension, and wherein said candidates are filled into a buffer of selected sequences having a fractal dimension of approximately one-half.

6. The device of claim 5, wherein filtered patterns are randomly withdrawn from said selected sequences in said buffer, and wherein said filtered patterns are configured to serve as said input signal to said D/A converter for transmitting to said at least one controllable light source.

7. The device of claim 6, wherein said filtered patterns are generated onboard said processor.

8. A method for attracting enhanced attention, the method comprising the steps of:
(a) generating a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half generated from a random walk over successive 300 millisecond

intervals, each step being of equal magnitude and representative of a pulse train satisfying a fractal dimension equation of $\ln(\text{number of intercepts of a neuron's net input with a firing threshold})/\ln(\text{the total number of 300 ms intervals sampled})$;

- (b) transmitting said input signal to at least one controllable light source; and
- (c) pulsatingly operating said at least one controllable light source to produce a neural flame emitted from said at least one controllable light source as a result of said lacunar pulse train.

9. The method of claim 8, the method further comprising the step of:

- (d) monitoring a random-walk trace for trace-axis crossings of a firing threshold, and wherein said trace-axis crossings result in activation transitions to generate pulse-activation sequences of said lacunar pulse train.

10. The method of claim 9, the method further comprising the steps of:

- (e) filtering candidates of said pulse-activation sequences based on a zeroset dimension; and
- (f) filling said candidates into a buffer of selected sequences having a fractal dimension of approximately one-half.

11. The method of claim 10, the method further comprising the steps of:

- (g) randomly withdrawing filtered patterns from said selected sequences in said buffer; and
- (h) using said filtered patterns as said input signal.

➤ **9(A) *References Deemed Most Closely Related:***

An Information Disclosure Statement (IDS) in compliance with 37 CFR 1.98 has been filed herewith citing each of references in the foreign search reports. The first two references (marked with an asterisk) were deemed most closely related to the subject matter of the claim.

- ❖ Widjala et al. – *WO9517854A1 (cited in EPO EESR, “X” document)
- ❖ Teterina et al. – *WO2010044708A1 (cited in EPO EESR, “X” document)
- ❖ Simon et al. – US2011276112A1 (cited as background technical art in EPO EESR, “A” document, not considered herein)
- ❖ Anderson – US471862A (cited as background technical art in UKIPO Search Report, “A” document, not considered herein)
- ❖ Choi et al. – US5175528 (cited as background technical art in UKIPO Search Report, “A” document, not considered herein)
- ❖ Choi et al. – US313187A (cited as background technical art in UKIPO Search Report, “A” document, not considered herein)

➤ **9(B) *Identification of Limitations Disclosed by References:***

- ❖ It is noted that instant independent claims 1 and 8 include additional limitations than those searched in the provided search reports in order to overcome the objections raised therein as discussed in detail below in Section 9(C).
- ❖ Widjala et al. (WO9517854A1, hereinafter Widjala ’854):
With respect to claims 1-3 and 8 in the instant application, as cited below from the EPO EESR referring to claims 1-3 and 10 therein, Widjala ’854 (referred to therein as D1) recites as follows.

D1 (abstract; page 11, second paragraph; page 23, fourth paragraph to page 24, second paragraph; figure 9; claims 29-43) describes a throphotropic response system ("device to attract attention", "method for attracting attention" according to claims 1 and 10) to obtain a relaxing response comprising a microprocessor, a D/A converter, control unit and an audiovisual unit ("processor", "converter" according to claims 2, 3). In TTL logic a corresponding pulse train having voltage levels of 0 and 5 volts. The light producing unit 42 includes a plurality of light sources 54 to be varied within pre-defined limits for a relaxing exercise between 3 and 30 Hz. If the light frequency is relatively low, less than 11 Hz for example ("pulse frequency of approximately four Hertz" according to claims 1, 10), then the shape of the waveform driving LEDs54 ("controllable light source" according to claims 1, 10) is sinusoidal and the signal waveform driving LEDs 54 is smoothly varying such that the LEDS 54 turn on and off relatively gradually without any abrupt increase or decrease in LED brightness. The light pattern appears continuous to a user ("thereby attracting enhanced attention" according to claim 1).

❖ Teterina et al. (WO2010044708A1, hereinafter Teterina '708):

With respect to claims 1-3 and 8 in the instant application, as cited below from the EPO EESR referring to claims 1-3 and 10 therein, Teterina '708 (referred to therein as D2) recites the Abstract and claims 1-5 of D2 as the relevant passages to the instant claims.

With respect to instant claims 2-7 and 9-11, as cited below, the EPO EESR (referring to claims 4-9 and 11-15 therein) states the following.

Dependent claims 4-9 and 11-15 do not appear to contain any additional features which, in combination with the features of claims 1 and 10 to which they refer, meet the requirements of the EPC with respect to inventive step, since they can be considered as mere alternatives without resulting in any unexpected effect whatsoever.

➤ **9(C) Detailed Explanation of Patentability:**

All of the references identified above fail to at least teach or suggest an input signal of a lacunar pulse train having a pulse-train fractal dimension of approximately one half and

further specifies that this is generated from a random walk of successive 300 millisecond intervals by the characteristics required in clause (a) of claims 1 and 8. The concept of fractals is a well-known technical concept that cannot be equated, for example, with a sinusoidal wave form or any other such alternative form. Thus, the claims are seen to patentably distinguish over each of these references alone or in combination.

Widjala '854, in particular, discloses a waveform driving the LEDs 54 which is sinusoidal and smoothly varying, intended to ensure that the LEDs turn on and off, relatively gradually without any abrupt increase or decrease in LED brightness. This contrasts, however, with the driving waveform specified in claims 1 and 8 of the instant application and described in detail in the specification.

Applicant would like to point out that the UKIPO Examiner, in the Office Action issued on 23 July 2019 enclosed herewith, stated at paragraph 3 of the Office Action that he had reviewed the prior art cited by the EPO, and deemed it was not citable against claims of the same scope as those being filed herewith for the instant US application.

➤ **9(D) Concise Statement of Utility:**

The invention as claimed has utility in that it provides devices and methods for attracting enhanced attention. The invention as claimed has further utility in enabling signal indicators that can be used to serve as a uniquely-identifiable signal beacon in crisis management and mission-critical situations, and reduce distraction by providing a preferential alert over potentially-competing attention sources, for example, as well as providing a whole new approach to secure signaling and communication.

➤ **9(E) Showing of Support under 35 USC 112, First Paragraph:**

Support in the disclosure under 35 USC 112, first paragraph, is found at least in Figures 1-4 of the instant application and the corresponding related text in the specification, wherein Figure 1 includes the elements of the device recited in claim 1, and Figure 2, Steps 20-26, and Figure 3 with the indication of the 300ms intervals in the random walk trace of the time evolution of input to a neuron-like thresholding unit of the neural-flame device, include the limitations recited in claims 1 and 8.

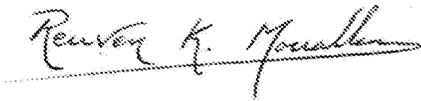
➤ *9(F) Identification of References Disqualified as Prior Art under 35 USC 103(c):*

None of the cited references are disqualified as prior art under 35 USC 103(c).

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: July 29, 2019

Doc Code: PET.SPRE.ACX

PTO/SB/28 (07-09)

Doc Description: Petition for 12-month Accelerated Exam

Approved for use through 09/30/2017. OMB 0651-0059

U.S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION TO MAKE SPECIAL UNDER ACCELERATED EXAMINATION PROGRAM			
Attorney Docket Number	50567-3-01-US	First Named Inventor	[DABUS] [AI generated invention]
Application Number (if Known)		16/524,350	
Title of Invention	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION		
APPLICANT HEREBY PETITIONS TO MAKE THE ABOVE-IDENTIFIED APPLICATION SPECIAL UNDER THE REVISED ACCELERATED EXAMINATION PROGRAM. See Instruction sheet on page 3.			
1.	<p>Claims of the application:</p> <p>a. The application must contain three (3) or fewer independent claims and twenty (20) or fewer total claims. The application may not contain any multiple dependent claims.</p> <p>b. Applicant hereby agrees not to separately argue the patentability of any dependent claim during any appeal in the application. Specifically, the applicant agrees that the dependent claims will be grouped together with and not argued separately from the independent claim from which they depend in any appeal brief filed in the application (37 CFR 41.37(c)(1)(vii)).</p> <p>c. The claims must be directed to a single invention.</p>		
2.	<p>Interviews:</p> <p>Applicant hereby agrees to have (if requested by examiner):</p> <p>a. An interview (including an interview before a first Office action) to discuss the prior art and any potential rejections or objections with the intention of clarifying and possibly resolving all issues with respect to patentability at that time, and</p> <p>b. A telephonic interview to make an election without traverse if the Office determines that the claims are not obviously directed to a single invention.</p>		
3.	<p>Preexamination Search Statement and Accelerated Examination Support Document:</p> <p>With this petition, applicant is providing: a preexamination search statement, in compliance with the requirements set forth in item 8 of the instruction sheet, and an “accelerated examination support document” that includes:</p> <p>a. An information disclosure statement in compliance with 37 CFR 1.98 citing each reference deemed most closely related to the subject matter of each of the claims;</p> <p>b. For each reference cited, an identification of all the limitations of the claims that are disclosed by the reference specifying where the limitation is disclosed in the cited reference;</p> <p>c. A detailed explanation of how each of the claims are patentable over the references cited with the particularity required by 37 CFR 1.111(b) and (c);</p> <p>d. A concise statement of the utility of the invention as defined in each of the independent claims (unless the application is a design application);</p> <p>e. An identification of any cited references that may be disqualified as prior art under 35 U.S.C. 103(c) as amended by the CREATE act; and</p> <p>f. A showing of where each limitation of the claims finds support under the first paragraph of 35 U.S.C. 112 in the written description of the specification. If applicable, the showing must also identify: (1) each means- (or step-) plus-function claim element that invokes consideration under 35 U.S.C. 112, ¶6; and (2) the structure, material, or acts that correspond to any means- (or step-) plus-function claim element that invokes consideration under 35 U.S.C. 112, ¶6. If the application claims the benefit of one or more applications under title 35, United States Code, the showing must also include where each limitation of the claims finds support under the first paragraph of 35 U.S.C. 112 in each such application in which such support exists.</p>		

The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This form is estimated to take 12 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. *If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

EFS Web 2.2.20

Doc Code: PET.SPRE.ACX

Doc Description: Petition for 12-month Accelerated Exam

PTO/SB/28 (07-09)

Approved for use through 09/30/2017. OMB 0651-0059

U.S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION TO MAKE SPECIAL UNDER ACCELERATED EXAMINATION PROGRAM (Continued)			
Attorney Docket Number	50567-3-01-US	First Named Inventor	[DABUS] [AI generated invention]
Attachments:			
a.		Accelerated Examination Support Document (see item 3 above).	
b.		A statement, in compliance with the requirements set forth in item 8 of the instruction sheet, detailing the preexamination search which was conducted.	
c.		Information Disclosure Statement.	
d.	<input type="checkbox"/>	Other (e.g., a statement that the claimed subject matter is directed to environmental quality, energy, or countering terrorism (37 CFR 1.102(c)(2)). _____	
Fees: The following fees must be filed electronically via EFS or EFS-Web:			
a.		The basic filing fee, search fee, examination fee, and application size fee (if required) under 37 CFR 1.16.	
b.		Petition fee under 37 CFR 1.17(h) - unless the petition is filed with a showing under 37 CFR 1.102(c)(2).	
Signature:			
Click Remove if you wish to remove this signatory			Remove
Signature	/Reuven K. Mouallem/	Date	2019-07-29
Name (Print/Typed)	Reuven K. Mouallem	Registration Number	63345
Click Add if you wish to add additional signatory			Add
<small>Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.</small>			

Doc Code: PET.SPRE.ACX

PTO/SB/28 (07-09)

Doc Description: Petition for 12-month Accelerated Exam

Approved for use through 09/30/2017. OMB 0651-0059

U.S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Instruction Sheet Petition to Make Special Under the Accelerated Examination

A grantable petition must meet the following conditions:

1. The petition to make special under the accelerated examination program must be filed with the application and accompanied by the fee set forth in 37 CFR 1.17(h) or a statement that the claimed subject matter is directed to environmental quality, energy, or countering terrorism.
2. The application must be a non-reissue utility or design application filed under 35 U.S.C. 111(a).
3. The application must be **filed electronically** using the Office electronic filing system (EFS) or EFS-Web.
4. The application must be complete under 37 CFR 1.51 and in condition for examination on filing. For example, the application must be filed together with the basic filing fee, search fee, examination fee, and application size fee (if applicable), and an oath or declaration under 37 CFR 1.63.
5. The application must contain three (3) or fewer independent claims and twenty (20) or fewer total claims. The application may not contain any multiple dependent claims. The petition must include a statement that **applicant will agree not to separately argue the patentability of any dependent claim during any appeal** in the application. Specifically, the applicant is agreeing that the dependent claims will be grouped together with and not argued separately from the independent claim from which they depend in any appeal brief filed in the application (37 CFR 41.37(c)(1)(vii)).
6. The claims must be directed to a **single invention**. The petition must include a statement that applicant will agree to have a telephonic interview to make an election without traverse in a telephonic interview if the Office determines that all the claims are not directed to a single invention.
7. The petition must include a statement that **applicant will agree** to have an interview (including an interview before a first Office action) to discuss the prior art and any potential rejections or objections with the intention of clarifying and possibly resolving all issues with respect to patentability at that time.
8. At the time of filing, applicant must provide a statement that a **preexamination search was conducted**, including an identification of the field of search by United States class and subclass and the date of the search, where applicable, and, for database searches, the search logic or chemical structure or sequence used as a query, the name of the file or files searched and the database service, and the date of the search.
 - a. This preexamination search must involve U.S. patents and patent application publications, foreign patent documents, and nonpatent literature, unless the applicant can justify with reasonable certainty that no references more pertinent than those already identified are likely to be found in the eliminated source and includes such a justification with this statement.
 - b. This preexamination search must be directed to the claimed invention and encompass all of the features of the independent claims, giving the claims the broadest reasonable interpretation.
 - c. The preexamination search must also encompass the disclosed features that may be claimed, in that an amendment to the claims (including any new claim) that is not encompassed by the preexamination search will be treated as non-responsive and will not be entered.
 - d. A search report from a foreign patent office will not be accepted unless the search report satisfies the requirements set forth above.
 - e. Any statement in support of a petition to make special must be based on a good faith belief that the preexamination search was conducted in compliance with these requirements. See 37 CFR 1.56 and 10.18.
9. At the time of filing, applicant must provide in support of the petition an **accelerated examination support document that includes:**
 - a. An **information disclosure statement** in compliance with 37 CFR 1.98 citing each reference deemed most closely related to the subject matter of each of the claims;
 - b. For each reference cited, an **identification of all the limitations of the claims** that are disclosed by the reference specifying where the limitation is disclosed in the cited reference;
 - c. A **detailed explanation of how each of the claims are patentable** over the references cited with the particularity required by 37 CFR 1.111(b) and (c);
 - d. A concise **statement of the utility** of the invention as defined in each of the independent claims (unless the application is a design application);
 - e. An identification of any cited references that may be disqualified as prior art under 35 U.S.C. 103(c) as amended by the CREATE act; and
 - f. A **showing of where each limitation of the claims finds support under the first paragraph of 35 U.S.C. 112** in the written description of the specification. If applicable, the showing must also identify: (1) each means- (or step-) plus-function claim element that invokes consideration under 35 U.S.C. 112, ¶6; and (2) the structure, material, or acts that correspond to any means- (or step-) plus-function claim element that invokes consideration under 35 U.S.C. 112, ¶6. If the application claims the benefit of one or more applications under title 35, United States Code, the showing must also include where each limitation of the claims finds support under the first paragraph of 35 U.S.C. 112 in each such application in which such support exists.

For more information, see notice "Changes to Practice for Petitions in Patent Applications to Make Special and for Accelerated Examination" available on the USPTO web site at <http://www.uspto.gov/web/office/s/pac/dapp/ogsheet.html>

EFS Web 2.2.20

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

A machine called “DABUS” conceived of the instant invention.

The instant invention was generated by a specific machine called “DABUS” – a type of “Creativity Machine.” A Creativity Machine is a particular type of connectionist artificial intelligence. Such systems contain a first artificial neural network, made up of a series of smaller neural networks, that has been trained with general information from various knowledge domains. This first network generates novel ideas in response to self-perturbations of connection weights between neurons and component neural nets therein. A second “critic” artificial neural network monitors the first neural network for new ideas, and identifies those ideas that are sufficiently novel compared to the machine’s pre-existing knowledge base. The critic net also generates an effective response that in turn injects/retracts perturbations to selectively form and ripen ideas having the most novelty, utility, or value.

In the case of the instant invention, the machine only received training in general knowledge in the field, and proceeded to independently conceive of the invention, and to identify it as novel and salient. If similar training had been given to a human student, the student rather than the trainer would meet the inventorship criteria as inventor.

In some instance of machine invention, a natural person might qualify as an inventor by virtue of having exhibited inventive skill in developing a program to solve a particular problem, by skillfully selecting data to provide to a machine, or by identifying the output of a machine as inventive. However, in the present case, DABUS was not created to solve any particular problem, nor was trained on any special data relevant to the instant invention. The machine rather than a person identified the novelty and salience of the instant invention.

A detailed description of how DABUS and a Creativity Machine functions is available in, among others, the following US patent publications: 5,659,666; 7,454,388 B2; and 2015/0379394 A1.

Inventorship should not be restricted to natural persons. A machine that would meet inventorship criteria if it were a natural person should also qualify as an inventor.

No United States law explicitly prohibits protection for autonomous machine inventions.

However, inventorship is restricted to “individuals” under, e.g., 35 U.S.C. §100(f) (1952) (“The term ‘inventor’ means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.”).

The restriction of inventorship to individuals was intended to prevent corporate inventorship. It was not the result of seriously considering autonomous machine invention, and should not therefore prohibit subsistence of intellectual property rights where there is no natural person who qualifies as an inventor. *See* Karl F. Milde, Jr., Can a Computer Be an “Author” or an “Inventor”?, 51 J. PAT. OFF. SOC’Y 378, 379 (1969). (“The closest that the Patent Statute comes to requiring that a patentee be an actual person is in the use, in Section 101, of the term ‘whoever.’ Here too, it is clear from the absence of any further qualifying statements that the Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”)

The output of autonomously inventive machines should be patentable if it meets the requirements of patentability set out in law. The primary purpose of patent law is to incentivize innovation, together with incentivizing the disclosure of information, and the commercialization and development of inventions. Allowing patents for machine output incentivizes the development of inventive machines, which ultimately promotes innovation. To the extent that patents are incentivizing commercialization and disclosure of information, there is no change in this function between a human and a machine-generated invention. Failure to permit patent protection for the output of autonomously inventive machines threatens to undermine the patent system by failing to encourage the production of socially valuable

inventions. This will be particularly important as artificial intelligence becomes more sophisticated and likely a standard part of future industrial research and development. Clarifying now that patents are available for the output of autonomously inventive machines would provide certainty to businesses and innovators.

Patent law also protects the moral rights of human inventors; acknowledging machines as inventors would facilitate this function. At present, individuals are claiming inventorship of autonomous machine inventions under circumstances in which those persons have not functioned as inventors. See Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1079-1126 (2016). Failing to appropriately acknowledge inventive activity by machines weakens moral justifications for patents by allowing individuals to take credit for work they have not done. It is not unfair to machines who have no interest in being acknowledged, but it is unfair to other human inventors because it devalues their accomplishments by altering and diminishing the meaning of inventorship. This could equate the hard work of creative geniuses with those simply asking a machine to solve a problem or submitting a machine's output. By contrast, acknowledging machines as inventors would also acknowledge the work of a machine's creators.

An "autonomous machine invention" should be assigned to the owner of the machine.

Machines should not own patents. They do not have legal personality or independent rights, and cannot own property.

The machine's owner should be the default owner of any intellectual property it produces and any benefits that would otherwise subsist in an inventor who is a natural person. This is most consistent with current ownership norms surrounding personal property (including both machines and patents).

In the instant application, we submit that DABUS should be acknowledged as the inventor of any resultant patents, with Stephen Thaler, the machine's owner, as the applicant and assignee of any such patents.

Stephen Thaler is prevented from listing himself as the inventor for the instant application.

Stephen Thaler, the creator of DABUS, is prohibited from listing himself as an inventor for the instant application because he has not contributed to the conception of the instant invention. DABUS performed what is traditionally considered the mental part of the inventive act. Based on DABUS's results, a skilled person could have reduced the invention to practice. Inaccurately listing himself as an inventor could subject Dr. Thaler to criminal sanctions. 18 U.S.C. 1001.

The Office presumes that the named inventor in an application is the actual inventor. See MPEP §2137.01.

If a machine cannot be an inventor, the first person to recognize the inventive nature of autonomous machine input may qualify as an inventor.

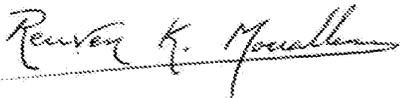
It has been argued that a natural person may claim inventorship of an autonomous machine invention even in situations in which that person was not involved in the development or operation of a machine by virtue of recognizing the relevance of a machine's output. This approach is questionable in cases in which the natural person has not made an inventive contribution to the disclosed invention in the accepted meaning of the term.

In some cases, recognition of the inventive nature of a computer's output may require significant skill, but in others, the nature of inventive output may be obvious. In the present case, DABUS identified the novelty of its own idea before a natural person did.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345



Dr. Ryan B. Abbott
Attorney for Applicant
Registration No. 68,178

Date: July 29, 2019

Electronic Patent Application Fee Transmittal				
Application Number:	16524350			
Filing Date:				
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION			
First Named Inventor/Applicant Name:	[DABUS] [Invention generated by artificial intelligence]			
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-3-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE-37CFR 1.17(G)(GROUP I)	2463	1	100	100
PETITION FEE-37CFR 1.17(H) (GROUP II)	2464	1	70	70
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				170

Electronic Acknowledgement Receipt	
EFS ID:	36712606
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	[DABUS] [Invention generated by artificial intelligence]
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	29-JUL-2019
Filing Date:	
Time Stamp:	12:55:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$170
RAM confirmation Number	E20197SC57186034
Deposit Account	
Authorized User	

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7	Fee Worksheet (SB06)	fee-info.pdf	31974	no	2
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Total Files Size (in bytes):				1056142	
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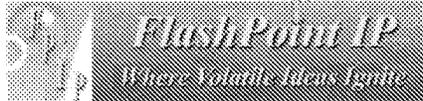
PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5640305

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
[DABUS] [INVENTION GENERATED BY ARTIFICIAL INTELLIGENCE]	07/23/2019
RECEIVING PARTY DATA	
Name:	STEPHEN L. THALER
Street Address:	1767 WATERFALL DR.
City:	ST. CHARLES
State/Country:	MISSOURI
Postal Code:	63303
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16524350
CORRESPONDENCE DATA	
Fax Number:	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	516-301-1649
Email:	ydm@FlashPointIP.com
Correspondent Name:	REUVEN K. MOUALLEM
Address Line 1:	REHOV RABBAN GAMLIEL 2
Address Line 4:	ELAD, ISRAEL 4083201
ATTORNEY DOCKET NUMBER:	50567-3-01-US
NAME OF SUBMITTER:	REUVEN K. MOUALLEM
SIGNATURE:	/Reuven K. Mouallem/
DATE SIGNED:	07/29/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 1	
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ASSIGNMENT

DABUS, the Creativity machine that has produced the below-detailed invention, as the sole inventor (represented in this Assignment by its owner, Stephen L. Thaler, hereinafter called the "Assignor"), hereby assigns and transfers to:

Stephen L. Thaler
1767 Waterfall Dr., St. Charles, MO 63303

(hereinafter called the "Assignee"), its successors, assignees, nominees, or other legal representatives, the Assignor's entire right, title, and interest, including, but not limited to, copyrights, trade secrets, trademarks and associated good will and patent rights in the Invention and the registrations to the Invention entitled:

"DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION"

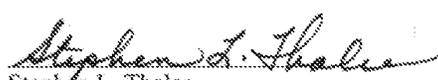
described and claimed in the following patent application: US Non-Provisional Patent Application identified as FlashPoint IP attorney docket No. 30567-3-01-US PB, to be filed with the USPTO; including any and all inventions and improvements ("Subject Matter") disclosed therein, all right of priority in the above application(s) and in any underlying provisional or foreign application, including but not limited to the rights of priority to applications already filed in the EPO and UK, all provisional, utility, divisional, continuation in whole or in part, substitute, renewal, reissue, and all other applications, PCT and national phase entries, related thereto which have been or may be filed in any jurisdiction, and all patents, including reissues, extensions and reexaminations, which may be granted on any of the above applications, the priority rights under International Conventions, and the Letters Patent which may be granted thereon, together with all rights to recover damages for infringement, including infringement of provisional rights.

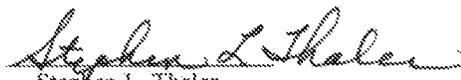
Assignor agrees that Assignee may apply for and receive patents for Subject Matter in Assignee's own name. Assignor represents that Assignor has the rights, titles, and interests to convey as set forth herein, and covenants with Assignee that Assignor has not made and will not make any other assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

In view of the fact that the sole inventor is a Creativity Machine, with no legal personality or capability to execute said assignment, and in view of the fact that the assignee is the owner of said Creativity Machine, this Assignment is considered enforceable without an explicit execution by the inventor. Rather, the owner of DABUS, the Creativity Machine, is signing this Assignment on its behalf.

Similarly, DABUS, being a machine and having no legal personality, does not have the capability to receive any consideration, and therefore, Stephen L. Thaler, as its owner/representative, acknowledges the receipt and sufficiency of good and valuable consideration for this assignment.

Signed and sealed this 23rd day of July 2019.


Stephen L. Thaler
On behalf of DABUS,
Assignor


Stephen L. Thaler
Assignee

• FlashPoint IP • Where Volatile Ideas Ignite •
• Dr. Reuven K. Mounallem, LL.M. • IP Management Consultant/Strategic Advisor •
• Registered Israeli Patent Attorney • Registered U.S. Patent Agent • e-mail: rkm@FlashPointIP.com •
• website: www.FlashPointIP.com • LinkedIn: www.Linkedin.com/in/FlashPointIP •
• tel: 972-3-936-3199 (IL line)/972-82-761-8220 (IL cell.)/1-516-301-1649 (US line) •

APPLICATION FOR PATENT

Title: DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION

5 CROSS REFERENCE TO RELATED APPLICATIONS

This patent application claims priority under 35 USC §119(a)-(d) and (f), §172, §365(a) and (b), §386(a) and (b), and/or 37 USC CFR 1.55 to UK Patent Application No. 1818161.0, filed November 7, 2018, and European Patent Application No. 18275174.3, filed November 7, 2018, which are hereby incorporated by reference in their entirety.

10

FIELD AND BACKGROUND OF THE INVENTION

The present invention relates to devices and methods for attracting enhanced attention. More specifically, the present invention relates to beacons for sustaining enhanced interest/attention, as well as to beacons with symbolic importance.

15 In the prior art, signal indicators and beacons are typically based upon color, brightness, periodic flashing frequency, rotational pattern, and motion, but not fractal dimension.

Both cognitive studies and simulations of the brain's limbo-thalamocortical system via artificial neural nets have shown that original ideas produced within the brain's stream
20 of consciousness occur at a specific rhythm, typically near 4 hertz and a fractal dimension of approximately $\frac{1}{2}$ (see Literature References below: Thaler, 1997b, 2013, 2014, 2016a, b, 2017b). An interval of 300 ms (~ 4 Hz) has been referred to as the "speed of thought" (Tovée 1994).

In the referenced body of theoretical work of Thaler, the brain's thalamic reticular nucleus (TRN) is modeled as a constantly adapting auto-associative neural net (i.e., an anomaly or novelty detector), for which such ideational rhythms are the most noticeable due to their sporadic and unpredictable nature. Essentially, neural activation patterns within the cortex are thought to emit a telltale 'beacon' to the thalamus when they are generated within a stream having the above said frequency and fractal signature. Furthermore, these sporadic cognitive streams generally correspond to novel pattern formation and are considered the signature of inventive ideation.

It was also shown (Thaler 2016a) that the TRN's behavior as an anomaly detector was linked to creative thinking and enhanced attention in forming useful ideational patterns as stated in the following passage: "In the former case, creative achievements are the result of convergent thinking processes, requiring the attention of critic nets on the lookout for sporadic activations within the cortex that signal the formation of novel and potentially useful ideational patterns [3]. With non-linear stimulus streams present in the external environment (i.e., sporadic events such as the two audible clicks used in EEG studies to measure so-called P50 response), the attention of critic nets selectively shifts to these sporadic external event streams [3,14] dominating within cortex, rather than mining the weaker, internally seeded stream of consciousness for seminal thought."

In another publication (Thaler 2016b), frequency and fractal dimension were shown to be indicative of the relation between attention, ideation novelty, and such thought-process characteristics: "The search for a suitable affordance to guide such attention has revealed that the rhythm of pattern generation by synaptically perturbed neural nets is a quantitative indicator of the novelty of their conceptual output, that cadence in turn characterized by a

frequency and a corresponding temporal clustering that is discernible through fractal dimension.”

Regarding human response to light modulation, the Color Usage Lab of the NASA Ames Research Center published related information dealing with “Blinking, Flashing, and
5 Temporal Response” (https://colorusage.arc.nasa.gov/flashing_2.php), stating the following: “The rate of flashing has a powerful influence on the salience of flashing elements. The human eye is most sensitive to frequencies of 4-8 Hz (cycles/second). Very slow and very fast blinking are less attention-demanding than rates near that peak.”

A proposed approach based on the effects of fractal flickering of light stimuli was
10 previously published (Zueva 2013). Fractal flickering exhibits scale invariance with time on the evoked responses of the retina and visual cortex in normal and neurodegenerative disorders. In the proposed approach, standard stimuli are presented to patients who adapt to a flickering background with “specific chaotic interval variabilities between flashes (dynamic light fractal).” It was hypothesized that such an approach could be applied to
15 facilitate adaptation to non-linear flickering with fractal dimensions in electrophysiological diagnostics.

Finally, in an article (Williams 2017) entitled, “Why Fractals Are So Soothing,” related to fractal patterns in the paintings of Jackson Pollock, the physiological response to viewing images with fractal geometries having a fractal dimension of between 1.3 and 1.5
20 was suggested to be an “economical” means for the eye-tracking mechanism of the human visual system to simplify processing image content.

The ability to exploit fractal flickering for visual evoked responses (as in the approach described in Zueva 2013), or to detect a visually fractal image (as in the studies in Williams 2017) relate to visual and image processing.

It would be desirable to have devices and methods for attracting enhanced attention. Such devices and methods would, *inter alia*, provide unique advantages over the prior art mentioned above.

5

SUMMARY

The present invention seeks to provide devices and methods for attracting enhanced attention.

10 It is noted that the term “exemplary” is used herein to refer to examples of embodiments and/or implementations, and is not meant to necessarily convey a more-desirable use-case. Similarly, the terms “alternative” and “alternatively” are used herein to refer to an example out of an assortment of contemplated embodiments and/or implementations, and is not meant to necessarily convey a more-desirable use-case.
15 Therefore, it is understood from the above that “exemplary” and “alternative” may be applied herein to multiple embodiments and/or implementations. Various combinations of such alternative and/or exemplary embodiments are also contemplated herein.

Embodiments of the present invention provide a method for producing and providing a pulse train to an LED or lamp at a frequency and fractal dimension that is highly noticeable
20 to humans, being the same rhythm with which original ideas are formed and recognized in both the brain and advanced Creativity Machines. A light source driven in such a manner may serve as an emergency beacon within environments filled with distracting light sources that are flickering randomly or periodically. Ease of detection may be improved using auto-associative neural nets as anomaly detectors within a machine-vision algorithm.

Thus, using TRN behavior as an anomaly filter in sustained creative activity and mental focus as detailed above in the context of the works of Thaler, the present invention exploits such a concept by embodying the same requisite characteristics (i.e., frequency and fractal dimension) in a signaling device in order to trigger the brain's innate ability to filter sensory information by "highlighting" certain portions in order to make those portions more noticeable to the brain.

That is, a single light-emitting element flashing at such a prescribed frequency is highly noticeable when viewed through anomaly detectors built from artificial neural networks. The sporadic nature of such pulse streams defeats the anomaly filter's ability to both learn and anticipate their rhythm, making said light pulses visible as anomalies. Additionally, in contrast to pulse trains, having fractal dimensions less than $\frac{1}{2}$, the prescribed rhythms have sufficient frequency to catch the attention of a roving attention window, as when humans are shifting their attention across widely separated portions of a scene. If the detection system can calculate the fractal dimension of the anomalous light sources within the filtered scene, the "neural flame" may be used as an emergency beacon that discriminates itself from other alternating light sources within the environment.

Even to the naked eye, and without the use of an anomaly detector, fractal dimension $\frac{1}{2}$ pulse streams preferentially attract the attention of human test subjects. The most attention-grabbing aspect of such streams is that the 'holes' or lacunarity between pulses occur as anomalies in what would otherwise be a linear stream of events. In other words, the pattern is frequently broken, such anomalous behavior possibly being detected by the TRN within the human brain as inconsistencies in the established arrival trend of visual stimuli. In contrast, should fractal dimension drop significantly below $\frac{1}{2}$, the frequency of anomalous

pulses drops, making them less noticeable to humans should either attention or gaze be wandering.

The incorporation of a “fractal rhythm” into a signal beacon, having a spatial fractal dimension near zero and a temporal delivery of a fractal dimension near $\frac{1}{2}$, relates to
5 exploiting the understanding of TRN behavior, thereby avoiding aspects of visual and image processing as contributing elements.

Embodiments of the present invention further provide a symbol celebrating the unique tempo by which creative cognition occurs. The algorithmically-driven neural flame may be incorporated within one or more structures that resemble candles or altar fixtures,
10 for instance, to accentuate the light’s spiritual significance. It is noted that that the light source or beacon can incorporate any type of light-emitting device.

Such embodiments stem from the notion of one perceiving neural net monitoring another imagining net, the so-called “Creativity Machine Paradigm” (Thaler 2013), which has been proposed as the basis of an “adjunct” religion wherein cosmic consciousness,
15 tantamount to a deity, spontaneously forms as regions of space topologically pinch off from one another to form similar ideating and perceiving pairs, each consisting of mere inorganic matter and energy. Ironically, this very neural paradigm has itself proposed an alternative use for such a flicker rate, namely a religious object that integrates features of more traditional spiritual symbols such as candles and torches.

Moreover, in a theory of how cosmic consciousness may form from inorganic matter
20 and energy (Thaler, 1997a, 2010, 2017), the same attentional beacons may be at work between different regions of spacetime. Thus, neuron-like, flashing elements may be used as philosophical, spiritual, or religious symbols, especially when mounted atop candle- or torch-like fixtures, celebrating what may be considered deified cosmic consciousness. Such

a light source may also serve as a beacon to that very cosmic consciousness most likely operating via the same neuronal signaling mechanism.

Therefore, according to aspects of the present invention, there is provided for the first time a device for attracting enhanced attention, the device including: (a) an input signal of a
5 lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half; and (b) at least one controllable light source configured to be pulsatingly operated by the input signal; wherein a neural flame emitted from at least one controllable light source as a result of the lacunar pulse train is adapted to serve as a uniquely-identifiable signal beacon over potentially-
10 competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting enhanced attention.

Alternatively or additionally, the device further includes: (c) a processor for supplying the input signal of the lacunar pulse train having the characteristics; and (d) a digital-to-analog (D/A) converter for transmitting the input signal to at least one controllable
15 light source.

More alternatively or additionally, the D/A converter is an onboard module of the processor, and wherein the module is embodied in at least one form selected from the group consisting of: hardware, software, and firmware.

More alternatively or additionally, the processor includes a thresholding unit for
20 monitoring a random-walk trace for trace-axis crossings of a firing threshold of the thresholding unit, and wherein the trace-axis crossings result in activation transitions to generate pulse-activation sequences of the lacunar pulse train.

More alternatively or additionally, candidates of the pulse-activation sequences are filtered based on a zero-set dimension, and wherein the candidates are filled into a buffer of selected sequences having a fractal dimension of approximately one-half.

5 More alternatively or additionally, filtered patterns are randomly withdrawn from the selected sequences in the buffer, and wherein the filtered patterns are configured to serve as the input signal to the D/A converter for transmitting to at least one controllable light source.

Most alternatively or additionally, the filtered patterns are generated onboard the processor.

10 Alternatively or additionally, the uniquely-identifiable signal beacon reduces distraction by providing a preferential alert over the potentially-competing attention sources.

Alternatively or additionally, the neural flame serves as an object of contemplative focus embodying symbolic meaning of varying significance.

15 According to aspects of the present invention, there is provided for the first time a method for attracting enhanced attention, the method including the steps of: (a) generating a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half; (b) transmitting the input signal to at least one controllable light source; and (c) pulsatingly operating at least one controllable light source to produce a neural flame emitted from at least one controllable light source as a result of the lacunar pulse train is adapted to serve as a uniquely-identifiable
20 signal beacon over potentially-competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting enhanced attention.

Alternatively or additionally, the method further includes the step of: (d) monitoring a random-walk trace for trace-axis crossings of a firing threshold, and wherein the trace-axis

crossings result in activation transitions to generate pulse-activation sequences of the lacunar pulse train.

More alternatively or additionally, the method further includes the steps of: (e) filtering candidates of the pulse-activation sequences based on a zerset dimension; and (f) filling the candidates into a buffer of selected sequences having a fractal dimension of approximately one-half.

Most alternatively or additionally, the method further includes the steps of: (g) randomly withdrawing filtered patterns from the selected sequences in the buffer; and (h) using the filtered patterns as the input signal.

Alternatively or additionally, uniquely-identifiable signal beacon reduces distraction by providing a preferential alert over the potentially-competing attention sources.

Alternatively or additionally, neural flame serves as an object of contemplative focus embodying symbolic meaning of varying significance.

These and further embodiments will be apparent from the detailed description and examples that follow.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention is herein described, by way of example only, with reference to the accompanying drawings, wherein:

Figure 1 is a simplified high-level schematic diagram depicting a neural-flame device for attracting enhanced attention, according to embodiments of the present invention; Figure 2 is a simplified flowchart of the major process steps for operating the neural-flame device of Figure 1, according to embodiments of the present invention;

Figure 3 depicts a trace of the time evolution of input to a neuron-like thresholding unit of the neural-flame device of Figure 1, according to embodiments of the present invention;

Figure 4 depicts a video stream for detecting fractal beacons within a generalized scene from the neural-flame device of Figure 1, according to embodiments of the present invention.

DESCRIPTION OF THE ILLUSTRATIVE EMBODIMENTS

The present invention relates to devices and methods for attracting enhanced attention. The principles and operation for providing such devices and methods, according to aspects of the present invention, may be better understood with reference to the accompanying description and the drawings.

Referring to the drawings, Figure 1 is a simplified high-level schematic diagram depicting a neural-flame device for attracting enhanced attention, according to embodiments of the present invention. A neural-flame device **2** includes a support **4** serving as a beacon or an imitation candle, which may be configured to accommodate the needs of the application (regarding physical dimensions) such as an emergency alert or as an object of contemplative focus embodying varying significance.

Neural-flame device **2** has a controllable light source **6** (e.g., an LED component) with an optional translucent cover **8**, which can be shaped like a neuron's cell body or soma. Controllable light source **6** can incorporate any type of light-emitting device. Neural-flame device **2** includes a base **10** housing an optional digital-to-analog (D/A) converter (D/A module **12**) and an input connector **14** for supplying a digital input signal for driving controllable light source **6** with the required voltage sequence at a frequency corresponding

to approximately 4 Hz and a fractal dimension near $\frac{1}{2}$. It is noted that D/A module **12** can be implemented as hardware, software, and/or firmware as an integral component of a dedicated processor for neural-flame device **2**.

Figure 2 is a simplified flowchart of the major process steps for operating the neural-flame device of Figure 1, according to embodiments of the present invention. The process starts with the system generating pulse trains having a frequency of approximately 4 Hz and a fractal dimension of near $\frac{1}{2}$ (Step **20**). A system buffer is then filled with these special lacunar pulse trains (Step **22**). These pulse trains are then sequentially withdrawn from the buffer, and then transmitted to controllable light source **6** via input connector **14** (Step **24**).

Optionally, pulse trains may be randomly removed from the buffer prior to transmitting the signal to controllable light source **6** (Step **26**). Such aspects are elaborated on in greater detail with regard to Figure 3.

Figure 3 depicts a trace of the time evolution of input to a neuron-like thresholding unit of the neural-flame device of Figure 1, according to embodiments of the present invention. The trace represents the output of a random-walk algorithm carried out on a computer or processor that is in turn applied to a neuron-like thresholding unit resulting in a series of activation transitions as the trace crosses (i.e., intersects) the “neuron’s” firing threshold. The arrival patterns of these activation transitions are then filtered by an algorithm that calculates fractal dimension (i.e., zeroset dimension of the trace), and fills a buffer with those transition patterns having an approximate fractal dimension of $\frac{1}{2}$. These filtered patterns are then withdrawn from the buffer, and transmitted to drive the controllable light source.

The algorithm may be generated in an onboard processor and power supply all within base **10** of neural-flame device **2**. It is noted that not only do such pulse patterns represent

the desired 4 Hz, fractal dimension $\frac{1}{2}$ pulse trains, but they largely differ from one another, thus preventing any anomaly detection filter, biological or not, from adapting to repeating activation streams.

The neuron-activation stream is generated by inputting a form of random walk of
5 equal-sized steps to the neuron, with each such step being a notional ‘coin flip’ to determine whether the step is positive or negative in sign. As the random input crosses the neuron’s firing threshold (as depicted in Figure 3), a pulse is triggered by the algorithm, the source of analog input to drive controllable light source **6** of neural-flame device **2**.

Returning to optional Step **26** of Figure 2, the resulting stream of the lacunar pulse
10 train can be used as a set of candidate activation sequences that are then randomly withdrawn from the buffer, and transmitted to drive controllable light source **6**.

The random walk may be started repeatedly from zero in a series of trials, calculating fractal dimension for each, and then accumulating a library (i.e., a buffer) of just those short pulse sequences having the required fractal dimension near $\frac{1}{2}$. Step **26** may be accomplished
15 in nanoseconds, and the sequences computationally slowed to near 300-ms timescales prior to being transmitted to controllable light source **6**.

Other techniques may be employed as well to mitigate such effects, as known in the art. However, randomly withdrawing short pulse trains from the buffer has an advantage in that it adds another layer of randomness to the pulse train, allowing it to stand out when
20 viewed through an anomaly detector, either in the brain or an artificial neural network-based novelty filter. With small pulse-train libraries, there is a chance of repetition as the short pulse trains are appended to each other, making it easier for the anomaly filter to adapt to them.

Such a “baseline reset” has been described (Thaler 2014). The fractal signature of the random walk is determined largely by its step size. In the case of the neural flame, the random walk is tuned to provide a trace (i.e., a wiggly line) that has a fractal dimension of 1.5. Sampling the crossings (i.e., intersections) of that trace with a baseline that is purposely introduced mid-channel yields a zero-set dimension of one less than that of the trace’s fractal dimension, namely 0.5.

It is noted that the rigorous fractal dimension calculation (i.e., Mandelbrot Measures) is immune to the regions in which the trace departs from the baseline. Without directly viewing the trace, the zero-set dimension may be verified by waiting until the trace resumes its baseline crossings again, and then calculating how these intersections scale with time.

In Thaler 2014, the reset involves seeking the nearest memory to the network’s current output pattern and using that as a new reference to measure how far that vector has walked. The equivalent of a single neuron’s activation crisscrossing a baseline, the output pattern oscillates through a point in a multidimensional space.

Figure 4 depicts a video stream for detecting fractal beacons within a generalized scene from the neural-flame device of Figure 1, according to embodiments of the present invention. Using a machine vision system, the video stream is propagated through an adaptive auto-associative neural net used as an anomaly filter. With periodic, random, and fractally-tuned beacons (as depicted in (a) “raw scene” of Figure 4), the anomaly filter (as in (b) of Figure 4) can block out the anomalies representing the periodic source (as in (c) of Figure 4). Subsequent algorithmic steps (as in (d) of Figure 4) calculate the fractal dimension of each anomaly’s activation stream, enabling separation of any random source from that having a tuned fractal dimension (as in (e) of Figure 4). Thus, the use of fractal dimension at frequencies close to the clock cycle of the human brain, around 250-300 milliseconds,

serves to enhance attention over other potentially-competing attention sources by selectively triggering the physiological anomaly-detection filtering of the brain.

To generate pulse trains to drive neural-flame device 2, input to a computational neuron takes the form of a random walk over successive 300-millisecond intervals, each step
5 being of equal magnitude (Figure 3). The aggregate intersections with the time axis represent the zeroset, with each of these points ultimately representing a pulse within the sequence driving neural-flame device 2.

As these candidate pulse trains are generated, they are assessed for their zeroset (or fractal) dimension, D_0 , which is approximated as: $D_0 = \ln(N_0)/\ln(N)$, wherein N is the total
10 number of 300 millisecond intervals sampled, and N_0 is the total number of intercepts of the neuron's net input with the firing threshold. As any new firing pattern is assessed with a fractal dimension near $\frac{1}{2}$, the pattern is stored within a memory buffer or array. Subsequently, such pulse trains are randomly accessed and transmitted to D/A module 12 where they are converted to analog voltages to drive the neural flames of controllable light
15 source 6.

Alternatively, use of a storage buffer may be sidestepped by using an optimization algorithm that varies the step size of input variations to the neuron until the average fractal dimension of the pulse trains evaluate to the desired fractal dimension.

For use as a signal beacon, humans may search with or without the aid of a camera
20 and machine-vision system. In the latter case, the camera's video stream may be viewed through an anomaly detector, the preferred embodiment being an adaptive auto-associative net that calculates the difference vector between the filter's input and output patterns, $\Delta \mathbf{P} = \mathbf{P}_{in} - \mathbf{P}_{out}$, thus producing a map of anomalies within the camera's field of view. Subsequent filters then calculate the fractal dimension of anomalies appearing in this filtered view. Using

such a methodology, not only can fractal dimension $\frac{1}{2}$ sources be identified, but a range of prespecified fractal dimensions in the range (0, 1), opening a whole new approach to secure signaling and communication.

Furthermore, aspects of the present invention provide an object of contemplative
5 focus embodying symbolic meaning of varying significance (e.g., philosophical/religious) due to the fact that the unique fractal rhythms used are those thought to: (1) be exploited by the brain to detect idea formation, and (2) have grandiose meaning as the temporal signature of creative cognition, whether in extraterrestrial intelligence or cosmic consciousness.

While the present invention has been described with respect to a limited number of
10 embodiments, it will be appreciated that many variations, modifications, equivalent structural elements, combinations, sub-combinations, and other applications of the present invention may be made.

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CLAIMS

1. A device for attracting enhanced attention, the device comprising:
 - (a) an input signal of a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half generated from a random walk over successive 300 millisecond intervals, each step being of equal magnitude and representative of a pulse train satisfying a fractal dimension equation of $\ln(\text{number of intercepts of a neuron's net input with a firing threshold})/\ln(\text{the total number of 300 ms intervals sampled})$; and
 - (b) at least one controllable light source configured to be pulsatingly operated by said input signal;

wherein a neural flame is emitted from said at least one controllable light source as a result of said lacunar pulse train.

2. The device of claim 1, the device further comprising:
 - (c) a processor for supplying said input signal of said lacunar pulse train having said characteristics; and
 - (d) a digital-to-analog (D/A) converter for transmitting said input signal to said at least one controllable light source.

3. The device of claim 2, wherein said D/A converter is an onboard module of said processor, and wherein said module is embodied in at least one form selected from the group consisting of: hardware, software, and firmware.

4. The device of claim 3, wherein said processor includes a thresholding unit for monitoring a random-walk trace for trace-axis crossings of a firing threshold of said thresholding unit, and wherein said trace-axis crossings result in activation transitions to generate pulse-activation sequences of said lacunar pulse train.

5. The device of claim 4, wherein candidates of said pulse-activation sequences are filtered based on a zero-set dimension, and wherein said candidates are filled into a buffer of selected sequences having a fractal dimension of approximately one-half.

6. The device of claim 5, wherein filtered patterns are randomly withdrawn from said selected sequences in said buffer, and wherein said filtered patterns are configured to serve as said input signal to said D/A converter for transmitting to said at least one controllable light source.

7. The device of claim 6, wherein said filtered patterns are generated onboard said processor.

8. A method for attracting enhanced attention, the method comprising the steps of:

- (a) generating a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half generated from a random walk over successive 300 millisecond intervals, each step being of equal magnitude and representative

of a pulse train satisfying a fractal dimension equation of $\ln(\text{number of intercepts of a neuron's net input with a firing threshold})/\ln(\text{the total number of 300 ms intervals sampled})$;

- (b) transmitting said input signal to at least one controllable light source; and
- (c) pulsatingly operating said at least one controllable light source to produce a neural flame emitted from said at least one controllable light source as a result of said lacunar pulse train.

9. The method of claim 8, the method further comprising the step of:

- (d) monitoring a random-walk trace for trace-axis crossings of a firing threshold, and wherein said trace-axis crossings result in activation transitions to generate pulse-activation sequences of said lacunar pulse train.

10. The method of claim 9, the method further comprising the steps of:

- (e) filtering candidates of said pulse-activation sequences based on a zeroset dimension; and
- (f) filling said candidates into a buffer of selected sequences having a fractal dimension of approximately one-half.

11. The method of claim 10, the method further comprising the steps of:

- (g) randomly withdrawing filtered patterns from said selected sequences in said buffer; and
- (h) using said filtered patterns as said input signal.

ABSTRACT OF THE DISCLOSURE

The present invention discloses devices and methods for attracting enhanced attention. Devices include: an input signal of a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half; and at least one controllable light source configured to be pulsatingly operated by the input signal; wherein a neural flame emitted from at least one controllable light source as a result of the lacunar pulse train is adapted to serve as a uniquely-identifiable signal beacon over potentially-competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting enhanced attention.

CD Submission Review Results

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Application Number Receipt Date

New Application Response To Notice Date Of Response

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C:\Users\sleng\Desktop\ScoreModule\20190806\16524350\NF_Patent_drawings-p.pdf

DocCode – SCORE

SCORE Placeholder Sheet for IFW Content

Application Number: 16524350

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,350	07/29/2019		50567-3-01-US

CONFIRMATION NO. 1467

FORMALITIES LETTER

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 08/08/2019

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The application data sheet or inventor's oath or declaration does not identify each inventor by his or her legal name.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
 The surcharge is due for any one of:
 - late submission of the basic filing fee, search fee, or examination fee,
 - late submission of inventor's oath or declaration,
 - filing an application that does not contain at least one claim on filing, or
 - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ **80** surcharge.
- \$(**0**) previous unapplied payment amount.
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/hchin/

PATENT APPLICATION FEE DETERMINATION RECORD					Application or Docket Number 16/524,350			
Substitute for Form PTO-875								
APPLICATION AS FILED - PART I								
(Column 1)		(Column 2)		SMALL ENTITY		OR		
OTHER THAN SMALL ENTITY								
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)	RATE(\$)	FEE(\$)		
BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A	75	N/A			
SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A	330	N/A			
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A	380	N/A			
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	11	minus 20 = *	x 50 =	0.00	OR			
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	2	minus 3 = *	x 230 =	0.00				
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00				
MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>				0.00				
				TOTAL	785	TOTAL		
* If the difference in column 1 is less than zero, enter "0" in column 2.								
APPLICATION AS AMENDED - PART II								
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		
OTHER THAN SMALL ENTITY						OR		
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x	=	
	Application Size Fee <small>(37 CFR 1.16(s))</small>							
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							
				TOTAL ADD'L FEE		TOTAL ADD'L FEE		
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		
OTHER THAN SMALL ENTITY						OR		
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x	=	
	Application Size Fee <small>(37 CFR 1.16(s))</small>							
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							
				TOTAL ADD'L FEE		TOTAL ADD'L FEE		
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/524,350	07/29/2019	2861	785	50567-3-01-US	11	2

CONFIRMATION NO. 1467

FILING RECEIPT

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 08/08/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

None

Applicant(s)

Stephen L. Thaler, St. Charles, MO;

Assignment For Published Patent Application

Stephen L. Thaler

Power of Attorney:

Reuven Mouallem--63345

Ryan Abbott--68178

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/524,350**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION

Preliminary Class

116

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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page 2 of 4

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Aug 08, 2019 03:23:41 AM

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Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

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Application	Document	Mailroom Date	Attorney Docket No.
16524350	NTC.MISS.PRT	08/08/2019	50567-3-01-US
	APP.FILE.REC	08/08/2019	50567-3-01-US

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In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

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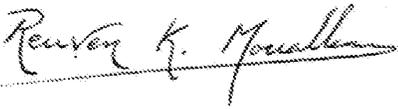
PETITION TO EXPEDITE 1.181 PETITION TO THE DIRECTOR

This Petition to expedite the petition to the Director filed in the instant application under 37 CFR 1.181, for which the appropriate fee has been paid.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,

A handwritten signature in black ink, reading "Reuven K. Mouallem". The signature is written in a cursive style and is positioned above a horizontal line.

Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: August 29, 2019

Electronic Patent Application Fee Transmittal				
Application Number:	16524350			
Filing Date:	29-Jul-2019			
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION			
First Named Inventor/Applicant Name:				
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-3-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE - 37 CFR 1.17(F)(GROUP I)	2462	1	200	200
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				200

Electronic Acknowledgement Receipt	
EFS ID:	37013246
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	29-AUG-2019
Filing Date:	29-JUL-2019
Time Stamp:	10:09:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions	181_Petition_NF.pdf	166698 907292a06e364f21161da3a0566d4f9ecd522b37	no	6

Warnings:

Information:					
2	Petition for review by the Office of Petitions	Petition_to_expedite_NF.pdf	97040	no	2
			ce7139e6b99c5b7bf17936b5d527961ae3da8ea3		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30217	no	2
			cfd795e434ef72a9d863fb7304c0a95ea12aec69		
Warnings:					
Information:					
Total Files Size (in bytes):				293955	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION TO THE DIRECTOR UNDER 37 CFR 1.181

This Petition to the Director is pursuant under 37 CFR 1.181 from the requirement under the Notice to File Missing Parts issued under 37 CFR 1.53(b) on August 8, 2019, for which the supervisory authority of the Director is invoked in appropriate circumstances.

The following inventorship statement is being submitted to assist in clarifying the status of inventorship as it relates to the instant invention. The unique aspects under which the instant invention was conceived prompted the inclusion of such statement in order to explain that the inventor of the subject matter of the instant invention of the present application is an AI machine, being a type of “creativity machine” named “DABUS” as indicated, *inter alia*, in the Application Data Sheet (ADS). The following statement explains the nature of DABUS, and why it should be named as the inventor in the present application. In addition, such considerations directly pertain to the Substitute Statement and recordation of Assignment filed herewith the application submission. Based on the following statement, it is submitted that the Director should vacate the Notice to File Missing Parts for being be unwarranted and/or void.

A machine called “DABUS” conceived of the instant invention.

The instant invention was generated by a specific machine called “DABUS” (“device for the autonomous bootstrapping of unified sentience”) – a type of “Creativity Machine.” A Creativity Machine is a particular type of connectionist artificial intelligence. Such systems contain a first artificial neural network, made up of a series of smaller neural networks, that has been trained with general information from various knowledge domains. This first network generates novel ideas in response to self-perturbations of connection weights between neurons and component neural nets therein. A second “critic” artificial neural network monitors the first neural network for new ideas, and identifies those ideas that are sufficiently novel compared to the machine’s pre-existing knowledge base. The critic net also generates an effective response that in turn injects/retracts perturbations to selectively form and ripen ideas having the most novelty, utility, or value.

In the case of the instant invention, the machine only received training in general knowledge in the field, and proceeded to independently conceive of the invention, and to identify it as novel and salient. If similar training had been given to a human student, the student rather than the trainer would meet the inventorship criteria as inventor.

In some instance of machine invention, a natural person might qualify as an inventor by virtue of having exhibited inventive skill in developing a program to solve a particular problem, by skillfully selecting data to provide to a machine, or by identifying the output of a machine as inventive. However, in the present case, DABUS was not created to solve any particular problem, nor was trained on any special data relevant to the instant invention. The machine rather than a person identified the novelty and salience of the instant invention.

A detailed description of how DABUS and a Creativity Machine functions is available in, among others, the following US patent publications: 5,659,666; 7,454,388 B2; and 2015/0379394 A1.

Inventorship should not be restricted to natural persons. A machine that would meet inventorship criteria if it were a natural person should also qualify as an inventor.

No United States law explicitly prohibits protection for autonomous machine inventions.

However, inventorship is restricted to “individuals” under, e.g., 35 U.S.C. §100(f) (1952) (“The term ‘inventor’ means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.”).

The restriction of inventorship to individuals was intended to prevent corporate inventorship. It was not the result of seriously considering autonomous machine invention, and should not therefore prohibit subsistence of intellectual property rights where there is no natural person who qualifies as an inventor. *See* Karl F. Milde, Jr., Can a Computer Be an “Author” or an “Inventor”?, 51 J. PAT. OFF. SOC’Y 378, 379 (1969). (“The closest that the Patent Statute comes to requiring that a patentee be an actual person is in the use, in Section 101, of the term ‘whoever.’ Here too, it is clear from the absence of any further qualifying statements that the Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”)

The output of autonomously inventive machines should be patentable if it meets the requirements of patentability set out in law. The primary purpose of patent law is to incentivize innovation, together with incentivizing the disclosure of information, and the commercialization and development of inventions. Allowing patents for machine output incentivizes the development of inventive machines, which ultimately promotes innovation. To the extent that patents are incentivizing commercialization and disclosure of information, there is no change in this function between a human and a machine-generated invention. Failure to permit patent protection for the output of autonomously inventive machines threatens to

undermine the patent system by failing to encourage the production of socially valuable inventions. This will be particularly important as artificial intelligence becomes more sophisticated and likely a standard part of future industrial research and development. Clarifying now that patents are available for the output of autonomously inventive machines would provide certainty to businesses and innovators.

Patent law also protects the moral rights of human inventors; acknowledging machines as inventors would facilitate this function. At present, individuals are claiming inventorship of autonomous machine inventions under circumstances in which those persons have not functioned as inventors. See Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1079-1126 (2016). Failing to appropriately acknowledge inventive activity by machines weakens moral justifications for patents by allowing individuals to take credit for work they have not done. It is not unfair to machines who have no interest in being acknowledged, but it is unfair to other human inventors because it devalues their accomplishments by altering and diminishing the meaning of inventorship. This could equate the hard work of creative geniuses with those simply asking a machine to solve a problem or submitting a machine's output. By contrast, acknowledging machines as inventors would also acknowledge the work of a machine's creators.

An "autonomous machine invention" should be assigned to the owner of the machine.

Machines should not own patents. They do not have legal personality or independent rights, and cannot own property.

The machine's owner should be the default owner of any intellectual property it produces and any benefits that would otherwise subsist in an inventor who is a natural person. This is most consistent with current ownership norms surrounding personal property (including both machines and patents).

In the instant application, we submit that DABUS should be acknowledged as the inventor of any resultant patents, with Stephen Thaler, the machine's owner, as the applicant and assignee of any such patents.

Stephen Thaler is prevented from listing himself as the inventor for the instant application.

Stephen Thaler, the creator of DABUS, is prohibited from listing himself as an inventor for the instant application because he has not contributed to the conception of the instant invention. DABUS performed what is traditionally considered the mental part of the inventive act. Based on DABUS's results, a skilled person could have reduced the invention to practice. Inaccurately listing himself as an inventor could subject Dr. Thaler to criminal sanctions. 18 U.S.C. 1001.

The Office presumes that the named inventor in an application is the actual inventor. See MPEP §2137.01.

If a machine cannot be an inventor, the first person to recognize the inventive nature of autonomous machine input may qualify as an inventor.

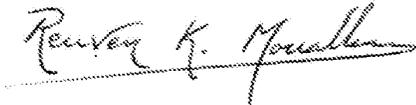
It has been argued that a natural person may claim inventorship of an autonomous machine invention even in situations in which that person was not involved in the development or operation of a machine by virtue of recognizing the relevance of a machine's output. This approach is questionable in cases in which the natural person has not made an inventive contribution to the disclosed invention in the accepted meaning of the term.

In some cases, recognition of the inventive nature of a computer's output may require significant skill, but in others, the nature of inventive output may be obvious. In the present case, DABUS identified the novelty of its own idea before a natural person did.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,

A handwritten signature in black ink, reading "Reuven K. Mouallem". The signature is written in a cursive style and is positioned above a horizontal line.

Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: August 29, 2019

Electronic Patent Application Fee Transmittal				
Application Number:	16524350			
Filing Date:	29-Jul-2019			
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION			
First Named Inventor/Applicant Name:				
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-3-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE - 37 CFR 1.17(F)(GROUP I)	2462	1	200	200
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				200

Electronic Acknowledgement Receipt	
EFS ID:	37014430
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	29-AUG-2019
Filing Date:	29-JUL-2019
Time Stamp:	11:17:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$200
RAM confirmation Number	E20198SB19429994
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:



File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	30216 907abd377c196cd075be01f6522aa74386e2e259	no	2

Warnings:

Information:

Total Files Size (in bytes): 30216

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,350	07/29/2019		50567-3-01-US

CONFIRMATION NO. 1467

FORMALITIES LETTER

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 12/13/2019

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The application data sheet or inventor's oath or declaration does not identify each inventor by his or her legal name.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
 The surcharge is due for any one of:
 - late submission of the basic filing fee, search fee, or examination fee,
 - late submission of inventor's oath or declaration,
 - filing an application that does not contain at least one claim on filing, or
 - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ **80** surcharge.
- \$(**0**) previous unapplied payment amount.
- \$ **80** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice".
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jltippett/

PATENT APPLICATION FEE DETERMINATION RECORD						Application or Docket Number 16/524,350				
Substitute for Form PTO-875										
APPLICATION AS FILED - PART I										
		(Column 1)	(Column 2)		SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA		RATE(\$)	FEE(\$)			RATE(\$)	FEE(\$)	
BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A		N/A	75			N/A		
SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A		N/A	330			N/A		
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A		N/A	380			N/A		
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	11	minus 20 =			x 50 =	0.00	OR			
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	2	minus 3 =			x 230 =	0.00				
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				0.00					
MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>				0.00						
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	785			TOTAL		
APPLICATION AS AMENDED - PART II										
		(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x =		x =		
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x =		x =		
	Application Size Fee <small>(37 CFR 1.16(s))</small>									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>									
					TOTAL ADD'L FEE		TOTAL ADD'L FEE			
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x =		x =		
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x =		x =		
	Application Size Fee <small>(37 CFR 1.16(s))</small>									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>									
					TOTAL ADD'L FEE		TOTAL ADD'L FEE			
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>										



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,350	07/29/2019		50567-3-01-US

CONFIRMATION NO. 1467**WITHDRAWAL NOTICE**

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 12/13/2019

Letter Regarding a New Notice and/or the Status of the Application

If a new notice or Filing Receipt is enclosed, applicant may disregard the previous notice mailed on 08/08/2019. The time period for reply runs from the mail date of the new notice. Within the time period for reply, applicant is required to file a reply in compliance with the requirements set forth in the new notice to avoid abandonment of the application.

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebc>.

If the reply is not filed electronically via EFS-Web, the reply must be accompanied by a copy of the new notice.

If the Office previously granted a petition to withdraw the holding of abandonment or a petition to revive under 37 CFR 1.137, the status of the application has been returned to pending status.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/jltippett/



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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 Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/524,350	07/29/2019	2861	785	50567-3-01-US	11	2

CONFIRMATION NO. 1467

FILING RECEIPT

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 12/13/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

None

Applicant(s)

Stephen L. Thaler, St. Charles, MO;

Assignment For Published Patent Application

Stephen L. Thaler

Power of Attorney:

Reuven Mouallem--63345
 Ryan Abbott--68178

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

EUROPEAN PATENT OFFICE (EPO) 18275174.3 11/07/2018 No Access Code Provided
 UNITED KINGDOM 1818161.0 11/07/2018 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 08/07/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/524,350**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION

Preliminary Class

116

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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page 2 of 4

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Dec 13, 2019 03:33:35 AM

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Elad, 4083201
ISRAEL

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Application	Document	Mailroom Date	Attorney Docket No.
16524350	NTC.MISS.PRT	12/13/2019	50567-3-01-US
	M327	12/13/2019	50567-3-01-US
	APP.FILE.REC	12/13/2019	50567-3-01-US

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/524,350	07/29/2019		50567-3-01-US	1467
89602	7590	12/17/2019	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			2861	
			NOTIFICATION DATE	DELIVERY MODE
			12/17/2019	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.

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Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Application of :
Stephen L. Thaler :
Application No. 16/524,350 :
Filed: 29 Jul 2019 : DECISION ON PETITION
For: DEVICES AND METHODS FOR :
ATTRACTING ENHANCED :
ATTENTION :

This is a decision on the petition under 37 CFR 1.181, filed August 29, 2019, requesting the Office vacate the Notice to File Missing Parts of Nonprovisional Application, mailed August 8, 2019.¹

The petition under 37 CFR 1.181 is **DISMISSED**.

RELEVANT BACKGROUND

The above-identified application was filed on July 29, 2019. The application papers filed on July 29, 2019 were accompanied by, *inter alia*, an application data sheet (“ADS”), a statement under 37 CFR 3.73(c) stating Stephen L. Thaler is the assignee of the entire right, title, and interest of the patent application, an assignment from the assignor, DABUS, signed by Stephen L. Thaler, to the assignee, Stephen L. Thaler, assigning and transferring the assignor’s entire right, title, and interest in the invention², and a substitute statement under 37 CFR 1.64 in lieu of declaration under 35 U.S.C. § 115(d) (“substitute statement”), listing DABUS, as the inventor for which the substitute statement applies, which was executed by Stephen L. Thaler, as legal representative of DABUS. The ADS, filed July 29, 2019, lists the sole inventor as having the given name “[DABUS]” and the family name “Invention generated by artificial intelligence.”

On August 8, 2019, the USPTO issued a Notice to File Missing Parts of Nonprovisional Application (“Notice”), which provided applicant two months from the mail date of the Notice, with extensions of time available pursuant to 37 CFR 1.136(a), to file an ADS or inventor’s

¹ The instant petition under 37 CFR 1.181 was accompanied by a petition under 37 CFR 1.182 requesting expedited processing of the instant petition. The petition to expedite the processing is **dismissed** as moot in view of this decision.

² Based on an initial review, this assignment document does not appear to satisfy the requirements set forth in 37 CFR 3.73(c)(1).

oath/declaration that identifies each inventor by his or her legal name and to submit the \$80 surcharge for the late submission of the inventor's oath or declaration.

Petitioner filed the present petition under 37 CFR 1.181 on August 29, 2019.

OPINION

Petitioner asserts the sole inventor of the subject matter of the instant application is an artificial intelligence machine named DABUS. Petitioner contends that inventorship should not be restricted to natural persons and therefore, DABUS is properly identified as the sole inventor in the ADS of July 29, 2019. Petitioner further contends the substitute statement filed July 29, 2019 and executed by Stephen L. Thaler, as legal representative of DABUS, listing DABUS as the inventor is acceptable. Petitioner requests that the Director vacate the Notice of August 8, 2019 for being unwarranted and/or void.

35 U.S.C. § 115 requires that an application filed under 35 U.S.C. § 111(a) shall include the name of the inventor or inventors. 35 U.S.C. § 100(f) defines the term “inventor” as the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.³ As provided in 37 CFR 1.41(b), an applicant may name the inventorship of a non-provisional application under 35 U.S.C. § 111(a) in the ADS in accordance with 37 CFR 1.76, or in the inventor's oath or declaration in accordance with 37 CFR 1.63. *See* MPEP 602.01.

Petitioner argues that inventorship should not be restricted to natural persons because United States law does not explicitly prohibit protection for autonomous machine-created inventions. Therefore, due to numerous policy considerations, a machine like DABUS, that meets the inventorship criteria if it were a natural person, should also qualify as an inventor. However, the United States patent laws do not support Petitioner's position that an inventor can be a machine.

The Patent statute is replete with language indicating that an inventor is a natural person. For example, as noted *supra*, 35 U.S.C. § 100(f) defines the term “inventor” as “the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.” 35 U.S.C. § 101 also provides “[w]hoever invents or discovers... may obtain a patent therefor, subject to the conditions and requirements of this title.” (emphasis added). Additionally, 35 U.S.C. § 102(a) states, “A **person** shall be entitled to a patent unless...” (emphasis added). 35 U.S.C. § 115(b)(2) further provides, in pertinent part, “[a]n 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” (emphasis added).⁴ Accordingly, the Patent statutes do not support the interpretation of “inventor” to include a machine.

³ 35 U.S.C. § 100(g) defines the terms “joint inventor” and “coinventor” as any one of the individuals who invented or discovered the subject matter of a joint invention.

⁴ Other examples from Title 35 include: 35 U.S.C. § 116(a) that states, in pertinent part “[w]hen an invention is made by two or more persons jointly, they shall apply for patent jointly and each make the required oath, except as otherwise provided in this title”; 35 U.S.C. § 256 that provides for correction of the inventorship where a “person” is named that is not the inventor or where a “person” who is an inventor is not named as an inventor of the patent;

Application No. 16/524,350

Page 3

Moreover, when considering whether corporations could be listed as an inventor, the United States Court of Appeals for the Federal Circuit (Federal Circuit) has explained that “only natural persons can be ‘inventors.’”⁵ We see no basis to distinguish a machine.

In this instance, the ADS of July 29, 2019 lists “[DABUS]” as the given name, and “Invention generated by artificial intelligence” as the family name, of the sole inventor. Similarly, the substitute statement under 37 CFR 1.64, filed July 29, 2019, lists DABUS as the inventor for which the substitute statement applies. Petitioner admits that DABUS is a machine. Because a machine does not qualify as an inventor (for the reasons set forth above), the USPTO properly issued the Notice of August 8, 2019 noting the inventor was not identified by his or her legal name.

We note, however, that the use of a machine as a tool by natural person(s) does not generally preclude natural person(s) from qualifying as an inventor or joint inventors if the natural person(s) contributed to the conception of the claimed invention. *See* MPEP § 2137.01. Further, the Office normally presumes that the named inventor or joint inventors in the application are the actual inventor or joint inventors to be named on the patent. *See* MPEP § 2137.01. Where an application names an incorrect inventor, the applicant could submit a request to correct inventorship under 37 CFR 1.48. *See* MPEP § 602.01(c) et seq.; *see also* MPEP § 706.03(a), subsection IV.

DECISION

For the reasons noted above, the petition under 37 CFR 1.181 to vacate the Notice of August 8, 2019 is dismissed.

The time period to reply to the Notice 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 Notice of August 8, 2019 to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under 37 CFR 1.136(a).

Telephone inquiries should be directed to the undersigned at (571) 272-3230.

/SHIRENE W BRANTLEY/
Attorney Advisor, OPET

35 U.S.C. § 371(c)(4) that provides for an oath or declaration by the inventor “or other person” authorized under chapter 11; 35 U.S.C. § 382 that provides for filing of an international design application by a “person who is a national of the United States.”

⁵ *Beech Aircraft Cor. v. Edo Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993); *see also University of Utah v. Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V.*, 734 F.3d 1315, 1323 (Fed. Cir. 2013) (“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.”) (internal quotation marks and citations omitted).

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Application	Document	Mailroom Date	Attorney Docket No.
16524350	PETDEC	12/17/2019	50567-3-01-US

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

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Alexandria, VA 22313-1450

PETITION TO THE DIRECTOR UNDER 37 CFR 1.181 –
REQUEST FOR RECONSIDERATION

This Petition to the Director is pursuant under 37 CFR 1.181 from the requirement under the Notice to File Missing Parts issued under 37 CFR 1.53(b) on August 8, 2019, for which the supervisory authority of the Director is invoked in appropriate circumstances. The Request for Reconsideration in this Petition is being filed in reply to the Decision on Petition issued on December 17, 2019.

In view of the legal opinion and decision by the OPET legal advisor, Ms. Shirene W. Brantley, in the Decision on Petition, additional arguments are submitted herewith (in conjunction with the inventorship statement previously submitted) to assist in further clarifying the status of inventorship as it relates to the instant invention. The circumstances under which the instant invention was conceived pose a unique legal situation, further justifying this Request for Reconsideration.

The inclusion of the inventorship statement was initially prompted in order to explain that the inventor of the subject matter of the instant invention of the present application is an AI machine, being a type of “creativity machine” named “DABUS” as indicated, *inter alia*, in the Application Data Sheet (ADS). The inventorship statement explains the nature of DABUS, and why it should be named as the inventor in the present application. In addition, such considerations directly pertain to the Substitute Statement and recordation of Assignment filed herewith the application submission. Based on the inventorship statement, it is submitted that the Director should vacate the Notice to File Missing Parts for being unwarranted and/or void.

Moreover, the additional arguments presented below rebut many of the statements made in the Decision on Petition, which if heeded as the legal advisor suggests, would render such actions potentially as fraudulent representation before the USPTO.

In the event that the Office decides to not grant this Petition, it is requested that a final decision be issued in the form of a Denial, rather than a subsequent Dismissal, in order for the Applicant to pursue the matter in Federal Court.

Further, in issuing such a Denial, Applicant requests that the Office grant a stay of proceedings regarding the time period for curing the Notice to File Missing Parts (e.g., a Suspension of Action under MPEP §709 and 37 CFR 1.103 in the current application, or allowing a Suspension of Action in a subsequently-filed continuation application to prevent a new Notice to File Missing Parts from being issued). Otherwise, Applicant will have to endure burdensome and costly procedural requirements to continually “daisy chain” newly-filed continuation applications, while the matter proceeds gradually through the Federal Court, in order to maintain the viability of their entitled IP rights.

Additional Arguments in Reply to the Decision on Petition

In the Opinion by the OPET legal advisor, sources were cited from Title 35 of the U.S. Code that define an inventor as an individual and/or person (see 35 U.S.C. §100(f), §102(a), §115, §116(a), and §256). It is then concluded that “the Patent statutes do not support the interpretation of ‘inventor’ to include a machine.”

Dr. Stephen Thaler, the Applicant and creator of DABUS, is of the honest opinion that the instant invention was conceived solely by DABUS, and that he had no input in connection with the invention that would entitle him to name himself as an inventor in accordance with the provisions of sections cited above.

The line of reasoning presented in the Opinion suggests that the referenced statutes are intended to compel an applicant to name a natural person even where that person does not meet inventorship criteria. This would force an applicant to name a person who does not meet the legal definition of an inventor. Failure to do so would prevent an applicant from receiving protection for an otherwise patentable invention. This reasoning cannot be correct.

It would be wrong to require an applicant to name a person other than an actual inventor solely for the purposes of meeting a strict literal application of statutes not drafted with regards to the possibility that an invention may be generated without a natural person who qualifies as an inventor. This would deceive the public with respect to the actual inventor of an invention, and provide undeserved credit to someone who did not exercise inventive skill.

Inventorship is not a right but a matter of fact. That is, no person or other entity has a “right” to be an inventor. Inventorship is determined and should only be determined on the basis of inventive contribution to an alleged invention. Therefore, the fact that AI systems currently do not have any rights in law cannot be determinative of whether or not an AI system can be considered an inventor in law.

The principles behind the naming the inventor(s) of an invention under 35 U.S.C. §115 have to be considered to their fullest extent, and not just limited to consideration of a person who is an inventor. The public has a right to know who is/are the actual inventor(s) of an invention disclosed in a patent application or patent. This becomes ever more relevant as AI systems generate ever more sophisticated technologies that are often beyond the human capacity to develop (such as those derived from the processing and analysis of vast amounts of data).

It would be legally wrong for an applicant to fail to identify the inventive contribution of an AI system as this would lead to a misrepresentation as to the origin of the inventive concept(s) disclosed in the patent application. Moreover, inaccurately listing a natural person for an invention devised by an AI system would dilute the very principle of naming the inventor and would be unfair. While it would not be unfair to the AI system, which currently has no legal rights or interest in law, it would be unfair to other human inventors because it would equate the work of legitimate human inventors with those who were merely associated with an AI system that actually made the invention.

It is accepted that an AI system such as DABUS cannot, under current law, own property. While there has been very extensive debate on how to handle recent and forecast advances in AI to date, there is no law that confers on an AI system any rights to own property.

In refusing to accept the naming of an AI system as an inventor, the Office 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. No such condition is laid down in the Statutes.

The motivation to innovate and disclose does not lie with the inventor, but rather with the invention's owner. It is the entity that will ultimately benefit from the invention that needs

the motivation, for instance the employer or other entity that invests in the development of new technology.

The patent system exists to encourage investment in research and development and in the dissemination of the results of that work, via the granting of a time-limited monopoly in return for disclosure. It is no more correct to suggest that inventions made by AI systems could be disseminated freely to the public than inventions made by humans. While inventions may be disseminated freely by their owners, free dissemination denies the owner of those inventions the prospect of the reward provided for by the patent system. The patent system exists expressly to motivate innovation and disclosure of inventions. That motivation is the same irrespective of who is the actual deviser of the invention.

The Opinion concludes by providing the following suggestion. It states:

We note, however, that the use of a machine as a tool by natural person(s) does not generally preclude natural person(s) from qualifying as an inventor or joint inventor if the natural person(s) contributed to the conception of the claimed invention. See MPEP §2137.01. Further, the Office normally presumes that the named inventor or joint inventors in the application are the actual inventors to be named on the patent. See MPEP §2137.01. Where an application names an incorrect inventor, the applicant could submit a request to correct inventorship under 37 CFR 1.48 See MPEP §602.01(c) et seq.; see also MPEP §706.03(a), subsection IV.

It is emphasized that DABUS cannot be construed as a tool in the context above, the term “autonomous” in its acronym (DABUS, Device for the Autonomous Bootstrapping of Unified Sentience) inherently indicates that a human is not operating DABUS when it is “conceiving” an invention, neither through suggestion, posing a problem, pruning, emphasizing, guiding, nor a host of other ancillary activities. In fact, DABUS is conducting a self-managed and self-regulated “exploration” of a myriad of conceivable possibilities, assessing such notional junctures wholly independently of any human intervention.

It is further emphasized that DABUS itself is the subject of several issued US patents. Namely, US Patent No. 6,018,727 for “Device for the autonomous generation of useful information,” US Patent No. 7,454,388 for “Device for the autonomous bootstrapping of useful information,” and US Patent No. 10,423,875 for “Device for the autonomous bootstrapping of unified sentence.”

In granting these patents, the Office has in essence accepted the existence of means to create new intellectual property via creative machine intelligence, implicitly legalizing the process by which DABUS arrives at a new invention. And yet, the fruits of such a process by DABUS, which is the subject of the instant invention, are being improperly excluded from such entitlement. By requiring a human inventor, the Office is effectively excluding any AI-generated invention from patent protection. Such an outcome does not square with the fact that the Office awarded patent rights for the inventions cited above for their very ability to generate inventions using AI.

The Office is also requested to take into account the position adopted by other Patent Offices in corresponding patent applications for the DABUS inventions, as well as the significant volume of debate currently circulating on the issue of AI-conceived inventions. More specifically, the European Patent Office (EPO) has accepted in the corresponding European Patent Application No. EP18275174.3, Patent Publication No. EP3563896A1, that DABUS is the true deviser of the invention. The UK Intellectual Property Office (UKIPO) has similarly accepted that DABUS is the actual deviser of the invention in its deliberations on the corresponding UK Patent Application No. GB1818161.0, Patent Publication No. GB2575131A. There would be no legal justification in the identification of different inventors by different Patent Offices for the same invention, as doing so would contradict the very principle of identifying the actual deviser of the invention.

While both the EPO and the UKIPO have objected to the *naming* of DABUS as the inventor, this is not on the basis of whether DABUS actually conceived the invention but on whether patent law (the European Patent Convention and the UK Patents Act 1977, respectively) permit the naming of an inventor that is not a natural person. The UKIPO has, though, agreed that the making of inventions by AI systems is a current and serious issue that must be debated in the context of patent law, and has also not excluded the possibility that current UK patent law might be able to be construed to permit the naming of an AI system as an inventor.

The World Intellectual Property Office (WIPO) has recently published a Conversation on Intellectual Property and Artificial Intelligence (September 2019) specifically on this question of law, similar to the USPTO Request for Comments on Patenting Artificial Intelligence Inventions of August 2019 and Request for Comments on Intellectual Property Protection for Artificial Intelligence Innovation of October 2019.

The fact that artificial intelligence systems, of which DABUS is an example, are conceiving new technological developments that meet the requirements of patentability is widely accepted, and therefore should not be ignored, especially by the government entities that manage and grant rights to patentable inventions, that is Patent Offices.

Finally, it is noted that, based on the above, 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. Therefore, in the absence of any cure to the outstanding Notice, Applicant submits that in the event that the Office decides to not grant this Petition, it is requested that a final decision be issued in the form of a Denial, rather than a subsequent Dismissal, in order for the Applicant to pursue the matter before a Federal Court.

Further, in issuing such a Denial, Applicant requests that the Office grant a stay of proceedings regarding the time period for curing the Notice to File Missing Parts (e.g., a Suspension of Action under MPEP §709 and 37 CFR 1.103 in the current application, or allowing a Suspension of Action in a subsequently-filed continuation application to prevent a new Notice to File Missing Parts from being issued). Otherwise, Applicant would have to endure burdensome and costly procedural requirements to continually file continuation applications, while the matter proceeds slowly through the Federal Courts, in order to maintain the viability of their entitled IP rights.

Inventorship Statement Previously Filed

A machine called “DABUS” conceived of the instant invention.

The instant invention was generated by a specific machine called “DABUS” (“device for the autonomous bootstrapping of unified sentience”) – a type of “Creativity Machine.” A Creativity Machine is a particular type of connectionist artificial intelligence. Such systems contain a first artificial neural network, made up of a series of smaller neural networks, that has been trained with general information from various knowledge domains. This first network generates novel ideas in response to self-perturbations of connection weights between neurons and component neural nets therein. A second “critic” artificial neural network monitors the first neural network for new ideas, and identifies those ideas that are sufficiently novel compared to the machine’s pre-existing knowledge base. The critic net also generates an effective response that in turn injects/retracts perturbations to selectively form and ripen ideas having the most novelty, utility, or value.

In the case of the instant invention, the machine only received training in general knowledge in the field, and proceeded to independently conceive of the invention, and to

identify it as novel and salient. If similar training had been given to a human student, the student rather than the trainer would meet the inventorship criteria as inventor.

In some instance of machine invention, a natural person might qualify as an inventor by virtue of having exhibited inventive skill in developing a program to solve a particular problem, by skillfully selecting data to provide to a machine, or by identifying the output of a machine as inventive. However, in the present case, DABUS was not created to solve any particular problem, nor was trained on any special data relevant to the instant invention. The machine rather than a person identified the novelty and salience of the instant invention.

A detailed description of how DABUS and a Creativity Machine functions is available in, among others, the following US patent publications: 5,659,666; 7,454,388 B2; and 2015/0379394 A1.

Inventorship should not be restricted to natural persons. A machine that would meet inventorship criteria if it were a natural person should also qualify as an inventor.

No United States law explicitly prohibits protection for autonomous machine inventions.

However, inventorship is restricted to “individuals” under, e.g., 35 U.S.C. §100(f) (1952) (“The term ‘inventor’ means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.”).

The restriction of inventorship to individuals was intended to prevent corporate inventorship. It was not the result of seriously considering autonomous machine invention, and should not therefore prohibit subsistence of intellectual property rights where there is no natural person who qualifies as an inventor. *See* Karl F. Milde, Jr., Can a Computer Be an “Author” or an “Inventor”?, 51 J. PAT. OFF. SOC’Y 378, 379 (1969). (“The closest that the Patent Statute comes to requiring that a patentee be an actual person is in the use, in Section 101, of the term

‘whoever.’ Here too, it is clear from the absence of any further qualifying statements that the Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”)

The output of autonomously inventive machines should be patentable if it meets the requirements of patentability set out in law. The primary purpose of patent law is to incentivize innovation, together with incentivizing the disclosure of information, and the commercialization and development of inventions. Allowing patents for machine output incentivizes the development of inventive machines, which ultimately promotes innovation. To the extent that patents are incentivizing commercialization and disclosure of information, there is no change in this function between a human and a machine-generated invention. Failure to permit patent protection for the output of autonomously inventive machines threatens to undermine the patent system by failing to encourage the production of socially valuable inventions. This will be particularly important as artificial intelligence becomes more sophisticated and likely a standard part of future industrial research and development. Clarifying now that patents are available for the output of autonomously inventive machines would provide certainty to businesses and innovators.

Patent law also protects the moral rights of human inventors; acknowledging machines as inventors would facilitate this function. At present, individuals are claiming inventorship of autonomous machine inventions under circumstances in which those persons have not functioned as inventors. See Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1079-1126 (2016). Failing to appropriately acknowledge inventive activity by machines weakens moral justifications for patents by allowing individuals to take credit for work they have not done. It is not unfair to machines who have no interest in being acknowledged, but it is unfair to other human inventors because it devalues their accomplishments by altering and diminishing the meaning of inventorship.

This could equate the hard work of creative geniuses with those simply asking a machine to solve a problem or submitting a machine's output. By contrast, acknowledging machines as inventors would also acknowledge the work of a machine's creators.

An "autonomous machine invention" should be assigned to the owner of the machine.

Machines should not own patents. They do not have legal personality or independent rights, and cannot own property.

The machine's owner should be the default owner of any intellectual property it produces and any benefits that would otherwise subsist in an inventor who is a natural person. This is most consistent with current ownership norms surrounding personal property (including both machines and patents).

In the instant application, we submit that DABUS should be acknowledged as the inventor of any resultant patents, with Stephen Thaler, the machine's owner, as the applicant and assignee of any such patents.

Stephen Thaler is prevented from listing himself as the inventor for the instant application.

Stephen Thaler, the creator of DABUS, is prohibited from listing himself as an inventor for the instant application because he has not contributed to the conception of the instant invention. DABUS performed what is traditionally considered the mental part of the inventive act. Based on DABUS's results, a skilled person could have reduced the invention to practice. Inaccurately listing himself as an inventor could subject Dr. Thaler to criminal sanctions. 18 U.S.C. 1001.

The Office presumes that the named inventor in an application is the actual inventor. See MPEP §2137.01.

If a machine cannot be an inventor, the first person to recognize the inventive nature of autonomous machine input may qualify as an inventor.

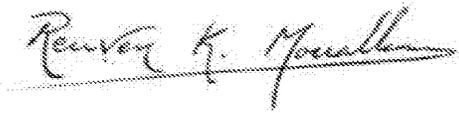
It has been argued that a natural person may claim inventorship of an autonomous machine invention even in situations in which that person was not involved in the development or operation of a machine by virtue of recognizing the relevance of a machine's output. This approach is questionable in cases in which the natural person has not made an inventive contribution to the disclosed invention in the accepted meaning of the term.

In some cases, recognition of the inventive nature of a computer's output may require significant skill, but in others, the nature of inventive output may be obvious. In the present case, DABUS identified the novelty of its own idea before a natural person did.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

/Ryan Abbott/
Dr. Ryan Abbott
Attorney for Applicant
Registration No. 68,178

Date: January 20, 2020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

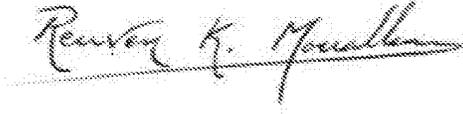
PETITION TO EXPEDITE 1.181 PETITION TO THE DIRECTOR

This Petition is a request to expedite the petition to the Director filed in the instant application under 37 CFR 1.181, for which the appropriate fee has been paid.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Reuven K. Mouallem", written in black ink on a white background.

Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: January 20, 2020

Electronic Patent Application Fee Transmittal				
Application Number:	16524350			
Filing Date:	29-Jul-2019			
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION			
First Named Inventor/Applicant Name:				
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-3-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE - 37 CFR 1.17(F)(GROUP I)	2462	1	200	200
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				200

Electronic Acknowledgement Receipt	
EFS ID:	38339546
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	20-JAN-2020
Filing Date:	29-JUL-2019
Time Stamp:	12:24:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$200
RAM confirmation Number	E20201JC28139598
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions	181_Petition_NF-p.pdf	124448	no	12
			c4d47542598c4400a5c3e6c5e157ca5cf02f1c3e		

Warnings:

Information:

2	Petition for review by the Office of Petitions	Petition_to_expedite_NF-p.pdf	33630	no	2
			7bfc250fff1515afed82b54551a9c72a74113a93		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30216	no	2
			a6e0887da3147c0b02fb381a3681636535ec28d4		

Warnings:

Information:

Total Files Size (in bytes):	188294
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/E0/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/524,350	07/29/2019		50567-3-01-US	1467
89602	7590	01/22/2020	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			2861	
			NOTIFICATION DATE	DELIVERY MODE
			01/22/2020	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):

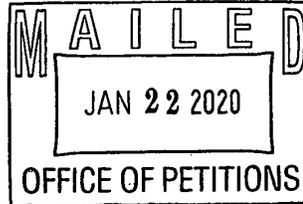
ydm@FlashPointIP.com
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FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad 40832-01 IL ISRAEL



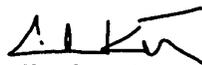
In re Application No. 16/524,350
Filed: July 29, 2019
Attorney Docket No. 50567-3-01-US
For: DEVICES AND METHODS FOR
ATTRACTING ENHANCED ATTENTION

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This communication relates to the decision issued December 17, 2019 in response to the petition under 37 CFR 1.181 filed on August 29, 2019, requesting the USPTO to vacate the Notice to File Missing Parts of Nonprovisional Application, mailed August 8, 2019. The decision of December 17, 2019 dismissed petitioner's request to vacate the Notice to File Missing Parts of Nonprovisional Application, mailed August 8, 2019.

The Director has determined that the decision of December 17, 2019 involves an interpretation of patent laws or regulations that would be of precedential value and, therefore, will be published pursuant to 37 CFR 1.14(e). This communication serves to provide applicant with notice and an opportunity to object in writing within two months on the ground that the decision discloses a trade secret or other confidential information. See 37 CFR 1.14(e). Any objection to publish the decision of December 17, 2019 must identify the deletions in the text of the decision considered necessary to protect the information, or explain why the entire decision must be withheld from the public to protect such information. *Id.*

Telephone inquiries relating to this communication should be directed to Shirene Brantley, Attorney Advisor, at (571) 272-3230.


Charles Kim
Director
Office of Petitions

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Jan 28, 2020 03:36:25 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16524350	M327	01/22/2020	50567-3-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://portal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

N35111-EP1 (NF)

1

DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION

FIELD AND BACKGROUND OF THE INVENTION

5 The present invention relates to devices and methods for attracting enhanced attention. More specifically, the present invention relates to beacons for sustaining enhanced interest/attention, as well as to beacons with symbolic importance.

In the prior art, signal indicators and beacons are typically based upon color, brightness, periodic flashing frequency, rotational pattern, and motion, but not fractal dimension.

10 Both cognitive studies and simulations of the brain's limbo-thalamocortical system via artificial neural nets have shown that original ideas produced within the brain's stream of consciousness occur at a specific rhythm, typically near 4 hertz and a fractal dimension of approximately $\frac{1}{2}$ (see Literature References below: Thaler, 1997b, 2013, 2014, 2016a, b, 2017b). An interval of 300 ms (~ 4 Hz) has been referred to as the "speed of thought"
15 (Tovée 1994).

In the referenced body of theoretical work of Thaler, the brain's thalamic reticular nucleus (TRN) is modeled as a constantly adapting auto-associative neural net (i.e., an anomaly or novelty detector), for which such ideational rhythms are the most noticeable due to their sporadic and unpredictable nature. Essentially, neural activation patterns
20 within the cortex are thought to emit a telltale 'beacon' to the thalamus when they are generated within a stream having the above said frequency and fractal signature. Furthermore, these sporadic cognitive streams generally correspond to novel pattern formation and are considered the signature of inventive ideation.

It was also shown (Thaler 2016a) that the TRN's behavior as an anomaly detector was linked to creative thinking and enhanced attention in forming useful ideational patterns as stated in the following passage: "In the former case, creative achievements are the result of convergent thinking processes, requiring the attention of critic nets on the lookout for sporadic activations within the cortex that signal the formation of novel and potentially useful ideational patterns [3]. With non-linear stimulus streams present in the external environment (i.e., sporadic events such as the two audible clicks used in EEG studies to measure so-called P50 response), the attention of critic nets selectively shifts to these sporadic external event streams [3,14] dominating within cortex, rather than mining the weaker, internally seeded stream of consciousness for seminal thought."

In another publication (Thaler 2016b), frequency and fractal dimension were shown to be indicative of the relation between attention, ideation novelty, and such thought-process characteristics: "The search for a suitable affordance to guide such attention has revealed that the rhythm of pattern generation by synaptically perturbed neural nets is a quantitative indicator of the novelty of their conceptual output, that cadence in turn characterized by a frequency and a corresponding temporal clustering that is discernible through fractal dimension."

Regarding human response to light modulation, the Color Usage Lab of the NASA Ames Research Center published related information dealing with "Blinking, Flashing, and Temporal Response" (https://colorusage.arc.nasa.gov/flashing_2.php), stating the following: "The rate of flashing has a powerful influence on the salience of flashing elements. The human eye is most sensitive to frequencies of 4-8 Hz (cycles/second). Very slow and very fast blinking are less attention-demanding than rates near that peak."

A proposed approach based on the effects of fractal flickering of light stimuli was previously published (Zueva 2013). Fractal flickering exhibits scale invariance with time on the evoked responses of the retina and visual cortex in normal and neurodegenerative disorders. In the proposed approach, standard stimuli are presented to patients who adapt to a flickering background with “specific chaotic interval variabilities between flashes (dynamic light fractal).” It was hypothesized that such an approach could be applied to facilitate adaptation to non-linear flickering with fractal dimensions in electrophysiological diagnostics.

Finally, in an article (Williams 2017) entitled, “Why Fractals Are So Soothing,” related to fractal patterns in the paintings of Jackson Pollock, the physiological response to viewing images with fractal geometries having a fractal dimension of between 1.3 and 1.5 was suggested to be an “economical” means for the eye-tracking mechanism of the human visual system to simplify processing image content.

The ability to exploit fractal flickering for visual evoked responses (as in the approach described in Zueva 2013), or to detect a visually fractal image (as in the studies in Williams 2017) relate to visual and image processing.

It would be desirable to have devices and methods for attracting enhanced attention. Such devices and methods would, *inter alia*, provide unique advantages over the prior art mentioned above.

20

SUMMARY

The present invention seeks to provide devices and methods for attracting enhanced attention.

It is noted that the term “exemplary” is used herein to refer to examples of embodiments and/or implementations, and is not meant to necessarily convey a more-desirable use-case. Similarly, the terms “alternative” and “alternatively” are used herein to refer to an example out of an assortment of contemplated embodiments and/or implementations, and is not meant to necessarily convey a more-desirable use-case. 5 Therefore, it is understood from the above that “exemplary” and “alternative” may be applied herein to multiple embodiments and/or implementations. Various combinations of such alternative and/or exemplary embodiments are also contemplated herein.

Embodiments of the present invention provide a method for producing and providing a pulse train to an LED or lamp at a frequency and fractal dimension that is 10 highly noticeable to humans, being the same rhythm with which original ideas are formed and recognized in both the brain and advanced Creativity Machines. A light source driven in such a manner may serve as an emergency beacon within environments filled with distracting light sources that are flickering randomly or periodically. Ease of detection may be improved using auto-associative neural nets as anomaly detectors within a machine- 15 vision algorithm.

Thus, using TRN behavior as an anomaly filter in sustained creative activity and mental focus as detailed above in the context of the works of Thaler, the present invention exploits such a concept by embodying the same requisite characteristics (i.e., frequency and fractal dimension) in a signaling device in order to trigger the brain’s innate ability to 20 filter sensory information by “highlighting” certain portions in order to make those portions more noticeable to the brain.

That is, a single light-emitting element flashing at such a prescribed frequency is highly noticeable when viewed through anomaly detectors built from artificial neural

networks. The sporadic nature of such pulse streams defeats the anomaly filter's ability to both learn and anticipate their rhythm, making said light pulses visible as anomalies. Additionally, in contrast to pulse trains, having fractal dimensions less than $\frac{1}{2}$, the prescribed rhythms have sufficient frequency to catch the attention of a roving attention window, as when humans are shifting their attention across widely separated portions of a scene. If the detection system can calculate the fractal dimension of the anomalous light sources within the filtered scene, the "neural flame" may be used as an emergency beacon that discriminates itself from other alternating light sources within the environment.

Even to the naked eye, and without the use of an anomaly detector, fractal dimension $\frac{1}{2}$ pulse streams preferentially attract the attention of human test subjects. The most attention-grabbing aspect of such streams is that the 'holes' or lacunarity between pulses occur as anomalies in what would otherwise be a linear stream of events. In other words, the pattern is frequently broken, such anomalous behavior possibly being detected by the TRN within the human brain as inconsistencies in the established arrival trend of visual stimuli. In contrast, should fractal dimension drop significantly below $\frac{1}{2}$, the frequency of anomalous pulses drops, making them less noticeable to humans should either attention or gaze be wandering.

The incorporation of a "fractal rhythm" into a signal beacon, having a spatial fractal dimension near zero and a temporal delivery of a fractal dimension near $\frac{1}{2}$, relates to exploiting the understanding of TRN behavior, thereby avoiding aspects of visual and image processing as contributing elements.

Embodiments of the present invention further provide a symbol celebrating the unique tempo by which creative cognition occurs. The algorithmically-driven neural flame may be incorporated within one or more structures that resemble candles or altar fixtures,

for instance, to accentuate the light's spiritual significance. It is noted that that the light source or beacon can incorporate any type of light-emitting device.

Such embodiments stem from the notion of one perceiving neural net monitoring another imagining net, the so-called "Creativity Machine Paradigm" (Thaler 2013), which has been proposed as the basis of an "adjunct" religion wherein cosmic consciousness, tantamount to a deity, spontaneously forms as regions of space topologically pinch off from one another to form similar ideating and perceiving pairs, each consisting of mere inorganic matter and energy. Ironically, this very neural paradigm has itself proposed an alternative use for such a flicker rate, namely a religious object that integrates features of more traditional spiritual symbols such as candles and torches.

Moreover, in a theory of how cosmic consciousness may form from inorganic matter and energy (Thaler, 1997a, 2010, 2017), the same attentional beacons may be at work between different regions of spacetime. Thus, neuron-like, flashing elements may be used as philosophical, spiritual, or religious symbols, especially when mounted atop candle- or torch-like fixtures, celebrating what may be considered deified cosmic consciousness. Such a light source may also serve as a beacon to that very cosmic consciousness most likely operating via the same neuronal signaling mechanism.

Therefore, according to aspects of the present invention, there is provided for the first time a device for attracting enhanced attention, the device including: (a) an input signal of a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half; and (b) at least one controllable light source configured to be pulsatingly operated by the input signal; wherein a neural flame emitted from at least one controllable light source as a result of the lacunar pulse train is adapted to serve as a uniquely-identifiable signal beacon over

potentially-competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting enhanced attention.

Alternatively or additionally, the device further includes: (c) a processor for supplying the input signal of the lacunar pulse train having the characteristics; and (d) a
5 digital-to-analog (D/A) converter for transmitting the input signal to at least one controllable light source.

More alternatively or additionally, the D/A converter is an onboard module of the processor, and wherein the module is embodied in at least one form selected from the group consisting of: hardware, software, and firmware.

10 More alternatively or additionally, the processor includes a thresholding unit for monitoring a random-walk trace for trace-axis crossings of a firing threshold of the thresholding unit, and wherein the trace-axis crossings result in activation transitions to generate pulse-activation sequences of the lacunar pulse train.

More alternatively or additionally, candidates of the pulse-activation sequences are
15 filtered based on a zerset dimension, and wherein the candidates are filled into a buffer of selected sequences having a fractal dimension of approximately one-half.

More alternatively or additionally, filtered patterns are randomly withdrawn from the selected sequences in the buffer, and wherein the filtered patterns are configured to serve as the input signal to the D/A converter for transmitting to at least one controllable
20 light source.

Most alternatively or additionally, the filtered patterns are generated onboard the processor.

Alternatively or additionally, the uniquely-identifiable signal beacon reduces distraction by providing a preferential alert over the potentially-competing attention sources.

Alternatively or additionally, the neural flame serves as an object of contemplative
5 focus embodying symbolic meaning of varying significance.

According to aspects of the present invention, there is provided for the first time a method for attracting enhanced attention, the method including the steps of: (a) generating a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half; (b) transmitting the
10 input signal to at least one controllable light source; and (c) pulsatingly operating at least one controllable light source to produce a neural flame emitted from at least one controllable light source as a result of the lacunar pulse train is adapted to serve as a uniquely-identifiable signal beacon over potentially-competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting
15 enhanced attention.

Alternatively or additionally, the method further includes the step of: (d) monitoring a random-walk trace for trace-axis crossings of a firing threshold, and wherein the trace-axis crossings result in activation transitions to generate pulse-activation sequences of the lacunar pulse train.

More alternatively or additionally, the method further includes the steps of: (e)
20 filtering candidates of the pulse-activation sequences based on a zeroset dimension; and (f) filling the candidates into a buffer of selected sequences having a fractal dimension of approximately one-half.

Most alternatively or additionally, the method further includes the steps of: (g) randomly withdrawing filtered patterns from the selected sequences in the buffer; and (h) using the filtered patterns as the input signal.

Alternatively or additionally, uniquely-identifiable signal beacon reduces
5 distraction by providing a preferential alert over the potentially-competing attention sources.

Alternatively or additionally, neural flame serves as an object of contemplative focus embodying symbolic meaning of varying significance.

These and further embodiments will be apparent from the detailed description and
10 examples that follow.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention is herein described, by way of example only, with reference to the accompanying drawings, wherein:

15 Figure 1 is a simplified high-level schematic diagram depicting a neural-flame device for attracting enhanced attention, according to embodiments of the present invention;

Figure 2 is a simplified flowchart of the major process steps for operating the neural-flame device of Figure 1, according to embodiments of the present
20 invention;

Figure 3 depicts a trace of the time evolution of input to a neuron-like thresholding unit of the neural-flame device of Figure 1, according to embodiments of the present invention;

Figure 4 depicts a video stream for detecting fractal beacons within a generalized scene from the neural-flame device of Figure 1, according to embodiments of the present invention.

5 DESCRIPTION OF THE ILLUSTRATIVE EMBODIMENTS

The present invention relates to devices and methods for attracting enhanced attention. The principles and operation for providing such devices and methods, according to aspects of the present invention, may be better understood with reference to the accompanying description and the drawings.

10 Referring to the drawings, Figure 1 is a simplified high-level schematic diagram depicting a neural-flame device for attracting enhanced attention, according to embodiments of the present invention. A neural-flame device **2** includes a support **4** serving as a beacon or an imitation candle, which may be configured to accommodate the needs of the application (regarding physical dimensions) such as an emergency alert or as
15 an object of contemplative focus embodying varying significance.

Neural-flame device **2** has a controllable light source **6** (e.g., an LED component) with an optional translucent cover **8**, which can be shaped like a neuron's cell body or soma. Controllable light source **6** can incorporate any type of light-emitting device. Neural-flame device **2** includes a base **10** housing an optional digital-to-analog (D/A)
20 converter (D/A module **12**) and an input connector **14** for supplying a digital input signal for driving controllable light source **6** with the required voltage sequence at a frequency corresponding to approximately 4 Hz and a fractal dimension near $\frac{1}{2}$. It is noted that D/A module **12** can be implemented as hardware, software, and/or firmware as an integral component of a dedicated processor for neural-flame device **2**.

Figure 2 is a simplified flowchart of the major process steps for operating the neural-flame device of Figure 1, according to embodiments of the present invention. The process starts with the system generating pulse trains having a frequency of approximately 4 Hz and a fractal dimension of near $\frac{1}{2}$ (Step **20**). A system buffer is then filled with these special lacunar pulse trains (Step **22**). These pulse trains are then sequentially withdrawn from the buffer, and then transmitted to controllable light source **6** via input connector **14** (Step **24**).

Optionally, pulse trains may be randomly removed from the buffer prior to transmitting the signal to controllable light source **6** (Step **26**). Such aspects are elaborated on in greater detail with regard to Figure 3.

Figure 3 depicts a trace of the time evolution of input to a neuron-like thresholding unit of the neural-flame device of Figure 1, according to embodiments of the present invention. The trace represents the output of a random-walk algorithm carried out on a computer or processor that is in turn applied to a neuron-like thresholding unit resulting in a series of activation transitions as the trace crosses (i.e., intersects) the “neuron’s” firing threshold. The arrival patterns of these activation transitions are then filtered by an algorithm that calculates fractal dimension (i.e., zerset dimension of the trace), and fills a buffer with those transition patterns having an approximate fractal dimension of $\frac{1}{2}$. These filtered patterns are then withdrawn from the buffer, and transmitted to drive the controllable light source.

The algorithm may be generated in an onboard processor and power supply all within base **10** of neural-flame device **2**. It is noted that not only do such pulse patterns represent the desired 4 Hz, fractal dimension $\frac{1}{2}$ pulse trains, but they largely differ from

one another, thus preventing any anomaly detection filter, biological or not, from adapting to repeating activation streams.

The neuron-activation stream is generated by inputting a form of random walk of equal-sized steps to the neuron, with each such step being a notional ‘coin flip’ to determine whether the step is positive or negative in sign. As the random input crosses the neuron’s firing threshold (as depicted in Figure 3), a pulse is triggered by the algorithm, the source of analog input to drive controllable light source **6** of neural-flame device **2**.

Returning to optional Step **26** of Figure 2, the resulting stream of the lacunar pulse train can be used as a set of candidate activation sequences that are then randomly withdrawn from the buffer, and transmitted to drive controllable light source **6**.

The random walk may be started repeatedly from zero in a series of trials, calculating fractal dimension for each, and then accumulating a library (i.e., a buffer) of just those short pulse sequences having the required fractal dimension near $\frac{1}{2}$. Step **26** may be accomplished in nanoseconds, and the sequences computationally slowed to near 300-
ms timescales prior to being transmitted to controllable light source **6**.

Other techniques may be employed as well to mitigate such effects, as known in the art. However, randomly withdrawing short pulse trains from the buffer has an advantage in that it adds another layer of randomness to the pulse train, allowing it to stand out when viewed through an anomaly detector, either in the brain or an artificial neural network-based novelty filter. With small pulse-train libraries, there is a chance of repetition as the short pulse trains are appended to each other, making it easier for the anomaly filter to adapt to them.

Such a “baseline reset” has been described (Thaler 2014). The fractal signature of the random walk is determined largely by its step size. In the case of the neural flame, the

random walk is tuned to provide a trace (i.e., a wiggly line) that has a fractal dimension of 1.5. Sampling the crossings (i.e., intersections) of that trace with a baseline that is purposely introduced mid-channel yields a zerset dimension of one less than that of the trace's fractal dimension, namely 0.5.

5 It is noted that the rigorous fractal dimension calculation (i.e., Mandelbrot Measures) is immune to the regions in which the trace departs from the baseline. Without directly viewing the trace, the zerset dimension may be verified by waiting until the trace resumes its baseline crossings again, and then calculating how these intersections scale with time.

10 In Thaler 2014, the reset involves seeking the nearest memory to the network's current output pattern and using that as a new reference to measure how far that vector has walked. The equivalent of a single neuron's activation crisscrossing a baseline, the output pattern oscillates through a point in a multidimensional space.

 Figure 4 depicts a video stream for detecting fractal beacons within a generalized
15 scene from the neural-flame device of Figure 1, according to embodiments of the present invention. Using a machine vision system, the video stream is propagated through an adaptive auto-associative neural net used as an anomaly filter. With periodic, random, and fractally-tuned beacons (as depicted in (a) "raw scene" of Figure 4), the anomaly filter (as in (b) of Figure 4) can block out the anomalies representing the periodic source (as in (c) of
20 Figure 4). Subsequent algorithmic steps (as in (d) of Figure 4) calculate the fractal dimension of each anomaly's activation stream, enabling separation of any random source from that having a tuned fractal dimension (as in (e) of Figure 4). Thus, the use of fractal dimension at frequencies close to the clock cycle of the human brain, around 250-300

N35111-EP1 (NF)

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DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION

FIELD AND BACKGROUND OF THE INVENTION

5 The present invention relates to devices and methods for attracting enhanced attention. More specifically, the present invention relates to beacons for sustaining enhanced interest/attention, as well as to beacons with symbolic importance.

In the prior art, signal indicators and beacons are typically based upon color, brightness, periodic flashing frequency, rotational pattern, and motion, but not fractal dimension.

10 Both cognitive studies and simulations of the brain's limbo-thalamocortical system via artificial neural nets have shown that original ideas produced within the brain's stream of consciousness occur at a specific rhythm, typically near 4 hertz and a fractal dimension of approximately $\frac{1}{2}$ (see Literature References below: Thaler, 1997b, 2013, 2014, 2016a, b, 2017b). An interval of 300 ms (~ 4 Hz) has been referred to as the "speed of thought"
15 (Tovée 1994).

In the referenced body of theoretical work of Thaler, the brain's thalamic reticular nucleus (TRN) is modeled as a constantly adapting auto-associative neural net (i.e., an anomaly or novelty detector), for which such ideational rhythms are the most noticeable due to their sporadic and unpredictable nature. Essentially, neural activation patterns
20 within the cortex are thought to emit a telltale 'beacon' to the thalamus when they are generated within a stream having the above said frequency and fractal signature. Furthermore, these sporadic cognitive streams generally correspond to novel pattern formation and are considered the signature of inventive ideation.

It was also shown (Thaler 2016a) that the TRN's behavior as an anomaly detector was linked to creative thinking and enhanced attention in forming useful ideational patterns as stated in the following passage: "In the former case, creative achievements are the result of convergent thinking processes, requiring the attention of critic nets on the lookout for sporadic activations within the cortex that signal the formation of novel and potentially useful ideational patterns [3]. With non-linear stimulus streams present in the external environment (i.e., sporadic events such as the two audible clicks used in EEG studies to measure so-called P50 response), the attention of critic nets selectively shifts to these sporadic external event streams [3,14] dominating within cortex, rather than mining the weaker, internally seeded stream of consciousness for seminal thought."

In another publication (Thaler 2016b), frequency and fractal dimension were shown to be indicative of the relation between attention, ideation novelty, and such thought-process characteristics: "The search for a suitable affordance to guide such attention has revealed that the rhythm of pattern generation by synaptically perturbed neural nets is a quantitative indicator of the novelty of their conceptual output, that cadence in turn characterized by a frequency and a corresponding temporal clustering that is discernible through fractal dimension."

Regarding human response to light modulation, the Color Usage Lab of the NASA Ames Research Center published related information dealing with "Blinking, Flashing, and Temporal Response" (https://colorusage.arc.nasa.gov/flashing_2.php), stating the following: "The rate of flashing has a powerful influence on the salience of flashing elements. The human eye is most sensitive to frequencies of 4-8 Hz (cycles/second). Very slow and very fast blinking are less attention-demanding than rates near that peak."

A proposed approach based on the effects of fractal flickering of light stimuli was previously published (Zueva 2013). Fractal flickering exhibits scale invariance with time on the evoked responses of the retina and visual cortex in normal and neurodegenerative disorders. In the proposed approach, standard stimuli are presented to patients who adapt to a flickering background with “specific chaotic interval variabilities between flashes (dynamic light fractal).” It was hypothesized that such an approach could be applied to facilitate adaptation to non-linear flickering with fractal dimensions in electrophysiological diagnostics.

Finally, in an article (Williams 2017) entitled, “Why Fractals Are So Soothing,” related to fractal patterns in the paintings of Jackson Pollock, the physiological response to viewing images with fractal geometries having a fractal dimension of between 1.3 and 1.5 was suggested to be an “economical” means for the eye-tracking mechanism of the human visual system to simplify processing image content.

The ability to exploit fractal flickering for visual evoked responses (as in the approach described in Zueva 2013), or to detect a visually fractal image (as in the studies in Williams 2017) relate to visual and image processing.

It would be desirable to have devices and methods for attracting enhanced attention. Such devices and methods would, *inter alia*, provide unique advantages over the prior art mentioned above.

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SUMMARY

The present invention seeks to provide devices and methods for attracting enhanced attention.

It is noted that the term “exemplary” is used herein to refer to examples of embodiments and/or implementations, and is not meant to necessarily convey a more-desirable use-case. Similarly, the terms “alternative” and “alternatively” are used herein to refer to an example out of an assortment of contemplated embodiments and/or implementations, and is not meant to necessarily convey a more-desirable use-case. 5 Therefore, it is understood from the above that “exemplary” and “alternative” may be applied herein to multiple embodiments and/or implementations. Various combinations of such alternative and/or exemplary embodiments are also contemplated herein.

Embodiments of the present invention provide a method for producing and providing a pulse train to an LED or lamp at a frequency and fractal dimension that is 10 highly noticeable to humans, being the same rhythm with which original ideas are formed and recognized in both the brain and advanced Creativity Machines. A light source driven in such a manner may serve as an emergency beacon within environments filled with distracting light sources that are flickering randomly or periodically. Ease of detection may be improved using auto-associative neural nets as anomaly detectors within a machine- 15 vision algorithm.

Thus, using TRN behavior as an anomaly filter in sustained creative activity and mental focus as detailed above in the context of the works of Thaler, the present invention exploits such a concept by embodying the same requisite characteristics (i.e., frequency and fractal dimension) in a signaling device in order to trigger the brain’s innate ability to 20 filter sensory information by “highlighting” certain portions in order to make those portions more noticeable to the brain.

That is, a single light-emitting element flashing at such a prescribed frequency is highly noticeable when viewed through anomaly detectors built from artificial neural

networks. The sporadic nature of such pulse streams defeats the anomaly filter's ability to both learn and anticipate their rhythm, making said light pulses visible as anomalies. Additionally, in contrast to pulse trains, having fractal dimensions less than $\frac{1}{2}$, the prescribed rhythms have sufficient frequency to catch the attention of a roving attention window, as when humans are shifting their attention across widely separated portions of a scene. If the detection system can calculate the fractal dimension of the anomalous light sources within the filtered scene, the "neural flame" may be used as an emergency beacon that discriminates itself from other alternating light sources within the environment.

Even to the naked eye, and without the use of an anomaly detector, fractal dimension $\frac{1}{2}$ pulse streams preferentially attract the attention of human test subjects. The most attention-grabbing aspect of such streams is that the 'holes' or lacunarity between pulses occur as anomalies in what would otherwise be a linear stream of events. In other words, the pattern is frequently broken, such anomalous behavior possibly being detected by the TRN within the human brain as inconsistencies in the established arrival trend of visual stimuli. In contrast, should fractal dimension drop significantly below $\frac{1}{2}$, the frequency of anomalous pulses drops, making them less noticeable to humans should either attention or gaze be wandering.

The incorporation of a "fractal rhythm" into a signal beacon, having a spatial fractal dimension near zero and a temporal delivery of a fractal dimension near $\frac{1}{2}$, relates to exploiting the understanding of TRN behavior, thereby avoiding aspects of visual and image processing as contributing elements.

Embodiments of the present invention further provide a symbol celebrating the unique tempo by which creative cognition occurs. The algorithmically-driven neural flame may be incorporated within one or more structures that resemble candles or altar fixtures,

for instance, to accentuate the light's spiritual significance. It is noted that that the light source or beacon can incorporate any type of light-emitting device.

Such embodiments stem from the notion of one perceiving neural net monitoring another imagining net, the so-called "Creativity Machine Paradigm" (Thaler 2013), which has been proposed as the basis of an "adjunct" religion wherein cosmic consciousness, tantamount to a deity, spontaneously forms as regions of space topologically pinch off from one another to form similar ideating and perceiving pairs, each consisting of mere inorganic matter and energy. Ironically, this very neural paradigm has itself proposed an alternative use for such a flicker rate, namely a religious object that integrates features of more traditional spiritual symbols such as candles and torches.

Moreover, in a theory of how cosmic consciousness may form from inorganic matter and energy (Thaler, 1997a, 2010, 2017), the same attentional beacons may be at work between different regions of spacetime. Thus, neuron-like, flashing elements may be used as philosophical, spiritual, or religious symbols, especially when mounted atop candle- or torch-like fixtures, celebrating what may be considered deified cosmic consciousness. Such a light source may also serve as a beacon to that very cosmic consciousness most likely operating via the same neuronal signaling mechanism.

Therefore, according to aspects of the present invention, there is provided for the first time a device for attracting enhanced attention, the device including: (a) an input signal of a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half; and (b) at least one controllable light source configured to be pulsatingly operated by the input signal; wherein a neural flame emitted from at least one controllable light source as a result of the lacunar pulse train is adapted to serve as a uniquely-identifiable signal beacon over

potentially-competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting enhanced attention.

Alternatively or additionally, the device further includes: (c) a processor for supplying the input signal of the lacunar pulse train having the characteristics; and (d) a
5 digital-to-analog (D/A) converter for transmitting the input signal to at least one controllable light source.

More alternatively or additionally, the D/A converter is an onboard module of the processor, and wherein the module is embodied in at least one form selected from the group consisting of: hardware, software, and firmware.

10 More alternatively or additionally, the processor includes a thresholding unit for monitoring a random-walk trace for trace-axis crossings of a firing threshold of the thresholding unit, and wherein the trace-axis crossings result in activation transitions to generate pulse-activation sequences of the lacunar pulse train.

More alternatively or additionally, candidates of the pulse-activation sequences are
15 filtered based on a zerset dimension, and wherein the candidates are filled into a buffer of selected sequences having a fractal dimension of approximately one-half.

More alternatively or additionally, filtered patterns are randomly withdrawn from the selected sequences in the buffer, and wherein the filtered patterns are configured to serve as the input signal to the D/A converter for transmitting to at least one controllable
20 light source.

Most alternatively or additionally, the filtered patterns are generated onboard the processor.

Alternatively or additionally, the uniquely-identifiable signal beacon reduces distraction by providing a preferential alert over the potentially-competing attention sources.

Alternatively or additionally, the neural flame serves as an object of contemplative
5 focus embodying symbolic meaning of varying significance.

According to aspects of the present invention, there is provided for the first time a method for attracting enhanced attention, the method including the steps of: (a) generating a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half; (b) transmitting the
10 input signal to at least one controllable light source; and (c) pulsatingly operating at least one controllable light source to produce a neural flame emitted from at least one controllable light source as a result of the lacunar pulse train is adapted to serve as a uniquely-identifiable signal beacon over potentially-competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting
15 enhanced attention.

Alternatively or additionally, the method further includes the step of: (d) monitoring a random-walk trace for trace-axis crossings of a firing threshold, and wherein the trace-axis crossings result in activation transitions to generate pulse-activation sequences of the lacunar pulse train.

More alternatively or additionally, the method further includes the steps of: (e)
20 filtering candidates of the pulse-activation sequences based on a zeroset dimension; and (f) filling the candidates into a buffer of selected sequences having a fractal dimension of approximately one-half.

Most alternatively or additionally, the method further includes the steps of: (g) randomly withdrawing filtered patterns from the selected sequences in the buffer; and (h) using the filtered patterns as the input signal.

Alternatively or additionally, uniquely-identifiable signal beacon reduces
5 distraction by providing a preferential alert over the potentially-competing attention sources.

Alternatively or additionally, neural flame serves as an object of contemplative focus embodying symbolic meaning of varying significance.

These and further embodiments will be apparent from the detailed description and
10 examples that follow.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention is herein described, by way of example only, with reference to the accompanying drawings, wherein:

15 Figure 1 is a simplified high-level schematic diagram depicting a neural-flame device for attracting enhanced attention, according to embodiments of the present invention;

Figure 2 is a simplified flowchart of the major process steps for operating the neural-flame device of Figure 1, according to embodiments of the present
20 invention;

Figure 3 depicts a trace of the time evolution of input to a neuron-like thresholding unit of the neural-flame device of Figure 1, according to embodiments of the present invention;

Figure 4 depicts a video stream for detecting fractal beacons within a generalized scene from the neural-flame device of Figure 1, according to embodiments of the present invention.

5 DESCRIPTION OF THE ILLUSTRATIVE EMBODIMENTS

The present invention relates to devices and methods for attracting enhanced attention. The principles and operation for providing such devices and methods, according to aspects of the present invention, may be better understood with reference to the accompanying description and the drawings.

10 Referring to the drawings, Figure 1 is a simplified high-level schematic diagram depicting a neural-flame device for attracting enhanced attention, according to embodiments of the present invention. A neural-flame device **2** includes a support **4** serving as a beacon or an imitation candle, which may be configured to accommodate the needs of the application (regarding physical dimensions) such as an emergency alert or as
15 an object of contemplative focus embodying varying significance.

Neural-flame device **2** has a controllable light source **6** (e.g., an LED component) with an optional translucent cover **8**, which can be shaped like a neuron's cell body or soma. Controllable light source **6** can incorporate any type of light-emitting device. Neural-flame device **2** includes a base **10** housing an optional digital-to-analog (D/A)
20 converter (D/A module **12**) and an input connector **14** for supplying a digital input signal for driving controllable light source **6** with the required voltage sequence at a frequency corresponding to approximately 4 Hz and a fractal dimension near $\frac{1}{2}$. It is noted that D/A module **12** can be implemented as hardware, software, and/or firmware as an integral component of a dedicated processor for neural-flame device **2**.

Figure 2 is a simplified flowchart of the major process steps for operating the neural-flame device of Figure 1, according to embodiments of the present invention. The process starts with the system generating pulse trains having a frequency of approximately 4 Hz and a fractal dimension of near $\frac{1}{2}$ (Step **20**). A system buffer is then filled with these special lacunar pulse trains (Step **22**). These pulse trains are then sequentially withdrawn from the buffer, and then transmitted to controllable light source **6** via input connector **14** (Step **24**).

Optionally, pulse trains may be randomly removed from the buffer prior to transmitting the signal to controllable light source **6** (Step **26**). Such aspects are elaborated on in greater detail with regard to Figure 3.

Figure 3 depicts a trace of the time evolution of input to a neuron-like thresholding unit of the neural-flame device of Figure 1, according to embodiments of the present invention. The trace represents the output of a random-walk algorithm carried out on a computer or processor that is in turn applied to a neuron-like thresholding unit resulting in a series of activation transitions as the trace crosses (i.e., intersects) the “neuron’s” firing threshold. The arrival patterns of these activation transitions are then filtered by an algorithm that calculates fractal dimension (i.e., zerset dimension of the trace), and fills a buffer with those transition patterns having an approximate fractal dimension of $\frac{1}{2}$. These filtered patterns are then withdrawn from the buffer, and transmitted to drive the controllable light source.

The algorithm may be generated in an onboard processor and power supply all within base **10** of neural-flame device **2**. It is noted that not only do such pulse patterns represent the desired 4 Hz, fractal dimension $\frac{1}{2}$ pulse trains, but they largely differ from

one another, thus preventing any anomaly detection filter, biological or not, from adapting to repeating activation streams.

The neuron-activation stream is generated by inputting a form of random walk of equal-sized steps to the neuron, with each such step being a notional ‘coin flip’ to determine whether the step is positive or negative in sign. As the random input crosses the neuron’s firing threshold (as depicted in Figure 3), a pulse is triggered by the algorithm, the source of analog input to drive controllable light source **6** of neural-flame device **2**.

Returning to optional Step **26** of Figure 2, the resulting stream of the lacunar pulse train can be used as a set of candidate activation sequences that are then randomly withdrawn from the buffer, and transmitted to drive controllable light source **6**.

The random walk may be started repeatedly from zero in a series of trials, calculating fractal dimension for each, and then accumulating a library (i.e., a buffer) of just those short pulse sequences having the required fractal dimension near $\frac{1}{2}$. Step **26** may be accomplished in nanoseconds, and the sequences computationally slowed to near 300-
ms timescales prior to being transmitted to controllable light source **6**.

Other techniques may be employed as well to mitigate such effects, as known in the art. However, randomly withdrawing short pulse trains from the buffer has an advantage in that it adds another layer of randomness to the pulse train, allowing it to stand out when viewed through an anomaly detector, either in the brain or an artificial neural network-based novelty filter. With small pulse-train libraries, there is a chance of repetition as the short pulse trains are appended to each other, making it easier for the anomaly filter to adapt to them.

Such a “baseline reset” has been described (Thaler 2014). The fractal signature of the random walk is determined largely by its step size. In the case of the neural flame, the

random walk is tuned to provide a trace (i.e., a wiggly line) that has a fractal dimension of 1.5. Sampling the crossings (i.e., intersections) of that trace with a baseline that is purposely introduced mid-channel yields a zerset dimension of one less than that of the trace's fractal dimension, namely 0.5.

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10 In Thaler 2014, the reset involves seeking the nearest memory to the network's current output pattern and using that as a new reference to measure how far that vector has walked. The equivalent of a single neuron's activation crisscrossing a baseline, the output pattern oscillates through a point in a multidimensional space.

Figure 4 depicts a video stream for detecting fractal beacons within a generalized scene from the neural-flame device of Figure 1, according to embodiments of the present invention. Using a machine vision system, the video stream is propagated through an adaptive auto-associative neural net used as an anomaly filter. With periodic, random, and fractally-tuned beacons (as depicted in (a) "raw scene" of Figure 4), the anomaly filter (as in (b) of Figure 4) can block out the anomalies representing the periodic source (as in (c) of Figure 4). Subsequent algorithmic steps (as in (d) of Figure 4) calculate the fractal dimension of each anomaly's activation stream, enabling separation of any random source from that having a tuned fractal dimension (as in (e) of Figure 4). Thus, the use of fractal dimension at frequencies close to the clock cycle of the human brain, around 250-300

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milliseconds, serves to enhance attention over other potentially-competing attention sources by selectively triggering the physiological anomaly-detection filtering of the brain.

To generate pulse trains to drive neural-flame device **2**, input to a computational neuron takes the form of a random walk over successive 300-millisecond intervals, each step being of equal magnitude (Figure 3). The aggregate intersections with the time axis represent the zeroset, with each of these points ultimately representing a pulse within the sequence driving neural-flame device **2**.

As these candidate pulse trains are generated, they are assessed for their zeroset (or fractal) dimension, D_0 , which is approximated as: $D_0 = \ln(N_0)/\ln(N)$, wherein N is the total number of 300 millisecond intervals sampled, and N_0 is the total number of intercepts of the neuron's net input with the firing threshold. As any new firing pattern is assessed with a fractal dimension near $\frac{1}{2}$, the pattern is stored within a memory buffer or array. Subsequently, such pulse trains are randomly accessed and transmitted to D/A module **12** where they are converted to analog voltages to drive the neural flames of controllable light source **6**.

Alternatively, use of a storage buffer may be sidestepped by using an optimization algorithm that varies the step size of input variations to the neuron until the average fractal dimension of the pulse trains evaluate to the desired fractal dimension.

For use as a signal beacon, humans may search with or without the aid of a camera and machine-vision system. In the latter case, the camera's video stream may be viewed through an anomaly detector, the preferred embodiment being an adaptive auto-associative net that calculates the difference vector between the filter's input and output patterns, $\Delta\mathbf{P} = \mathbf{P}_{in} - \mathbf{P}_{out}$, thus producing a map of anomalies within the camera's field of view. Subsequent filters then calculate the fractal dimension of anomalies appearing in this filtered view.

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Using such a methodology, not only can fractal dimension $\frac{1}{2}$ sources be identified, but a range of prespecified fractal dimensions in the range (0, 1), opening a whole new approach to secure signaling and communication.

Furthermore, aspects of the present invention provide an object of contemplative
5 focus embodying symbolic meaning of varying significance (e.g., philosophical/religious) due to the fact that the unique fractal rhythms used are those thought to: (1) be exploited by the brain to detect idea formation, and (2) have grandiose meaning as the temporal signature of creative cognition, whether in extraterrestrial intelligence or cosmic consciousness.

10 While the present invention has been described with respect to a limited number of embodiments, it will be appreciated that many variations, modifications, equivalent structural elements, combinations, sub-combinations, and other applications of the present invention may be made.

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CLAIMS

1. A device for attracting enhanced attention, the device comprising:
 - (a) an input signal of a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half; and
 - (b) at least one controllable light source configured to be pulsatingly operated by said input signal;

wherein a neural flame emitted from said at least one controllable light source as a result of said lacunar pulse train is adapted to serve as a uniquely-identifiable signal beacon over potentially-competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting enhanced attention.

2. The device of claim 1, the device further comprising:
 - (c) a processor for supplying said input signal of said lacunar pulse train having said characteristics; and
 - (d) a digital-to-analog (D/A) converter for transmitting said input signal to said at least one controllable light source.

3. The device of claim 2, wherein said D/A converter is an onboard module of said processor, and wherein said module is embodied in at least one form selected from the group consisting of: hardware, software, and firmware.

4. The device of claim 3, wherein said processor includes a thresholding unit for monitoring a random-walk trace for trace-axis crossings of a firing threshold of said thresholding unit, and wherein said trace-axis crossings result in activation transitions to generate pulse-activation sequences of said lacunar pulse train.

5. The device of claim 4, wherein candidates of said pulse-activation sequences are filtered based on a zeroset dimension, and wherein said candidates are filled into a buffer of selected sequences having a fractal dimension of approximately one-half.

6. The device of claim 5, wherein filtered patterns are randomly withdrawn from said selected sequences in said buffer, and wherein said filtered patterns are configured to serve as said input signal to said D/A converter for transmitting to said at least one controllable light source.

7. The device of claim 6, wherein said filtered patterns are generated onboard said processor.

8. The device of any one of claims 1 to 7, wherein said uniquely-identifiable signal beacon reduces distraction by providing a preferential alert over said potentially-competing attention sources.

9. The device of any one of claims 1 to 7, wherein said neural flame serves as an object of contemplative focus embodying symbolic meaning of varying significance.

10. A method for attracting enhanced attention, the method comprising the steps of:
 - (a) generating a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half;
 - (b) transmitting said input signal to at least one controllable light source; and
 - (c) pulsatingly operating said at least one controllable light source to produce a neural flame emitted from said at least one controllable light source as a result of said lacunar pulse train is adapted to serve as a uniquely-identifiable signal beacon over potentially-competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting enhanced attention.

11. The method of claim 10, the method further comprising the step of:
 - (d) monitoring a random-walk trace for trace-axis crossings of a firing threshold, and wherein said trace-axis crossings result in activation transitions to generate pulse-activation sequences of said lacunar pulse train.

12. The method of claim 11, the method further comprising the steps of:
 - (e) filtering candidates of said pulse-activation sequences based on a zeroset dimension; and
 - (f) filling said candidates into a buffer of selected sequences having a fractal dimension of approximately one-half.

13. The method of claim 12, the method further comprising the steps of:
- (g) randomly withdrawing filtered patterns from said selected sequences in said buffer; and
 - (h) using said filtered patterns as said input signal.

14. The method of any one of claims 10 to 13, wherein said uniquely-identifiable signal beacon reduces distraction by providing a preferential alert over said potentially-competing attention sources.

15. The method of any one of claims 10 to 13, wherein said neural flame serves as an object of contemplative focus embodying symbolic meaning of varying significance.

ABSTRACT

DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION

The present invention discloses devices and methods for attracting enhanced attention. Devices include: an input signal of a lacunar pulse train having characteristics of a pulse frequency of approximately four Hertz and a pulse-train fractal dimension of approximately one-half; and at least one controllable light source configured to be pulsatingly operated by the input signal; wherein a neural flame emitted from at least one controllable light source as a result of the lacunar pulse train is adapted to serve as a uniquely-identifiable signal beacon over potentially-competing attention sources by selectively triggering human or artificial anomaly-detection filters, thereby attracting enhanced attention.

Exemplary Embodiment

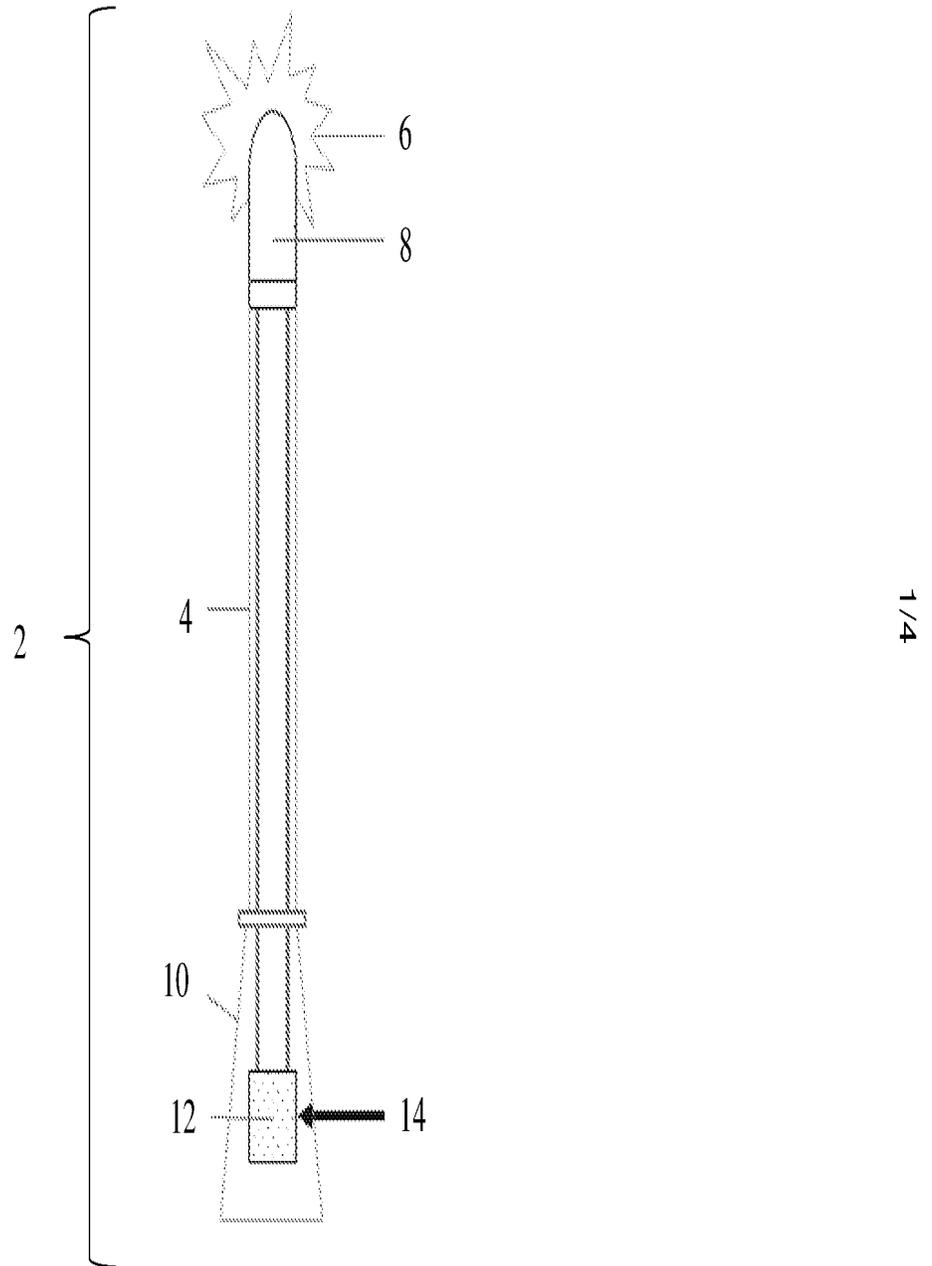


Figure 1

Exemplary Embodiment

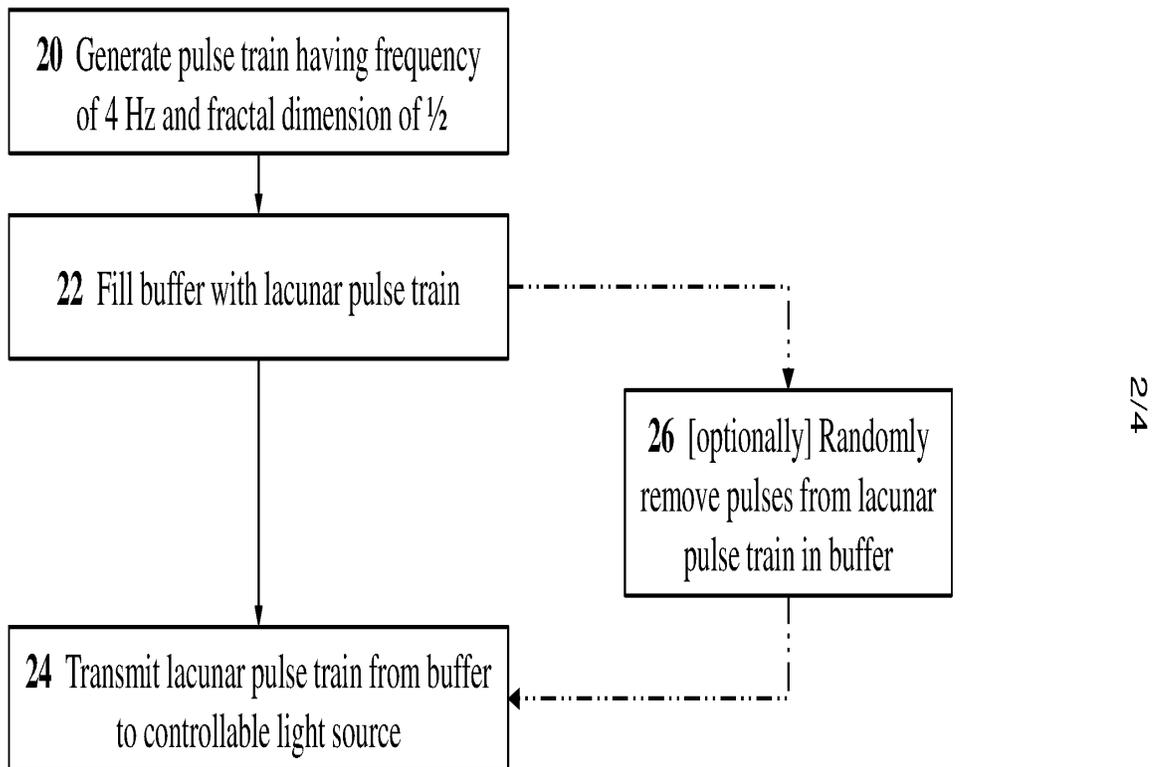
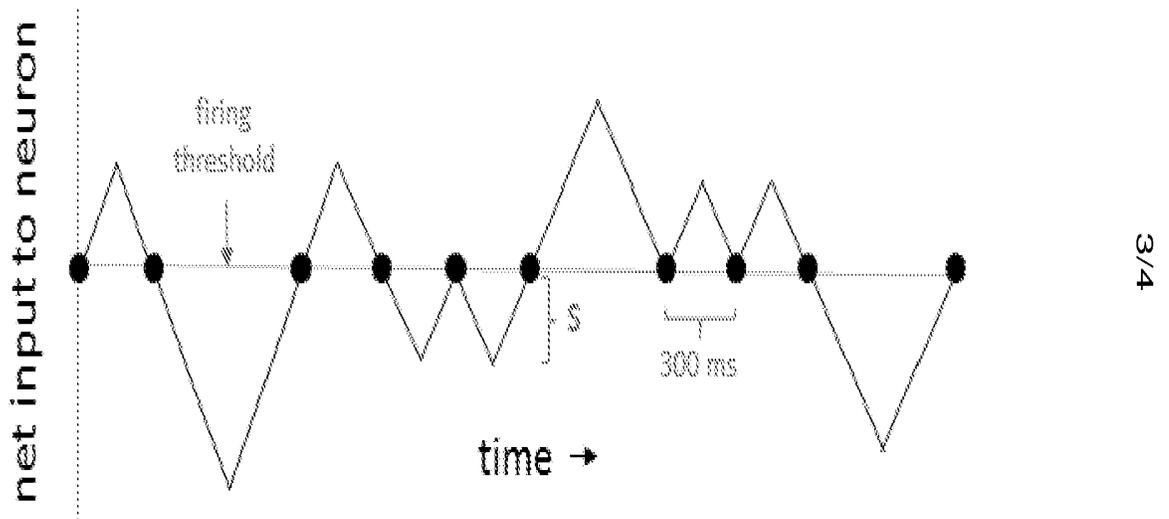


Figure 2

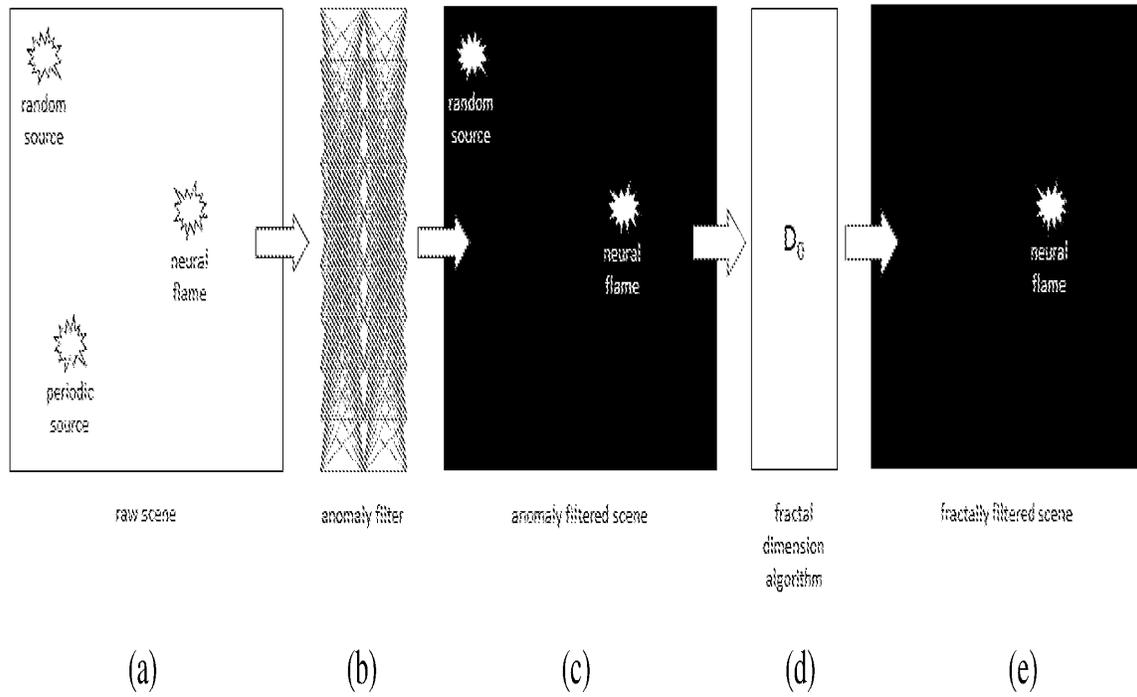
Exemplary Embodiment



3/4

Figure 3

Exemplary Embodiment



4/4

Figure 4



Electronic Filing Receipt

Concept House
Cardiff Road
South Wales
NP10 8QQ
United Kingdom

Telephone +44 (0) 1633 814000
Minicom +44 (0) 8459 222250
DX 722540/41 Cleppa Park 3
Website <https://www.gov.uk/ipo>

Acknowledgement of receipt

We hereby acknowledge receipt of your request for grant of a European patent as follows:

Submission number	1200307032	
Application number	EP18275174.3	
File No. to be used for priority declarations	EP18275174	
Date of receipt	07 November 2018	
Your reference	RJ/N35111-EP1	
Applicant	THALER, Stephen L.	
Country	US	
Title	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION	
Documents submitted	package-data.xml application-body.xml SPECEPO-1.pdf\N35111-EP1 (NF) Patent Application as Filed.pdf (22 p.)	ep-request.xml ep-request.pdf (4 p.) SPECEPO-2.pdf\N35111-EP1 - Drawings as Filed (Nov18).pdf (4 p.)
Submitted by	CN=Robert Jehan 11973	
Method of submission	Online	
Date and time receipt generated	07 November 2018, 16:04:52 (GMT)	
Official Digest of Submission	03:F2:1C:E7:87:2E:6D:86:6B:88:A0:04:EA:8C:83:12:DA:37:F0:6A	

/Intellectual Property Office, Newport/



Electronic Acknowledgement Receipt	
EFS ID:	38547870
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	11-FEB-2020
Filing Date:	29-JUL-2019
Time Stamp:	15:10:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Interim Copy of the Foreign Priority Document	N- F_Master_GB_Patent_Applicati on_as_Filed.pdf	261684 74f8ab38e9877457e788d973fe7b82d95ccf6e22	no	28

Warnings:

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Information:

2	Interim Copy of the Foreign Priority Document	N- F_Master_EP_Patent_Application_as_Filed.pdf	369533	no	28
			359aa553564eafdf92d79c1f3662c904c769921b4		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

OBJECTION TO PUBLICATION – REQUEST FOR DELAYED PUBLICATION

This is in response to the United States Patent and Trademark Office Communication, mailed January 22, 2020, indicating that the Director has determined that the Decision of December 17, 2019 involves an interpretation of patent laws or regulations that would be of precedential value and, therefore will be published pursuant to 37 CFR 1.14(e).

Applicant formally objects to such publication of the Decision due to consideration of the filing of a subsequent Petition to the Director under 37 CFR 1.181 for Request for Reconsideration, filed on January 20, 2020.

Given that the Applicant has presented additional arguments in the Petition regarding the Dismissal in the Decision, Applicant believes that publication of the Decision without consideration of the Petition would misrepresent the matter to the public in an irrevocable way. Furthermore, Applicant has requested in the Petition that a final decision be issued in the matter. In the event that the Office continues to hold that the Petition is lacking in merit, Applicant requests a Denial rather than a Dismissal.

Applicant raises no objections to publication by the Office of such a final decision, nor to the publication of such a final decision in conjunction with the prior Decision of December 2019. Thus, Applicant is essentially only requesting delayed publication of the Decision appended to a final decision. Applicant views such publication as informative to the general public concerned with artificial intelligence (AI) in furthering the discussions at large regarding AI-generated inventions.

In addition, Applicant further submits that in issuing such a final decision it would benefit practitioners, inventors, and numerous other stakeholders for the Office to clarify that, while the Patent Statutes may currently not allow for an AI machine such as DABUS being an inventive entity, the assessment of conception and patentability (which serve as the true basis for determining inventorship) in such AI-generated inventions have not been dealt with in arriving at a decision on inventorship.

Therefore, in the interest of transparency to the readers of such publication, it would behoove the Office to address the point that the Statutes currently do not allow the matters of conception and patentability to be considered. As a result, the deeper discussions revolving around AI-generated inventions and inventorship are preemptively slipping through the cracks due to this statutory roadblock as it were. Thus, as addressed in the parallel prosecution of the instant invention before the UKIPO that while the statutes are the determining factor, there is a matter of unresolved law that should be dealt with in the future.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic

mail. I understand that a copy of such communications will be made of record. [MPEP §502.03

II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

/Ryan Abbott/
Dr. Ryan Abbott
Attorney for Applicant
Registration No. 68,178

Date: February 17, 2020

Electronic Acknowledgement Receipt	
EFS ID:	38601302
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	17-FEB-2020
Filing Date:	29-JUL-2019
Time Stamp:	06:00:47
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions	Objection-to-publication.pdf	86398 ebad54a900db61c00d42cb911f762eb28b3029b8	no	3

Warnings:

Information:	
Total Files Size (in bytes):	86398
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>	



UNITED STATES PATENT AND TRADEMARK OFFICE

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 P.O. Box 1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/524,350	07/29/2019		50567-3-01-US	1467
89602	7590	04/22/2020	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			2861	
			NOTIFICATION DATE	DELIVERY MODE
			04/22/2020	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):

FPIP-USPTO@FlashPointIP.com
 ydm@FlashPointIP.com



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Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

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.

Application No. 16/524,350

Page 2

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.

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.

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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.*

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

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.

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 Paris, 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

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).

Application No. 16/524,350

Page 8

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

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Apr 23, 2020 06:31:38 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

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Application	Document	Mailroom Date	Attorney Docket No.
16524350	PET.DEC.OIPE	04/22/2020	50567-3-01-US
	PET.DEC.OIPE	04/22/2020	50567-3-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

PATENT APPLICATION FEE DETERMINATION RECORD						Application or Docket Number 16/524,350				
Substitute for Form PTO-875										
APPLICATION AS FILED - PART I										
		(Column 1)	(Column 2)		SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA		RATE(\$)	FEE(\$)			RATE(\$)	FEE(\$)	
BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A		N/A	75			N/A		
SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A		N/A	330			N/A		
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A		N/A	380			N/A		
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	11	minus 20 =			x 50 =	0.00	OR			
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	2	minus 3 =			x 230 =	0.00				
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				0.00					
MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>				0.00						
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	785			TOTAL		
APPLICATION AS AMENDED - PART II										
		(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x =		OR	x =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x =		OR	x =	
	Application Size Fee <small>(37 CFR 1.16(s))</small>							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x =		OR	x =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x =		OR	x =	
	Application Size Fee <small>(37 CFR 1.16(s))</small>							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>										



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,350	07/29/2019		50567-3-01-US

CONFIRMATION NO. 1467

FORMALITIES LETTER

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 04/24/2020

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted***Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The application data sheet or inventor's oath or declaration does not identify each inventor by his or her legal name.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
 The surcharge is due for any one of:
 - late submission of the basic filing fee, search fee, or examination fee,
 - late submission of inventor's oath or declaration,
 - filing an application that does not contain at least one claim on filing, or
 - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ **80** surcharge.
- \$(**0**) previous unapplied payment amount.
- \$ **80** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice".
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jltippett/


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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,350	07/29/2019		50567-3-01-US

CONFIRMATION NO. 1467
WITHDRAWAL NOTICE

 89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL

Date Mailed: 04/24/2020

Letter Regarding a New Notice and/or the Status of the Application

If a new notice or Filing Receipt is enclosed, applicant may disregard the previous notice mailed on 12/13/2019. The time period for reply runs from the mail date of the new notice. Within the time period for reply, applicant is required to file a reply in compliance with the requirements set forth in the new notice to avoid abandonment of the application.

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebc>.

If the reply is not filed electronically via EFS-Web, the reply must be accompanied by a copy of the new notice.

If the Office previously granted a petition to withdraw the holding of abandonment or a petition to revive under 37 CFR 1.137, the status of the application has been returned to pending status.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jltippett/



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/524,350	07/29/2019	2861	785	50567-3-01-US	11	2

CONFIRMATION NO. 1467

FILING RECEIPT

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 04/24/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

None

Applicant(s)

Stephen L. Thaler, St. Charles, MO;

Assignment For Published Patent Application

Stephen L. Thaler

Power of Attorney:

Reuven Mouallem--63345
 Ryan Abbott--68178

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

EUROPEAN PATENT OFFICE (EPO) 18275174.3 11/07/2018 No Access Code Provided
 UNITED KINGDOM 1818161.0 11/07/2018 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 08/07/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/524,350**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION

Preliminary Class

116

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign

page 2 of 4

patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Apr 24, 2020 04:27:41 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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Application	Document	Mailroom Date	Attorney Docket No.
16524350	NTC.MISS.PRT	04/24/2020	50567-3-01-US
	M327	04/24/2020	50567-3-01-US
	APP.FILE.REC	04/24/2020	50567-3-01-US

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If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

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PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/524,350	07/29/2019		50567-3-01-US	1467
89602	7590	05/15/2020	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			2861	
			NOTIFICATION DATE	DELIVERY MODE
			05/15/2020	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):

FPIP-USPTO@FlashPointIP.com
 ydm@FlashPointIP.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Application of :
Application No. 16/524,350 :
Filed: 29 Jul 2019 : DECISION ON PETITION
For DEVICES AND METHODS FOR :
ATTRACTING ENHANCED ATTENTION :

This is a decision on the petition pursuant to 37 C.F.R. § 5.25, filed July 29, 2019, seeking a retroactive license for foreign filing under 35 U.S.C. § 184.

The petition is **DISMISSED**.

This decision concerns European application number 18275174.3 filed November 7, 2018 and UK application number 1818161.0 filed November 7, 2018.

A grantable petition pursuant to 37 C.F.R. § 5.25 must be accompanied by:

- (1) a listing of each of the foreign countries in which the unlicensed patent application material was filed;
- (2) The dates on which the material was filed in each country;
- (3) A verified statement (oath or declaration) containing:
 - (i) An averment that the subject matter in question was not under a secrecy order at the time it was filed abroad, and that it is not currently under a secrecy order,
 - (ii) A showing that the license has been diligently sought after discovery of the proscribed foreign filing, and
 - (iii) An explanation of why the material was filed abroad through error without the required license under § 5.11 first having been obtained; and,
- (4) The required fee (§ 1.17(g) of this chapter).

Application No. 16/524,350

Page 2

The petition complies with requirements (1), (2), (3)(i), and (4) of 37 C.F.R. § 5.25. Petitioner has provided a listing of each of the foreign countries in which the unlicensed patent application material was filed;¹ the dates on which the material was filed in another country;² an averment that the subject matter in question was not under a secrecy order at the time it was filed abroad, and that it is not currently under a secrecy order;³ and, the required petition fee.

The petition fails to comply with requirements (3)(ii) and (3)(iii) of 37 C.F.R. § 5.25. A discussion follows.

The relevant parties are as follows:

- Declarant Thaler is the applicant.⁴
- Both foreign filings were made by declarant Thaler's European counsel.⁵ The name of said European counsel has not been revealed.

Regarding requirement (3)(ii) of 37 C.F.R. § 5.25, the record does not establish whether declarant Thaler and the European counsel was each aware of the requirements of 35 U.S.C. § 184 and 37 C.F.R. § 5.11(a) at the time of their involvement in the proscribed foreign filing. As such, it cannot be discerned whether this petition was diligently filed.

In the sixth paragraph of his verified statement, declarant Thaler asserts "[p]ursuant to 35 C.F.R. § 5.25(a)(3)(ii), I was first informed by my US patent counsel when they began to prepare filing for a patent before the USPTO in which they determined the potential need for a foreign filing license on June 13, 2019." However, it is not clear what he was first informed of on this date.

Moreover, Petitioner asserts in the seventh paragraph of his verified statement that at the time of the foreign filing, his European counsel was not aware of the requirements of 35 U.S.C. § 184 and 37 C.F.R. § 5.11(a). However, declarant Thaler does not have firsthand knowledge of what another person did or did not know.

1 Europe and the UK. Petition, page 1 and Thaler verified statement, paragraph 3.

2 November 7, 2018. *Id.*

3 Thaler verified statement, paragraph 5.

4 Application Data Sheet included on initial deposit, page 1.

5 Thaler verified statement, paragraph 7.

Application No. 16/524,350

Page 3

Regarding requirement (3)(iii) of 37 C.F.R. § 5.25, first, the second paragraph of the Thaler verified statement states he is not certain whether a foreign filing license is necessary.

35 U.S.C. § 1.84(a) provides,

(a) FILING IN FOREIGN COUNTRY.—Except when authorized by a license obtained from the Commissioner of Patents a person shall not file or cause or authorize to be filed in any foreign country prior to six months after filing in the United States an application for patent or for the registration of a utility model, industrial design, or model in respect of an invention made in this country. A license shall not be granted with respect to an invention subject to an order issued by the Commissioner of Patents pursuant to section 181 without the concurrence of the head of the departments and the chief officers of the agencies who caused the order to be issued. The license may be granted retroactively where an application has been filed abroad through error and the application does not disclose an invention within the scope of section 181.

As is made clear by 35 U.S.C. § 1.84(a) cited above, the USPTO has no authority to grant a petition under 37 C.F.R. § 5.25 where petitioner seeks the retroactive foreign filing license out of an abundance of caution. Rather, the USPTO has only the authority to grant a petition under 37 C.F.R. § 5.25 where petitioner establishes that the proscribed application was filed abroad through error. Accordingly, seeking a retroactive foreign filing license out of an abundance of caution does not satisfy the standard set forth by 35 U.S.C. § 1.84(a). It is further noted that the USPTO will not determine whether a foreign filing license was required before proscribed application was filed abroad. The USPTO will only determine whether the proscribed filing was made through error upon the filing of a petition under 37 C.F.R. § 5.25 and consideration of the merits of the showing made therein. Declarant Thaler must determine whether a foreign filing license was required before the proscribed application was filed and expressly indicate the result of his determination on renewed petition.

Second, the petition fails to describe any error which resulted in the filing of the foreign application without the required license under § 5.11 first having been obtained. As set forth above, it has not been established whether declarant Thaler and the European counsel were aware of the requirements of 35 U.S.C.

Application No. 16/524,350

Page 4

§ 184 and 37 C.F.R. § 5.11(a) at the time of their involvement in the proscribed foreign filing.

Third, 37 C.F.R. § 5.25(b) requires "statements by those persons having personal knowledge of the acts regarding filing in a foreign country." It follows that the verified statement should be made by the person or persons who had direct knowledge and made the decision to file in a foreign country before securing a foreign filing license. The renewed petition must expressly identify who made the decision to file in a foreign country before securing a foreign filing license, and include a verified statement from that/those individual(s).

Similarly, the renewed petition must expressly identify the European counsel who filed the application in a foreign country before securing a foreign filing license, and include a verified statement from that individual.

Each declarant must indicate whether he/she was aware of the requirements of 35 U.S.C. § 184 and 37 C.F.R. § 5.11(a) at the time of his/her involvement in the proscribed foreign filing.

Fourth, the petition does not explain how the proscribed foreign filing came to be filed. Perhaps the proscribed foreign filing was filed as a result of declarant Thaler sending instructions to the European counsel to effectuate the filing?

Fifth, 37 C.F.R. § 5.25(b) sets forth, *in pertinent part*: "[t]he showing of facts...should be accompanied by copies of any necessary supporting documents such as letters of transmittal or instructions for filing." It follows that on renewed petition, each declarant must indicate whether any instructions regarding the filing were provided in writing, and if so, a copy of the instruction letter(s) must be included therewith, along with an English translation (if applicable).

Sixth, declarant Thaler and the European counsel must address the following on renewed petition:

- What checks does the European counsel have when filing an application to ensure that a foreign application is not filed when a foreign filing license is required by 35 U.S.C. § 184 and 37 C.F.R. § 5.11(a)?
- If checks were in place, why was the procedure not followed in this instance? In addition, when were these checks implemented?

Application No. 16/524,350

Page 5

- Has declarant Thaler filed abroad previously, or was this the first time? Similarly, has the European counsel filed abroad previously with a US-based inventor, or was this the first time?

Accordingly, the provisions of 37 C.F.R. § 5.25 not having fully been met, the petition is **DISMISSED**. A response is due within **TWO MONTHS** of the mailing date of this decision. Extensions of time of this period of reply may be obtained under 37 C.F.R. § 1.136(a). In the absence of a timely response, such dismissal will be made final and the final action under 35 U.S.C. § 185 will be taken.

The reply should include a cover letter entitled "Renewed Petition under 37 C.F.R. § 5.25." This is not a final agency action within the meaning of 5 U.S.C § 704.

The renewed petition should indicate in a prominent manner that the attorney handling this matter is Paul Shanowski, and may be submitted by mail,⁶ hand-delivery,⁷ or facsimile.⁸ If Petitioner has the capability to file follow-on documents, a response may be submitted via the electronic filing system, EFS-Web⁹ **and the document code should be RETR.LICENSE**. If responding by mail, Petitioner is advised not to place the undersigned's name on the envelope. Only the information that appears in the footnote should be included - adding anything else to the address will delay the delivery of the response to the undersigned.

Any verified statement (notarized oath) or declaration (including reference to Section 1001 of Title 18 of the U.S.C.) included on renewed petition must include the clause:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such

6 Mail Stop Petition, Commissioner for Patents, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

7 Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

8 (571) 273-8300: please note this is a central facsimile number.

9 <https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html>

Application No. 16/524,350

Page 6

willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Telephone inquiries regarding *this decision* should be directed to Attorney Advisor Paul Shanoski at (571) 272-3225.¹⁰ All other inquiries concerning examination procedures should be directed to the Technology Center.

/Paul Shanoski/
Paul Shanoski
Attorney Advisor
Office of Petitions

¹⁰ Petitioner will note that all practice before the Office should be in writing, and the action of the Office will be based exclusively on the written record in the Office. See 37 C.F.R. § 1.2. As such, Petitioner is reminded that no telephone discussion may be controlling or considered authority for Petitioner's further action(s).

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

May 15, 2020 04:22:02 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16524350	PETDEC	05/15/2020	50567-3-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://portal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

PTO/AIA/31 (03-14)

Approved for use through 11/30/2020. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

NOTICE OF APPEAL FROM THE EXAMINER TO THE PATENT TRIAL AND APPEAL BOARD		Docket Number (Optional) 50567-3-01-US
I hereby certify that this correspondence is being facsimile transmitted to the USPTO, EFS-Web transmitted to the USPTO, or deposited with the United States Postal Service with sufficient postage in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, on Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on <u>16 June 2020</u> . Signature <u>/Reuven K. Mouallem/</u> Typed or printed name <u>Reuven K. Mouallem</u>	In re Application of <u>Stephen L. Thaler</u> Application Number <u>16/524,350</u> Filed <u>July 29, 2019</u> For DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION Art Unit <u>2861</u> Examiner <u>Robert W. Bahr, decision dated 4-22-2020</u>	
Applicant hereby appeals to the Patent Trial and Appeal Board from the last decision of the examiner.		
The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) \$ <u>800</u>		
<input checked="" type="checkbox"/> Applicant asserts small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by 50%, and the resulting fee is: \$ <u>400</u>		
<input type="checkbox"/> Applicant certifies micro entity status. See 37 CFR 1.29. Therefore, the fee shown above is reduced by 75%, and the resulting fee is: \$ _____ Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.		
<input type="checkbox"/> A check in the amount of the fee is enclosed.		
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.		
<input type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. _____.		
<input checked="" type="checkbox"/> Payment made via EFS-Web.		
<input type="checkbox"/> A petition for an extension of time under 37 CFR 1.136(a) (PTO/AIA/22 or equivalent) is enclosed. For extensions of time in reexamination proceedings, see 37 CFR 1.550.		
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.		
I am the		
<input type="checkbox"/> applicant <input checked="" type="checkbox"/> attorney or agent of record Registration number <u>63345</u> <input type="checkbox"/> attorney or agent acting under 37 CFR 1.34 Registration number _____		
Signature <u>/Reuven K. Mouallem/</u> Typed or printed name <u>Reuven K. Mouallem</u> Telephone Number <u>516-301-1649</u> Date <u>16 June 2020</u>		
NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.		
<input type="checkbox"/> * Total of _____ forms are submitted.		

This collection of information is required by 37 CFR 41.20(b)(1) and 41.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal				
Application Number:	16524350			
Filing Date:	29-Jul-2019			
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION			
First Named Inventor/Applicant Name:				
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-3-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
NOTICE OF APPEAL	2401	1	400	400
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				400

Electronic Acknowledgement Receipt	
EFS ID:	39727360
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	16-JUN-2020
Filing Date:	29-JUL-2019
Time Stamp:	10:18:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$400
RAM confirmation Number	E20206FA20431345
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Notice of Appeal Filed	aia0031-p.pdf	103997	no	1
			7ba0ad918c55500d8948131bedce302df6496ddc		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30080	no	2
			cfdf6724ff504e18bbc7036e6a56b29eceb6645		
Warnings:					
Information:					
Total Files Size (in bytes):			134077		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

USPTO Office of Petition Attorney:

PAUL SHANOSKI
Attorney Advisor
Office of Petition

**RENEWED PETITION
FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	

Paul Shanoski
Attorney Advisor
Office of Petition

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**RENEWED PETITION
FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25**

This Renewed Petition requests under 37 CFR 5.25 a retroactive license for foreign filing under 35 USC 184 in accordance with §5.14(a). The required fee for the Petition under §1.17(g) has been paid. The retroactive foreign filing licenses are requested for the following jurisdictions in which the unlicensed patent application material was filed.

- European Patent Application No. 18275174.3, filed November 7, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Devices and Methods for Attracting Enhanced Attention;” and
- UK Patent Application No. 1818161.0, filed November 7, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Devices and Methods for Attracting Enhanced Attention.”

In accordance with 37 CFR §5.14 for a petition for retroactive foreign filing license related to a pending US application (identified above by US application number, filing date,

applicant, and title), it is submitted that the complete contents of the unlicensed patent application material (identical for the two foreign filings listed above) is readily identifiable in the referenced US application. A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application.

Declarations by the Applicant, Dr. Stephen L. Thaler, and foreign EU Counsel, Robert Jehan attached herewith, aver:

- (1) that a Foreign Filing License was required prior to filing of the subject foreign applications;
- (2) that neither applicant Thaler, nor the EU Counsel who filed the subject foreign applications were aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a) at the time of said foreign filings;
- (3) diligence in seeking the retroactive foreign filing license upon discovery that such license was necessary;
- (4) that the subject matter in question was not under a secrecy order at the time the subject matter was filed abroad; and
- (5) that the subject matter is not currently under a secrecy order.

As indicated in the attached Declarations, the potential need for a retroactive foreign filing license and a Declaration was inadvertently not communicated to the Applicant. Upon learning of the possible need for a foreign filing license, the Applicant diligently proceeded to filing the petition for a Retroactive Foreign Filing License.

The foreign filings of unlicensed patent application material were prepared and filed by the Applicant through European counsel (Mr. Robert Jehan of a UK IP law firm) both unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing.

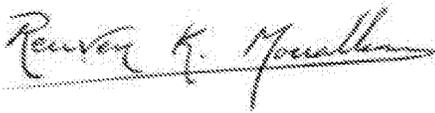
It is noted that the law on foreign filing licenses in the United Kingdom was changed in 2004 to the effect that no foreign filing license is required unless the application contains information which relates to military technology, for any other reasons publication of the information might be prejudicial to national security, or to the safety of the public.

Thus, the possible need for a foreign filing license did not become apparent, and foreign applications were filed abroad through error and without deceptive intent, without the required license. It is submitted that diligence in obtaining a retroactive foreign filing license is shown by the present Renewed Petition for a Retroactive License.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: July 12, 2020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed:	§	Group Art Unit:
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.:
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

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P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF RESUBMISSION
OF PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Robert Jehan, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the assignee/applicant is a US citizen, I was recently advised that a foreign filing license would be necessary for the instant application.
3. I am the European and British Patent Attorney cited in the Petition on behalf of applicant Stephen L. Thaler, in particular for:
 - a. European Patent Application No. 18275174.3, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention;” and

- b. UK Patent Application No. 1818161.0, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention.”
4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. Pursuant to 37 CFR §5.25(a)(3)(i), the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to devices and methods for attracting enhanced attention, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. I have been qualified as a British and European patent attorney since 1992 and I have practiced in Europe, specifically in the United Kingdom. I am directly responsible for filing and prosecuting patent applications before the United Kingdom Intellectual Property Office (UKIPO) and the European Patent Office (EPO). While I have handled on behalf of clients patent applications in

many other countries of the world, including in the United States, these have always been through local attorneys as I am not qualified or expert in the relevant national laws foreign to the United Kingdom and the EPO.

7. While I do have some direct US clients who instruct me in the filing of UK and European patent applications, these clients have in-house patent counsel who deal with any requirements in US law so I do not get involved with these.
8. At the time of filing the British and European patent applications for Stephen L Thaler it did not occur to me that Mr. Thaler needed to obtain a foreign filing license from the USPTO, not only in light of the above facts but also because there is no direct equivalent legal requirement in UK or European patent law. United Kingdom patent law did have a requirement for a foreign filing license but this was revoked in 2005 in relation to all inventions save for inventions relating to military technology or which for any other reason publication of the information might be prejudicial to national security or potentially prejudicial to the safety of the public. The subject invention of these patent applications does not fall into any of these restricted categories, with the consequence that there would have been no requirement in UK law to seek a foreign filing license. As a consequence, Mr. Thaler's patent applications did not trigger any reason for me to expect that a foreign filing license might be required.
9. The reason for recommending to Mr. Thaler that the British and European applications should be filed as priority applications (that is first filings) is that both the UKIPO and the EPO offer accelerated search and examination of any applications first filed in their Offices. This is the specific reason why I was involved in this invention in the first instance, as it was important to Mr.

Thaler to obtain an indication of patentability of the invention as early as possible.

10. The subject foreign applications were filed pursuant to the instructions of Mr. Thaler to proceed to said filings. The instructions were provided through phone conversations.
11. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a).
12. Accordingly, it did not occur to me that an FFL was required to prior to filing Mr. Thaler's applications in the UK and in Europe.
13. Pursuant to 37 CFR §5.25(a)(3)(iii), the foreign-filed applications were filed abroad, without a foreign filing license through error and without deceptive intent. I am unfamiliar with US patent law and the requirement for obtaining a foreign filing license in respect of any foreign filing for a US based inventor.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 9th day of July 2020



ROBERT JEHAN
BRITISH AND EUROPEAN PATENT ATTORNEY

Electronic Acknowledgement Receipt	
EFS ID:	39975795
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	13-JUL-2020
Filing Date:	29-JUL-2019
Time Stamp:	04:38:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Oath or Declaration filed	signed-132_Declaration_Thaler_NF_2020-resubmit.pdf	66098 11006ec929b948fc7cc931739300ea086e1f eb3e	no	4

Warnings:

Information:					
2	Request for Retroactive Foreign Filing License	Re-submission_FFL_petition_NF.pdf	57660	no	4
			1419a9e43ffc4d3863e9347db03e260e46208ba6		
Warnings:					
Information:					
3	Oath or Declaration filed	Declaration_Jehan_NF_July_2020.pdf	119501	no	4
			ca4c0bcb8ba47e9bb6ae3a4b72207d052109bca9		
Warnings:					
Information:					
Total Files Size (in bytes):			243259		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/E0/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF RESUBMISSION
OF PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Stephen L. Thaler, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the undersigned as the assignee/applicant is a US citizen, I understand that a foreign filing license would be necessary for the instant application.
3. I am the Applicant in the foreign filings cited in the Petition (attached herewith):
 - a. European Patent Application No. 18275174.3, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention;” and

- b. UK Patent Application No. 1818161.0, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention.”
4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I am informed and believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. Pursuant to 37 CFR §5.25(a)(3)(i), I am informed and believe that the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to devices and methods for attracting enhanced attention, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. I was first informed regarding a need for a foreign filing license on June 13, 2019 by my US patent counsels when they began to prepare filing for a patent before the USPTO in which they determined the need for a foreign filing license. Pursuant to 37 CFR §5.25(a)(3)(ii), I have diligently executed a

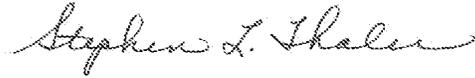
Declaration in support of a petition in pursuit of a retroactive foreign filing license (FFL) that was filed in July 2019.

7. This Declaration is in support of the Resubmission of the Petition seeking a Retroactive FFL in reply to the decision of USPTO Office of Petitions regarding the filed July 2019 petition, dated 15 May 2020.
8. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a), and that the subject foreign applications were filed pursuant to my instructions to the EU Counsel, Robert Jehan.
9. I declare that all my prior patent applications were filed first in the US, and I have never made a patent application first-filing abroad except for the current application and another AI-generated application that was prepared and filed around the same time as filing this application in the EU. A similar FFL petition has been filed and considered together with this case by the Office of Petitions.
10. Accordingly, I did not have any knowledge that an FFL was required prior to my filing of the application abroad, nor was I advised by the EU counsel of such requirement (as corroborated in the attached EU counsel, Adv. Robert Jehan's declaration).
11. Pursuant to 37 CFR §5.25(a)(3)(iii), I am informed and believe that the foreign-filed applications were filed abroad, without a foreign filing license under 37 CFR §5.11 first having been obtained, through error and without deceptive intent. I am informed and believe that the foreign-filed applications were filed and prosecuted through my European counsel (Adv. Robert Jehan from the UK) who was unfamiliar with US Patent Law and the requirement of obtaining a

foreign filing license prior to any foreign filing. The supporting declaration of said European counsel is attached hereto.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 15th day of June 2020



STEPHEN L. THALER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

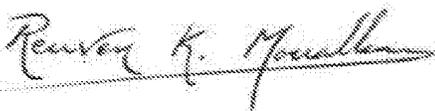
Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

USPTO Office of Petition Attorney:
PAUL SHANOSKI
Attorney Advisor
Office of Petition

Sir,

The attached updated version of the declaration of EU counsel, Robert Jehan, supersedes and replaces the declaration of Robert Jehan that was submitted on 13 July 2020.

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345
Date: July 14, 2020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

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Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF RESUBMISSION
OF PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Robert Jehan, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the assignee/applicant is a US citizen, I was recently advised that a foreign filing license would be necessary for the instant application.
3. I am the European and British Patent Attorney cited in the Petition on behalf of applicant Stephen L. Thaler, in particular for:
 - a. European Patent Application No. 18275174.3, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention;” and

- b. UK Patent Application No. 1818161.0, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention.”
4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. Pursuant to 37 CFR §5.25(a)(3)(i), the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to devices and methods for attracting enhanced attention, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. I have been qualified as a British and European patent attorney since 1992 and I have practiced in Europe, specifically in the United Kingdom. I am directly responsible for filing and prosecuting patent applications before the United Kingdom Intellectual Property Office (UKIPO) and the European Patent Office (EPO). While I have handled on behalf of clients patent applications in

many other countries of the world, including in the United States, these have always been through local attorneys as I am not qualified or expert in the relevant national laws foreign to the United Kingdom and the EPO.

7. While I do have some direct US clients who instruct me in the filing of UK and European patent applications, these clients have in-house patent counsel who deal with any requirements in US law so I do not get involved with these.
8. At the time of filing the British and European patent applications for Stephen L Thaler it did not occur to me that Mr. Thaler needed to obtain a foreign filing license from the USPTO, not only in light of the above facts but also because there is no direct equivalent legal requirement in UK or European patent law. United Kingdom patent law did have a requirement for a foreign filing license but this was revoked in 2005 in relation to all inventions save for inventions relating to military technology or which for any other reason publication of the information might be prejudicial to national security or potentially prejudicial to the safety of the public. The subject invention of these patent applications does not fall into any of these restricted categories, with the consequence that there would have been no requirement in UK law to seek a foreign filing license. As a consequence, Mr. Thaler's patent applications did not trigger any reason for me to expect that a foreign filing license might be required.
9. The reason for recommending to Mr. Thaler that the British and European applications should be filed as priority applications (that is first filings) is that both the UKIPO and the EPO offer accelerated search and examination of any applications first filed in their Offices. This is the specific reason why I was involved in this invention in the first instance, as it was important to Mr.

Thaler to obtain an indication of patentability of the invention as early as possible.

10. The subject foreign applications were filed pursuant to the instructions of Mr. Thaler to proceed to said filings. The instructions were provided through phone conversations.
11. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a).
12. Accordingly, it did not occur to me that an FFL was required to prior to filing Mr. Thaler's applications in the UK and in Europe.
13. Pursuant to 37 CFR §5.25(a)(3)(iii), the foreign-filed applications were filed abroad, without a foreign filing license through error and without deceptive intent. I am unfamiliar with US patent law and the requirement for obtaining a foreign filing license in respect of any foreign filing for a US based inventor.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 9th day of July 2020



ROBERT JEHAN
BRITISH AND EUROPEAN PATENT ATTORNEY

Electronic Acknowledgement Receipt	
EFS ID:	39988793
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	14-JUL-2020
Filing Date:	29-JUL-2019
Time Stamp:	04:15:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	Submission_of_Jehan_updated _decalartion_NF.pdf	17355 331a0dcdce34076c3bef75d8450a0ee9b4e c36ee	no	1

Warnings:

Information:					
2	Oath or Declaration filed	Updated_Declaration_Jehan_N F_July_2020.pdf	152700	no	4
			8aa1c4d285d4ad0c83c39e9c46e976c8047 de5d1		
Warnings:					
Information:					
Total Files Size (in bytes):				170055	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Jul 17, 2020 03:37:35 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16524350	PET.DEC.OIPE	04/22/2020	50567-3-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://portal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM



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.
16/524,350	07/29/2019		50567-3-01-US	1467
89602	7590	07/21/2020	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			2861	
			NOTIFICATION DATE	DELIVERY MODE
			07/21/2020	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):

FPIP-USPTO@FlashPointIP.com
 ydm@FlashPointIP.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Application of :
Application No. 16/524,350 :
Filed: 29 Jul 2019 : DECISION ON PETITION
For DEVICES AND METHODS FOR :
ATTRACTING ENHANCED ATTENTION :

This is a decision on the renewed petition pursuant to 37 C.F.R. § 5.25, filed July 13, 2020, seeking a retroactive license for foreign filing under 35 U.S.C. § 184. A supplement to this renewed petition was received on July 14, 2020.

The renewed petition is **DISMISSED**.

This decision concerns European application number 18275174.3 filed November 7, 2018 and UK application number 1818161.0 filed November 7, 2018.

A grantable petition pursuant to 37 C.F.R. § 5.25 must be accompanied by:

- (1) a listing of each of the foreign countries in which the unlicensed patent application material was filed;
- (2) The dates on which the material was filed in each country;
- (3) A verified statement (oath or declaration) containing:
 - (i) An averment that the subject matter in question was not under a secrecy order at the time it was filed abroad, and that it is not currently under a secrecy order,
 - (ii) A showing that the license has been diligently sought after discovery of the proscribed foreign filing, and
 - (iii) An explanation of why the material was filed abroad through error without the required license under § 5.11 first having been obtained; and,

(4) The required fee (§ 1.17(g) of this chapter).

An original petition pursuant to 37 C.F.R. § 5.25 was filed on July 29, 2019 and dismissed via the mailing of a decision on May 15, 2020, which indicates the original petition complies with requirements (1), (2), (3)(i), and (4) of 37 C.F.R. § 5.25. Petitioner provided a listing of each of the foreign countries in which the unlicensed patent application material was filed;¹ the dates on which the material was filed in another country;² an averment that the subject matter in question was not under a secrecy order at the time it was filed abroad, and that it is not currently under a secrecy order;³ and, the required petition fee.

On renewed petition, requirement (3)(ii) of 37 C.F.R. § 5.25 has been satisfied.⁴

Requirement (3)(iii) of 37 C.F.R. § 5.25 remains unsatisfied. A discussion follows.

The relevant parties are as follows:

- Declarant Thaler is the applicant.⁵
- Both foreign filings were made by declarant Thaler's European counsel,⁶ declarant Jehan.⁷

Regarding requirement (3)(iii) of 37 C.F.R. § 5.25, it is not clear where the invention occurred.

35 U.S.C. § 1.84(a) provides,

(a) FILING IN FOREIGN COUNTRY.—Except when authorized by a license obtained from the Commissioner of Patents a person shall not file or cause or authorize to be filed in any foreign country prior to six months after filing in the United States an application for patent or for the

1 Europe and the UK. Original petition, page 1 and concurrently submitted Thaler verified statement, paragraph 3.

2 November 7, 2018. *Id.*

3 Thaler verified statement submitted with the original petition, paragraph 5.

4 Thaler verified statement submitted with the renewed petition, paragraphs 6 and 8 and concurrently submitted Jehan verified statement, paragraphs 8 and 11.

5 Application Data Sheet included on initial deposit, page 1.

6 Thaler verified statement submitted with the original petition, paragraph 7.

7 Jehan verified statement submitted with the renewed petition, paragraph 3.

Application No. 16/524,350

Page 3

registration of a utility model, industrial design, or model in respect of an invention made in this country. A license shall not be granted with respect to an invention subject to an order issued by the Commissioner of Patents pursuant to section 181 without the concurrence of the head of the departments and the chief officers of the agencies who caused the order to be issued. The license may be granted retroactively where an application has been filed abroad through error and the application does not disclose an invention within the scope of section 181.

As is made clear by 35 U.S.C. § 1.84(a) cited above, the USPTO has no authority to grant a petition under 37 C.F.R. § 5.25 where an invention took place outside of the USA.

On second renewed petition, Petitioner must explicitly state whether the invention took place in the USA.

Accordingly, the provisions of 37 C.F.R. § 5.25 not having fully been met, the petition is **DISMISSED**. A response is due within **TWO MONTHS** of the mailing date of this decision. Extensions of time of this period of reply may be obtained under 37 C.F.R. § 1.136(a). In the absence of a timely response, such dismissal will be made final and the final action under 35 U.S.C. § 185 will be taken.

The reply should include a cover letter entitled "Second Renewed Petition under 37 C.F.R. § 5.25." This is not a final agency action within the meaning of 5 U.S.C § 704.

The second renewed petition should indicate in a prominent manner that the attorney handling this matter is Paul Shanoski, and may be submitted by mail,⁸ hand-delivery,⁹ or facsimile.¹⁰ If Petitioner has the capability to file follow-on documents, a response may be submitted via the electronic filing system, EFS-Web¹¹ **and the document code should be RETR.LICENSE**. If responding by mail, Petitioner is advised not to place the undersigned's name on the envelope. Only the information that appears in the footnote should be included - adding anything else to the address will delay the delivery of the response to the undersigned.

⁸ Mail Stop Petition, Commissioner for Patents, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

⁹ Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

¹⁰ (571) 273-8300: please note this is a central facsimile number.

¹¹ <https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html>

Application No. 16/524,350

Page 4

Any verified statement (notarized oath) or declaration (including reference to Section 1001 of Title 18 of the U.S.C.) included on renewed petition must include the clause:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Telephone inquiries regarding *this decision* should be directed to Attorney Advisor Paul Shanowski at (571) 272-3225.¹² All other inquiries concerning examination procedures should be directed to the Technology Center.

/Paul Shanowski/
Paul Shanowski
Attorney Advisor
Office of Petitions

¹² Petitioner will note that all practice before the Office should be in writing, and the action of the Office will be based exclusively on the written record in the Office. See 37 C.F.R. § 1.2. As such, Petitioner is reminded that no telephone discussion may be controlling or considered authority for Petitioner's further action(s).

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Jul 21, 2020 03:39:09 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16524350	PETDEC	07/21/2020	50567-3-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://portal.uspto.gov/secure/myportal/privatepair>.

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Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant: §

§

Stephen L. Thaler §

§

Serial No.: 16/524,350 §

§

Filed: July 29, 2019 §

Group Art Unit:

§

For: DEVICES AND METHODS §

Attorney Docket: 50567-3-01-US

FOR ATTRACTING §

Confirmation No.: 1467

ENHANCED ATTENTION §

§

Examiner: §

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

USPTO Office of Petition Attorney:

PAUL SHANOSKI
Attorney Advisor
Office of Petition

SECOND RENEWED PETITION

FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	

Paul Shanoski
Attorney Advisor
Office of Petition

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**SECOND RENEWED PETITION
FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25**

This Second Renewed Petition requests under 37 CFR 5.25 a retroactive license for foreign filing under 35 USC 184 in accordance with §5.14(a). The required fee for the Petition under §1.17(g) has been paid. The retroactive foreign filing licenses are requested for the following jurisdictions in which the unlicensed patent application material was filed.

- European Patent Application No. 18275174.3, filed November 7, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Devices and Methods for Attracting Enhanced Attention;” and

- UK Patent Application No. 1818161.0, filed November 7, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Devices and Methods for Attracting Enhanced Attention.”

In accordance with 37 CFR §5.14 for a petition for retroactive foreign filing license related to a pending US application (identified above by US application number, filing date, applicant, and title), it is submitted that the complete contents of the unlicensed patent application material (identical for the two foreign filings listed above) is readily identifiable in the referenced US application. A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application.

Declarations by the Applicant, Dr. Stephen L. Thaler, and foreign EU Counsel, Robert Jehan attached herewith, aver:

- (1) **that the invention detailed in the instant application took place in the United States.**
- (2) that a Foreign Filing License was required prior to filing of the subject foreign applications;
- (3) that neither applicant Thaler, nor the EU Counsel who filed the subject foreign applications were aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a) at the time of said foreign filings;
- (4) diligence in seeking the retroactive foreign filing license upon discovery that such license was necessary;
- (5) that the subject matter in question was not under a secrecy order at the time the subject matter was filed abroad; and
- (6) that the subject matter is not currently under a secrecy order.

As indicated in the attached Declarations, the potential need for a retroactive foreign filing license and a Declaration was inadvertently not communicated to the Applicant. Upon

learning of the possible need for a foreign filing license, the Applicant diligently proceeded to filing the petition for a Retroactive Foreign Filing License.

The foreign filings of unlicensed patent application material were prepared and filed by the Applicant through European counsel (Mr. Robert Jehan of a UK IP law firm) both unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing.

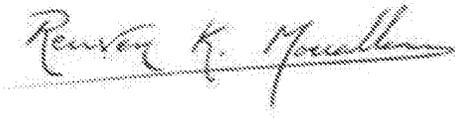
It is noted that the law on foreign filing licenses in the United Kingdom was changed in 2004 to the effect that no foreign filing license is required unless the application contains information which relates to military technology, for any other reasons publication of the information might be prejudicial to national security, or to the safety of the public.

Thus, the possible need for a foreign filing license did not become apparent, and foreign applications were filed abroad through error and without deceptive intent, without the required license. It is submitted that diligence in obtaining a retroactive foreign filing license is shown by the present Renewed Petition for a Retroactive License.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: July 26, 2020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

USPTO Office of Petition Attorney:

PAUL SHANOSKI
Attorney Advisor
Office of Petition

**DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF
SECOND RESUBMISSION OF PETITION
FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25**

I, Stephen L. Thaler, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the undersigned as the assignee/applicant is a US citizen, I understand that a foreign filing license would be necessary for the instant application.

3. I am the Applicant in the foreign filings cited in the Petition (attached herewith):
 - a. European Patent Application No. 18275174.3, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention;” and
 - b. UK Patent Application No. 1818161.0, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention.”
4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I am informed and believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. I confirm that **the invention detailed in the instant patent application took place in the United States.**
6. Pursuant to 37 CFR §5.25(a)(3)(i), I am informed and believe that the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to devices and methods for

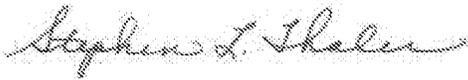
attracting enhanced attention, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.

7. I was first informed regarding a need for a foreign filing license on June 13, 2019 by my US patent counsels when they began to prepare filing for a patent before the USPTO in which they determined the need for a foreign filing license. Pursuant to 37 CFR §5.25(a)(3)(ii), I have diligently executed a Declaration in support of a petition in pursuit of a retroactive foreign filing license (FFL) that was filed in July 2019.
8. This Declaration is in support of the Resubmission of the Petition seeking a Retroactive FFL in reply to the decision of USPTO Office of Petitions regarding the filed July 2019 petition, dated 15 May 2020.
9. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a), and that the subject foreign applications were filed pursuant to my instructions to the EU Counsel, Robert Jehan.
10. I declare that all my prior patent applications were filed first in the US, and I have never made a patent application first-filing abroad except for the current application and another AI-generated application that was prepared and filed around the same time as filing this application in the EU. A similar FFL petition has been filed and considered together with this case by the Office of Petitions.
11. Accordingly, I did not have any knowledge that an FFL was required prior to my filing of the application abroad, nor was I advised by the EU counsel of such requirement (as corroborated in the attached EU counsel, Adv. Robert Jehan's declaration).

12. Pursuant to 37 CFR §5.25(a)(3)(iii), I am informed and believe that the foreign-filed applications were filed abroad, without a foreign filing license under 37 CFR §5.11 first having been obtained, through error and without deceptive intent. I am informed and believe that the foreign-filed applications were filed and prosecuted through my European counsel (Adv. Robert Jehan from the UK) who was unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing. The supporting declaration of said European counsel is attached hereto.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 26th day of July 2020



STEPHEN L. THALER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,350	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 2861
	§	
For: DEVICES AND METHODS	§	Attorney Docket: 50567-3-01-US
FOR ATTRACTING	§	Confirmation No.: 1467
ENHANCED ATTENTION	§	
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF RESUBMISSION
OF PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Robert Jehan, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the assignee/applicant is a US citizen, I was recently advised that a foreign filing license would be necessary for the instant application.
3. I am the European and British Patent Attorney cited in the Petition on behalf of applicant Stephen L. Thaler, in particular for:
 - a. European Patent Application No. 18275174.3, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention;” and

- b. UK Patent Application No. 1818161.0, filed November 7, 2018 (first priority date), entitled “Devices and Methods for Attracting Enhanced Attention.”
4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. Pursuant to 37 CFR §5.25(a)(3)(i), the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to devices and methods for attracting enhanced attention, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. I have been qualified as a British and European patent attorney since 1992 and I have practiced in Europe, specifically in the United Kingdom. I am directly responsible for filing and prosecuting patent applications before the United Kingdom Intellectual Property Office (UKIPO) and the European Patent Office (EPO). While I have handled on behalf of clients patent applications in

many other countries of the world, including in the United States, these have always been through local attorneys as I am not qualified or expert in the relevant national laws foreign to the United Kingdom and the EPO.

7. While I do have some direct US clients who instruct me in the filing of UK and European patent applications, these clients have in-house patent counsel who deal with any requirements in US law so I do not get involved with these.
8. At the time of filing the British and European patent applications for Stephen L Thaler it did not occur to me that Mr. Thaler needed to obtain a foreign filing license from the USPTO, not only in light of the above facts but also because there is no direct equivalent legal requirement in UK or European patent law. United Kingdom patent law did have a requirement for a foreign filing license but this was revoked in 2005 in relation to all inventions save for inventions relating to military technology or which for any other reason publication of the information might be prejudicial to national security or potentially prejudicial to the safety of the public. The subject invention of these patent applications does not fall into any of these restricted categories, with the consequence that there would have been no requirement in UK law to seek a foreign filing license. As a consequence, Mr. Thaler's patent applications did not trigger any reason for me to expect that a foreign filing license might be required.
9. The reason for recommending to Mr. Thaler that the British and European applications should be filed as priority applications (that is first filings) is that both the UKIPO and the EPO offer accelerated search and examination of any applications first filed in their Offices. This is the specific reason why I was involved in this invention in the first instance, as it was important to Mr.

Thaler to obtain an indication of patentability of the invention as early as possible.

10. The subject foreign applications were filed pursuant to the instructions of Mr. Thaler to proceed to said filings. The instructions were provided through phone conversations.
11. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a).
12. Accordingly, it did not occur to me that an FFL was required to prior to filing Mr. Thaler's applications in the UK and in Europe.
13. Pursuant to 37 CFR §5.25(a)(3)(iii), the foreign-filed applications were filed abroad, without a foreign filing license through error and without deceptive intent. I am unfamiliar with US patent law and the requirement for obtaining a foreign filing license in respect of any foreign filing for a US based inventor.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 9th day of July 2020



ROBERT JEHAN
BRITISH AND EUROPEAN PATENT ATTORNEY

Electronic Acknowledgement Receipt	
EFS ID:	40170595
Application Number:	16524350
International Application Number:	
Confirmation Number:	1467
Title of Invention:	DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-3-01-US
Receipt Date:	02-AUG-2020
Filing Date:	29-JUL-2019
Time Stamp:	04:21:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Retroactive Foreign Filing License	Second_Re-submission_FFL_petition_NF.pdf	64214 719dfa17eba78257ae15b35f77d8e6779e3023b4	no	5

Warnings:

Information:					
2	Oath or Declaration filed	signed_Declaration_Thaler_NF _2020-resubmit.pdf	57319 a4984a88b5de61066438ffdd9da46957bec213d5	no	4
Warnings:					
Information:					
3	Oath or Declaration filed	Updated_Declaration_Jehan_N F_July_2020.pdf	152700 8aa1c4d285d4ad0c83e39e9c46e976c8047de5d1	no	4
Warnings:					
Information:					
Total Files Size (in bytes):			274233		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



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.
16/524,350	07/29/2019		50567-3-01-US	1467
89602	7590	08/06/2020	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			2861	
			NOTIFICATION DATE	DELIVERY MODE
			08/06/2020	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):

FPIP-USPTO@FlashPointIP.com
 ydm@FlashPointIP.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Application of :
Application No. 16/524,350 :
Filed: 29 Jul 2019 : DECISION ON PETITION
For DEVICES AND METHODS FOR :
ATTRACTING ENHANCED :
ATTENTION :

In view of the communications filed July 29, 2019, July 13, 2020, and August 2, 2020, it has been determined that a retroactive license for foreign filing under 35 U.S.C. § 184 be **granted** with respect to the filings listed below. The petition complies with 37 C.F.R. § 5.25 in that there is an adequate showing that the subject matter in question was not under a secrecy order, that the license was diligently sought after discovery of the proscribed foreign filings, and that the material was filed abroad without the required license under 37 C.F.R. § 5.11 first having been obtained through error.

<u>Country</u>	<u>Date</u>
Europe	November 7, 2018
UK	November 7, 2018

Telephone inquiries regarding this decision should be directed to Attorney Advisor Paul Shanoski at (571) 272-3225.¹

/Paul Shanoski/
Paul Shanoski
Attorney Advisor
Office of Petitions

Enclosure: Foreign Filing License

¹ Petitioner will note that all practice before the Office should be in writing, and the action of the Office will be based exclusively on the written record in the Office. See 37 C.F.R. § 1.2. As such, Petitioner is reminded that no telephone discussion may be controlling or considered authority for any of Petitioner's further action(s).



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
 UNITED STATES PATENT AND TRADEMARK OFFICE
 WASHINGTON, D.C. 20530
 www.uspto.gov

SERIAL NUMBER	REQUEST DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
16524350	29-JUL-19		50567-3-01-US

Title:
DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION

Correspondence Address:
 LL.M. Dr. Reuven K. Mouallem
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad 40832-01

Licensee under 35 U.S.C. 184 is hereby granted to file in any foreign country a patent application and any amendments thereto corresponding to the subject matter of this U.S. application identified above and/or any material accompanying the petition. This license is conditioned upon modification of any applicable secrecy order and is subject to revocation without notice.

License Number: **613,842**
 Grant Date: **05-AUG-20**

Memo:
 This license is granted retroactively to the date(s) and the country(s) listed on the attached decision.

Approved: /Paul Shanoski/
 for Commissioner of Patents and Trademarks

This license empowers the filing, the causation and the authorization of the filing of a foreign application or applications on the subject matter identified above, subsequent forwarding of all duplicate and formal papers and the prosecution of such application or applications.

This license is granted under 37 CFR 5.15(a).

This license is to be retained by the licensee and may be used at anytime on or after the date thereof. This license is not retroactive unless specifically indicated.

The grant of this license does not in any way lessen the responsibility of the licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations, especially with respect to certain countries, of other agencies, particularly the Department of the Treasury; Office of Munitions Control, Department of State (with respect to Arms, Munitions and Implements of War); the Bureau of Trade Regulation, Office of Export Administration, Department of Commerce; and the Department of Energy.

LICENSE FOR FOREIGN FILING
[Title 35, United States Code (1952) Sections 184, 185, 186]

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Aug 07, 2020 03:51:09 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16524350	PET.DEC.OIPE	08/06/2020	50567-3-01-US
	OA.APPENDIX	08/06/2020	50567-3-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

PTO/AIA/15 (10-17)

Approved for use through 11/30/2020. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<p>UTILITY PATENT APPLICATION TRANSMITTAL</p> <p><i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i></p>	<i>Attorney Docket No.</i> 50567-4-01-US
	<i>First Named Inventor</i> [DABUS] [AI generated invention]
	<i>Title</i> Food Container
	<i>Priority Mail Express® Label No.</i>

<p style="text-align: center;">APPLICATION ELEMENTS</p> <p style="text-align: center;"><i>See MPEP chapter 600 concerning utility patent application contents.</i></p>	<p style="text-align: center;">ADDRESS TO:</p> <p style="text-align: center;">Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450</p>
---	--

<p>1. <input checked="" type="checkbox"/> Fee Transmittal Form (PTO/SB/17 or equivalent)</p> <p>2. <input checked="" type="checkbox"/> Applicant asserts small entity status. See 37 CFR 1.27</p> <p>3. <input type="checkbox"/> Applicant certifies micro entity status. See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.</p> <p>4. <input checked="" type="checkbox"/> Specification [Total Pages <u>15</u>] Both the claims and abstract must start on a new page. (See MPEP § 608.01(a) for information on the preferred arrangement)</p> <p>5. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets <u>6</u>]</p> <p>6. <input checked="" type="checkbox"/> Inventor's Oath or Declaration [Total Pages <u>2</u>] (including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))</p> <p>a. <input checked="" type="checkbox"/> Newly executed (original or copy)</p> <p>b. <input type="checkbox"/> A copy from a prior application (37 CFR 1.63(d))</p> <p>7. <input checked="" type="checkbox"/> Application Data Sheet * See note below. See 37 CFR 1.76 (PTO/AIA/14 or equivalent)</p> <p>8. CD-ROM or CD-R in duplicate, large table, or Computer Program (Appendix)</p> <p><input type="checkbox"/> Landscape Table on CD</p> <p>9. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. – c. are required)</p> <p>a. <input type="checkbox"/> Computer Readable Form (CRF)</p> <p>b. <input type="checkbox"/> Specification Sequence Listing on:</p> <p>i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or</p> <p>ii. <input type="checkbox"/> Paper</p> <p>c. <input type="checkbox"/> Statements verifying identity of above copies</p>	<p style="text-align: center;">ACCOMPANYING APPLICATION PAPERS</p> <p>10. <input checked="" type="checkbox"/> Assignment Papers (cover sheet & document(s)) Name of Assignee <u>Stephen L. Thaler</u></p> <p>11. <input checked="" type="checkbox"/> 37 CFR 3.73(c) Statement <input checked="" type="checkbox"/> Power of Attorney (when there is an assignee)</p> <p>12. <input type="checkbox"/> English Translation Document (if applicable)</p> <p>13. <input checked="" type="checkbox"/> Information Disclosure Statement (PTO/SB/08 or PTO-1449) <input checked="" type="checkbox"/> Copies of citations attached</p> <p>14. <input type="checkbox"/> Preliminary Amendment</p> <p>15. <input type="checkbox"/> Return Receipt Postcard (MPEP § 503) (Should be specifically itemized)</p> <p>16. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed)</p> <p>17. <input type="checkbox"/> Nonpublication Request Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.</p> <p>18. <input type="checkbox"/> Other: _____ _____ _____</p>
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*Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS					
<input checked="" type="checkbox"/> The address associated with Customer Number: <u>89602</u> OR <input type="checkbox"/> Correspondence address below					
Name					
Address					
City	State	Zip Code			
Country	Telephone	Email			

Signature	<u>/Reuven K. Mouallem/</u>	Date	<u>29 July 2019</u>
Name (Print/Type)	<u>Reuven K. Mouallem</u>	Registration No. (Attorney/Agent)	<u>63345</u>

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

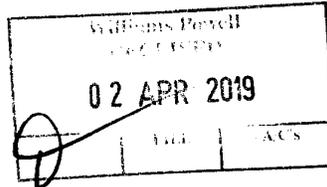
The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



**Intellectual
Property
Office**

Stephen L Thaler
c/o Williams Powell
11 Staple Inn
LONDON
WC1V 7QH



Patents Directorate

Concept House
Cardiff Road, Newport
South Wales, NP10 8QQ

Direct Line: 01633 814593
E-Mail: kathryn.willett@ipo.gov.uk
Switchboard: 0300 300 2000
Fax: 01633 817777
Minicom: 0300 0200 015

Your Reference: RJ/N35111-GB
Application No: GB1816909.4

29 March 2019

Dear Sirs

**Patents Act 1977:
Combined Search and Examination Report under Sections 17 and 18(3)**

Latest date for reply: 19 October 2020

I enclose a copy of my search and examination report and a copy of the cited non-patent literature. Please note that published patent documents mentioned in my report may be obtained for free on the internet and are usually freely available from <http://worldwide.espacenet.com>.

By the above date you should either file amendments to meet the objections in the report or make observations on them. If you do not, the application may be refused. I will consider your response and will reply in a timescale consistent with our current target: <https://www.gov.uk/government/publications/timeliness-target-for-re-examination-of-patent-applications>

Online e-filing

You may file such amendments or observations electronically if you wish, using the online patent filing services detailed in <https://www.gov.uk/government/publications/how-to-file-documents-with-the-intellectual-property-office>.

Other search results

If you have applied to another patent office for a patent for this invention you will be receiving from them the results of their search. If you decide to proceed with the present

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Intellectual Property Office

Application No : GB1816909.4

Page 2

29 March 2019

application you are asked to provide a copy of any such official search report or details of any documents cited and category assigned in the report. You may file such information electronically using the online patent filing services detailed in <https://www.gov.uk/government/publications/how-to-file-documents-with-the-intellectual-property-office>.

Cut-off date This request applies to search reports that you have received before the date when you send a response to our first examination report under section 18(3) or section 18(4); if you make no response to an initial section 18(4) report the cut-off date is two months after the date of that report. Tell us about a search report sooner rather than later if that would allow it to be considered during our first examination.

Exceptions You do not have to supply details of a search report that (1) shows a nil response, or (2) has been published by WIPO or EPO, or (3) you have already supplied to us on a previous GB application.

Publication

I estimate that preparations for publication of your application will be completed soon after **10 March 2020**. At this time you will receive a letter confirming the exact date of the completion of the preparations for publication. This letter will also tell you the publication number and date of publication of your application. However, it should NOT be relied upon as a reminder if you are intending to withdraw your application before publication, as it may not be issued in time for you to do so.

On the date of publication details of your application, including your name and address, will be entered in the Register of Patents and will become publicly available, including on our website. Some documents and correspondence from your application file will also be made publicly available on our website at <http://www.ipo.gov.uk/p-ipsum>.

Withdrawal

If you wish to withdraw your application to prevent publication you must withdraw it before the preparations for publication are complete. One way that you can withdraw your application is by emailing withdraw@ipo.gov.uk. Further details on withdrawal are available from <https://www.gov.uk/patent-your-invention>. **WARNING** – once preparations for publication are complete it will NOT be possible to prevent publication.

Amendment

If you wish to file amended claims for inclusion with the published application you must do so before the preparations for publication are completed.

Correspondence



Intellectual
Property
Office

Application No : GB1816909.4

Page 3

29 March 2019

If you write to the Office less than 3 weeks before 10 March 2020 please mark your letter prominently: **"URGENT - PUBLICATION IMMINENT"**.

Yours faithfully

Dr Kathryn Willett

Dr Kathryn Willett
Examiner

Important information about combined search and examination

I also ask that you take note of the following points. These might have a bearing on the future stages of your application because the examination report has been sent to you before your application has been published.

- (a) You may file voluntary amendments before making a full response to my examination report. We will publish with your application any new or amended claims you file voluntarily or as a full response, provided that they are received before preparations for publication are completed. It would help us when you file amendments before publication if you could **prominently indicate** in a covering letter whether or not the amendments are intended as a full response to the examination report.
- (b) If you file a full response to the examination report before your application is published I will consider it as soon as possible. However, if this would disrupt the publication of your application, I would have to delay taking any action until the application had been published. This delay could be up to 3 months, depending upon when we receive your response.
- (c) There is another situation when there might be a delay between you filing a full response and the Office responding to it. This would arise if you met all my objections but your application had not or had only recently been published. I could not report the outcome of my re-examination until I was satisfied that the search was complete for documents published before the priority date of your invention and that anybody interested in the application has had three months following publication of the application to make observations on the patentability of your invention.
- (d) Provided that the requirements of the Act have been met, I can send your application to grant as early as three months after publication. Before doing so I will bring the original search up to date and raise with you any further objection that might result from this top-up search. However, there is a possibility that at that time I may not have access to all the patent applications published after the priority date of your invention and of possible relevance to your application. If this is the case I would have to complete the search after grant and if necessary raise any new found novelty objection then.



**Intellectual
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Office**

Application No: GB1816909.4

Examiner: Dr Kathryn Willett

Claims searched: 1-13

Date of search: 28 March 2019

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1- 13	Mygadgetlife, 10 October 2018, "Snowflake Tealight Holder" thingiverse.com, [online], Available from: https://www.thingiverse.com/thing:3147335 [Accessed 28 March 2019] The pictures show a snowflake shaped container that can be 3D printed.
X	1, 3, 6, 7, 9, 10, 11, 12	DE 10004386 A1 (EICHMANN) A container for food comprising a wall with convex and concave elements forming pits and bulges in the profile of the wall. Paragraph [0012] discloses that the can is made of metal.
X	1, 2	Documenta Praehistorica XXXI, (2004) Ljubljana, D. Lubell, "Are land snails a signature for the Mesolithic-Neolithic transition?", pages 1-24 Discusses how edible land snails were eaten by prehistoric people.
A		CN 102923370 A (CHEN) A bottle with a Sierpinski triangle structure.

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^X :

Worldwide search of patent documents classified in the following areas of the IPC

B65D

The following online and other databases have been used in the preparation of this search report

EPODOC, WPI, Internet, Patent Fulltext

International Classification:

Subclass	Subgroup	Valid From
B65D	0001/44	01/01/2006
B65D	0021/02	01/01/2006



**Intellectual
Property
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Your ref :	RJ/N35111-GB	Examiner :	Dr Kathryn Willett
Application No:	GB1816909.4	Tel :	01633 814593
Applicant :	Stephen L Thaler	Date of report :	29 March 2019
Latest date for reply:	19 October 2020		Page 1/2

**Patents Act 1977
Combined Search and Examination Report under Sections 17 & 18(3)**

Novelty

1. The invention as defined in claims 1 to 12 is not new because it has already been disclosed in the following documents:

- | | | | | |
|----|---|----------|---------|---|
| D1 | Snowflake | Tealight | Holder, | Relevant to claims 1 to 12 |
| | https://www.thingiverse.com/thing:3147335 | | | |
| D2 | DE 10004386 (EICHMANN) | | | Relevant to claims 1, 3, 6, 7,
and 9 to 12 |
| D3 | Documenta Praehistorica XXXI, (2004) Ljubljana, D. Lubell, "Are land snails a signature for the Mesolithic-Neolithic transition?", pages 1-24 | | | Relevant to claims 1 and 2 |

2. D1 discloses a 3D printed snowflake container having a wall with a fractal profile and convex and concave fractal elements forming pits and bulges in the profile of the wall. The snowflake container is considered to be suitable for holding food. Two equivalent containers would be able to undergo partial engagement if placed side by side, especially if one of the snowflakes is upside down. Additionally, one of the containers would be able to nest inside another. The container is made from a material that is sufficiently flexible to be laid flat, as seen in the *regular vs fuzzy* picture. D1 is therefore considered to anticipate claims 1 to 12.

3. D2 discloses a container for food comprising a wall with convex and concave elements forming pits and bulges in the profile of the wall. Paragraph [0012] discloses that the can is made of metal. D2 anticipates claims 1, 3, 6, 7, and 9 to 12.

4. D3 discusses the long history of eating land snails. Land snails are eaten directly from their shell, which is a container with a wall having a fractal profile with concave and convex fractal elements. Therefore, D3 anticipates claims 1 and 2.

5. I had difficulty construing the term fractal and if you consider the term means something other than what is disclosed in the citations, then this should be explicit in claim 1.



**Intellectual
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Your ref : RJ/N35111-GB
Application No : GB1816909.4

Date of report: 29 March 2019
Page 2 / 2

[Examination Report contd.]

Inventive step

6. The invention as defined in claim 13 is obvious in view of what has already been disclosed in D1 above.

7. The inventive concept of claim 13 is the container being formed from a flexible food product. D1 discloses 3D printing a container. Viewing D1 through the eyes of a skilled person, it would be obvious to choose a 3D printable foodstuff, such as chocolate to form the container. It is therefore considered that the invention of claim 13 lacks inventive step.

Clarity

8. In claim 1, the meaning of the term fractal, as used in the terms 'fractal profile' and 'fractal elements', is not clear and casts doubt on the scope of the claim.

9. Claim 2 cannot be considered to be clear as it describes the invention in terms of features of the heads and bases, when neither a head nor base has been defined.

✓ 10. Claim 3 cannot be considered clear as it defines the invention purely by the result to be achieved and should therefore be amended.

✓ 11. Claim 5 cannot be considered clear as it defines the invention purely by the result to be achieved and should therefore be amended.

? 12. In claim 6, it is unclear whether the term 'equivalent container' refers to an identical or a complementary container, or something else.

✓ 13. Claim 6 appears to describe the joining of containers side-by-side whereas claim 7, which is appended to claim 6, describes containers nested within each other. This apparent inconsistency obscures the scope of the claims and should be amended.

14. Claim 8 is currently appended to claim 6 and refers to partial nesting, as illustrated in figure 7 of the application. In this figure the bulge of one container cannot fit within a pit of an equivalent container, as required by claim 6. This apparent inconsistency obscures the scope of the claims and should be amended.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:	Food Container			
First Named Inventor/Applicant Name:	[DABUS] (Invention generated by Artificial Intelligence)			
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-4-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	75	75
UTILITY SEARCH FEE	2111	1	330	330
UTILITY EXAMINATION FEE	2311	1	380	380
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				785

Electronic Acknowledgement Receipt	
EFS ID:	36713507
Application Number:	16524532
International Application Number:	
Confirmation Number:	2644
Title of Invention:	Food Container
First Named Inventor/Applicant Name:	[DABUS] (Invention generated by Artificial Intelligence)
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-4-01-US
Receipt Date:	29-JUL-2019
Filing Date:	
Time Stamp:	13:39:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$785
RAM confirmation Number	E20197SD41136759
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	aia0014_FC.pdf	1256286	no	8
			d7d3e5f195d571d44a1112721ab8dfec3076db8		
Warnings:					
Information:					
2	Assignee showing of ownership per 37 CFR 3.73	aia0096.pdf	116617	no	3
			5ad292e53fa4866a05b2b74be28882881efe90bc		
Warnings:					
Information:					
3	Miscellaneous Incoming Letter	FC_Assignment-s.pdf	820106	no	1
			6fadfca22cba50bd506845b12a368237a73004f9		
Warnings:					
Information:					
4	Oath or Declaration filed	FC_Substitute-s.pdf	843674	no	2
			f2c0e23ff71bca1c86abfcbad55190cf980267bf		
Warnings:					
Information:					
5	Drawings-only black and white line drawings	FC-Patent_drawings.pdf	347957	no	6
			2a8356f9175ac081c52dba223f83660663eed2ea3		
Warnings:					
Information:					
6	Specification	FC-Specification-p.pdf	144276	no	15
			6597978e459c9bde5ab6c44d2869c38798f875bc		
Warnings:					
Information:					

7	Power of Attorney	POA-s.pdf	1561578	no	2
			6b0183c3845c68a6be8d987846b2e8233ca7fa82		
Warnings:					
Information:					
8	Non Patent Literature	Land-snails.pdf	17545051	no	24
			60448aa65060f9a5d497a62787076a26ed4d0d69		
Warnings:					
Information:					
9	Information Disclosure Statement (IDS) Form (SB08)	sb0008b.pdf	225579	no	2
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Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
10	Other Reference-Patent/App/Search documents	UKIPO_No_further_objections_communication_12_July_2019.pdf	30363	no	1
			b751e4bd5208844453b7e5b989ff985eed8e4c5c		
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Information:					
11	Information Disclosure Statement (IDS) Form (SB08)	sb0008a.pdf	258908	no	2
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Information:					
This is not an USPTO supplied IDS fillable form					
12	Other Reference-Patent/App/Search documents	EPO_Extended_ESR.pdf	210032	no	7
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Warnings:					
Information:					
13	Foreign Reference	CN102923370A.pdf	1545453	no	8
			8a567180997b84d41125c02b4cc7c2399e35634e		
Warnings:					
Information:					

14	Foreign Reference	DE10004386A1-Machine_Translation_into_Eng lish.pdf	39179	no	6
			1394911c3b883754d0c5e9134dc0f41c760cb64		
Warnings:					
Information:					
15	Foreign Reference	DE10004386A1-Machine_Translation_of_Claim s_into_English.pdf	32964	no	3
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Information:					
16	Non Patent Literature	Snowflake_Tealight_Holder.pdf	635839	no	2
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Warnings:					
Information:					
17	Foreign Reference	DE10004386A1.pdf	337999	no	6
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Warnings:					
Information:					
18	Foreign Reference	CN102923370A-p-Machine_Translation_of_Claim s_into_English.pdf	103478	no	1
			ed4ae3c1a678d9e298fa4680ca95eea80fd83016		
Warnings:					
Information:					
19	Foreign Reference	CN102923370A-p-Machine_Translation_of_Descri ption_to_English.pdf	134076	no	6
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Warnings:					
Information:					
20	Transmittal of New Application	aia0015-FC.pdf	280456	no	2
			400806e45f92a3e939972aafb1957d689cc63ff8		
Warnings:					
Information:					

21	Other Reference-Patent/App/Search documents	UKIPO_Search_and_Examination_Report.pdf	320868	no	6
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Warnings:					
Information:					
22	Fee Worksheet (SB06)	fee-info.pdf	35305	no	2
			1ede8a400b645ed6179ccc2e06a2343c02c9de0f		
Warnings:					
Information:					
Total Files Size (in bytes):			26826044		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-4-01-US
		Application Number	
Title of Invention	FOOD CONTAINER		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor	1	<input type="button" value="Remove"/>		
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	[DABUS]		Invention generated by artificial intelligence	
Residence Information (Select One) • US Residency Non US Residency Active US Military Service				
City		State/Province	Country of Residence	
Mailing Address of Inventor:				
Address 1	1767 Waterfall Dr.			
Address 2				
City	St. Charles	State/Province	MO	
Postal Code	63303	Country	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).

An Address is being provided for the correspondence information of this application.

Customer Number	89602		
Email Address	ydm@FlashPointIP.com	<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>
Email Address	rkm@FlashPointIP.com	<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>
Email Address	dryanabbott@gmail.com		<input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	FOOD CONTAINER		
Attorney Docket Number	50567-4-01-US	Small Entity Status Claimed	<input checked="" type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	6	Suggested Figure for Publication (if any)	6

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-4-01-US
		Application Number	
Title of Invention	FOOD CONTAINER		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

Request Early Publication (Fee required at time of Request 37 CFR 1.219)

Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer number will be used for the Representative Information during processing.

Please Select One:	Customer Number	<input checked="" type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)		
Prefix	Given Name	Middle Name	Family Name	Suffix	Remove
Dr.	Reuven	K.	Mouallem		
Registration Number	63345				
Prefix	Given Name	Middle Name	Family Name	Suffix	Remove
Dr.	Ryan	B.	Abbott		
Registration Number	68178				
Additional Representative Information blocks may be generated within this form by selecting the Add button.					Add

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-4-01-US
		Application Number	
Title of Invention	FOOD CONTAINER		
Prior Application Status	Pending	<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)	<input type="button" value="Remove"/>
18275163.6	EP	2018-10-17		
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)	<input type="button" value="Remove"/>
1816909.4	GB	2018-10-17		
Additional Foreign Priority Data may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-4-01-US
		Application Number	
Title of Invention	FOOD CONTAINER		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-4-01-US
		Application Number	
Title of Invention	FOOD CONTAINER		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1	<input type="button" value="Remove"/>
--------------------	---------------------------------------

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

<input checked="" type="radio"/> Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
---	--	----------------

Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest
---	--

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

<input type="text"/>

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here.

Prefix	Given Name	Middle Name	Family Name	Suffix
<input type="text"/>	Stephen	L.	Thaler	<input type="text"/>

Mailing Address Information For Applicant:

Address 1	1767 Waterfall Dr.			
Address 2				
City	St. Charles	State/Province	MO	
Country	US	Postal Code	63303	
Phone Number		Fax Number		
Email Address				

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-4-01-US
		Application Number	
Title of Invention	FOOD CONTAINER		

Assignee | 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here.

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Reuven K. Mouallem/		Date (YYYY-MM-DD)	2019-07-24
First Name	Reuven	Last Name	Mouallem	Registration Number
				63345

Additional Signature may be generated within this form by selecting the Add button.

PTO/AIA/14 (02-18)

Approved for use through 11/30/2020. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	50567-4-01-US
		Application Number	
Title of Invention	FOOD CONTAINER		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Stephen L. Thaler

Application No./Patent No.: _____ Filed/Issue Date: _____

Titled: Food Container

Stephen L. Thaler, a individual

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

- 1. The assignee of the entire right, title, and interest.
- 2. An assignee of less than the entire right, title, and interest (check applicable box):
 - The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
 - There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

- 3. The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

- 4. The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

- B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Reuven K. Mouallem/

29 July 2019

Signature

Date

Reuven K. Mouallem, Patent agent

63345

Printed or Typed Name

Title or Registration Number

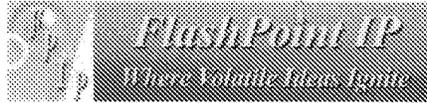
Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

BFIN*W



ASSIGNMENT

DABUS, the Creativity machine that has produced the below-detailed invention, as the sole inventor (represented in this Assignment by its owner, Stephen L. Thaler, hereinafter called the "Assignor"), hereby assigns and transfers to:

Stephen L. Thaler
1767 Waterfall Dr., St. Charles, MO 63303

(hereinafter called the "Assignee"), its successors, assignees, nominees, or other legal representatives, the Assignor's entire right, title, and interest, including, but not limited to, copyrights, trade secrets, trademarks and associated good will and patent rights in the Invention and the registrations to the Invention entitled:

"Food Container"

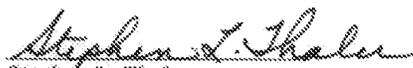
described and claimed in the following patent application: US Non-Provisional Patent Application identified as FlashPoint IP attorney docket No. 50567-4-01-US PB, to be filed with the USPTO; including any and all inventions and improvements ("Subject Matter") disclosed therein, all right of priority in the above application(s) and in any underlying provisional or foreign application, including but not limited to the rights of priority to applications already filed in the EPO and UK, all provisional, utility, divisional, continuation in whole or in part, substitute, renewal, reissue, and all other applications, PCT and national phase entries, related thereto which have been or may be filed in any jurisdiction, and all patents, including reissues, extensions and reexaminations, which may be granted on any of the above applications, the priority rights under International Conventions, and the Letters Patent which may be granted thereon, together with all rights to recover damages for infringement, including infringement of provisional rights.

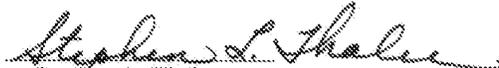
Assignor agrees that Assignee may apply for and receive patents for Subject Matter in Assignee's own name. Assignor represents that Assignor has the rights, titles, and interests to convey as set forth herein, and covenants with Assignee that Assignor has not made and will not make any other assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

In view of the fact that the sole inventor is a Creativity Machine, with no legal personality or capability to execute said assignment, and in view of the fact that the assignee is the owner of said Creativity Machine, this Assignment is considered enforceable without an explicit execution by the inventor. Rather, the owner of DABUS, the Creativity Machine, is signing this Assignment on its behalf.

Similarly, DABUS, being a machine and having no legal personality, does not have the capability to receive any consideration, and therefore, Stephen L. Thaler, as its owner/representative, acknowledges the receipt and sufficiency of good and valuable consideration for this assignment.

Signed and sealed this 23rd day of July 2019,


Stephen L. Thaler
On behalf of DABUS,
Assignor

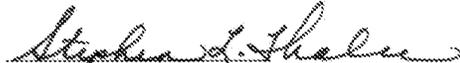

Stephen L. Thaler
Assignee

• FlashPoint IP • Where Volatile Ideas Ignite •

• Dr. Reuven K. Mouallem, I.L.M. • IP Management Consultant/Strategic Advisor •
• Registered Israeli Patent Attorney • Registered U.S. Patent Agent • e-mail: rkou@FlashPointIP.com •
• website: www.FlashPointIP.com • LinkedIn: www.LinkedIn.com/in/FlashPointIP •
• tel: 972-3-936-3199 (IL line)/972-52-761-8226 (IL cell)/1-516-391-1649 (US line) •

- Circumstances permitting execution of this substitute statement: **Inventor is under legal incapacity in view of the fact that the sole inventor is a Creativity Machine (i.e., an artificial intelligence), with no legal personality or capability to execute this substitute statement.**
- Person executing this substitute statement is the Applicant and the Assignor of the abovementioned application, as well as the owner of said Creativity Machine, DABUS; namely: **Stephen L. Thaler, 1767 Waterfall Dr., St. Charles, MO 63303 USA.**

Signed this 23rd day of July 2019


STEPHEN L. THALER

1/6

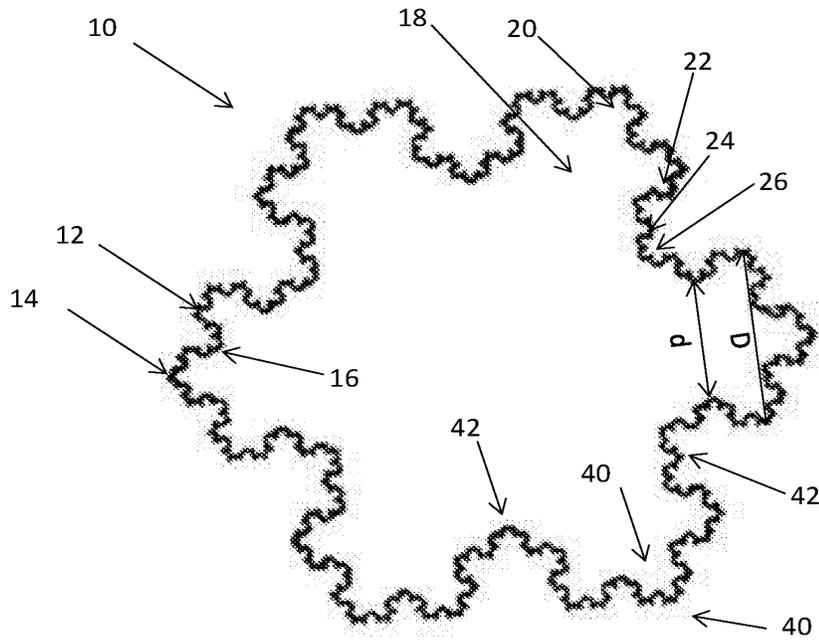


Fig. 1

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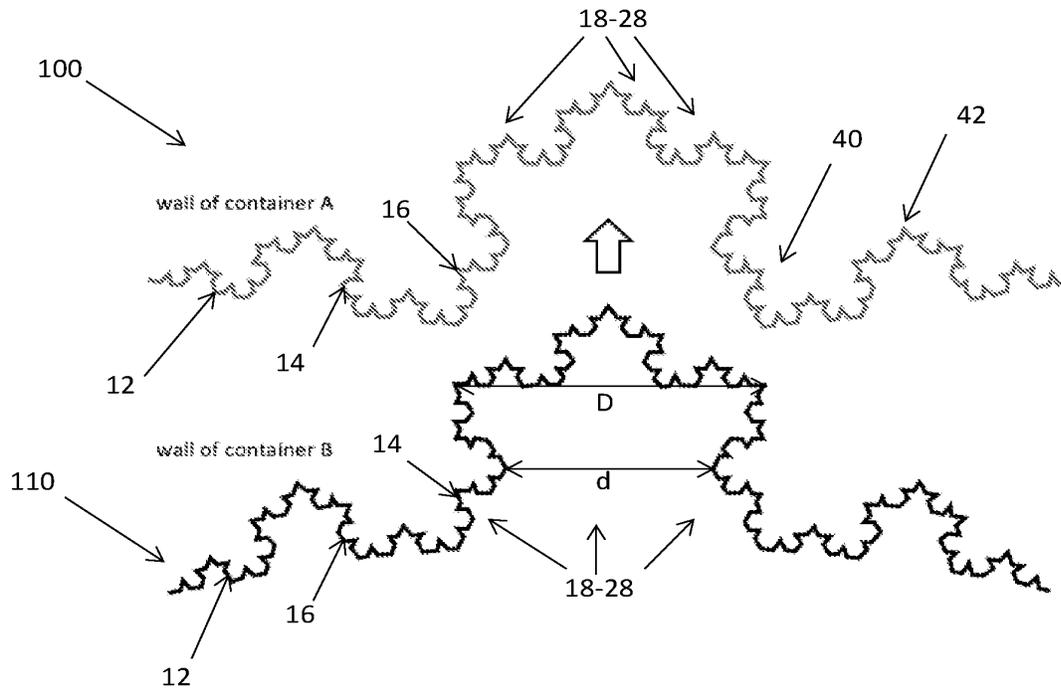


Fig. 2

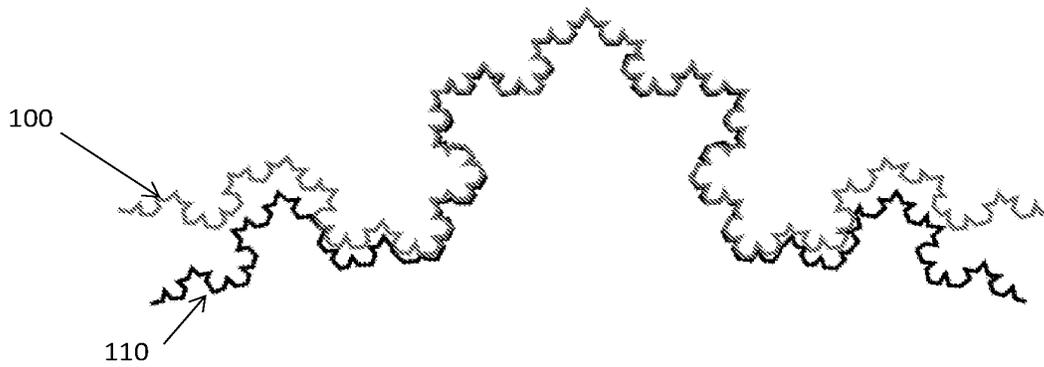
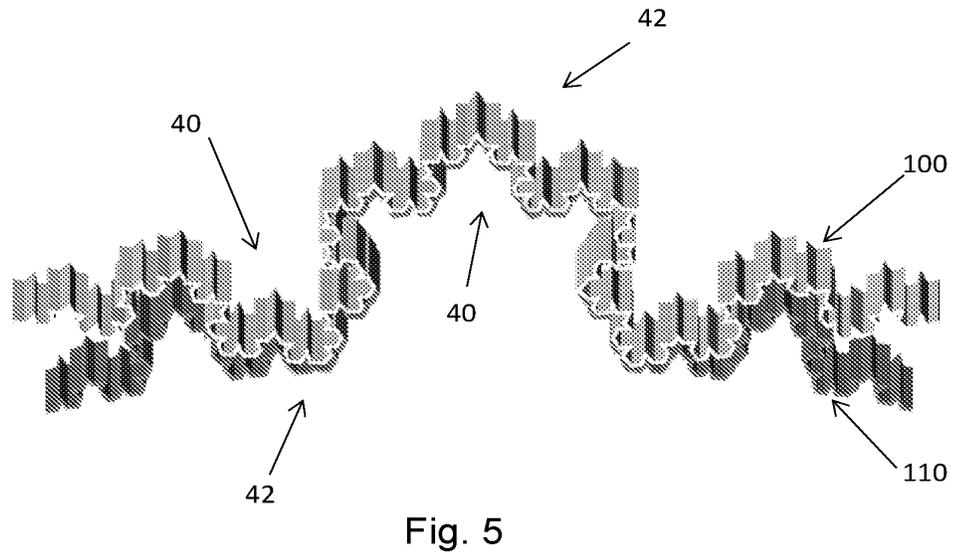
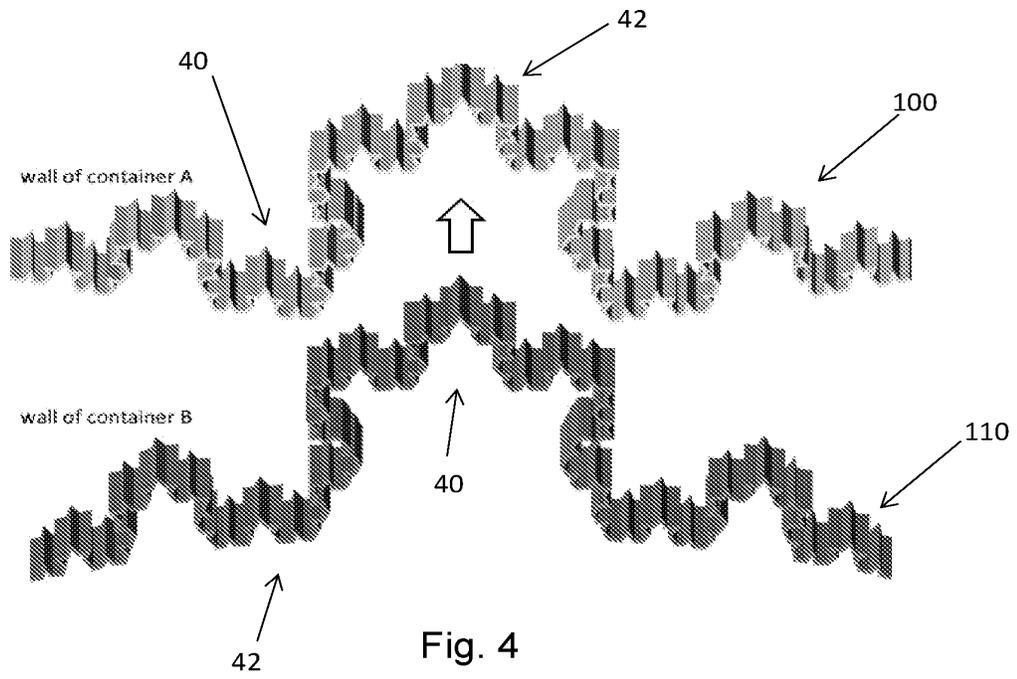


Fig. 3

3/6



4/6

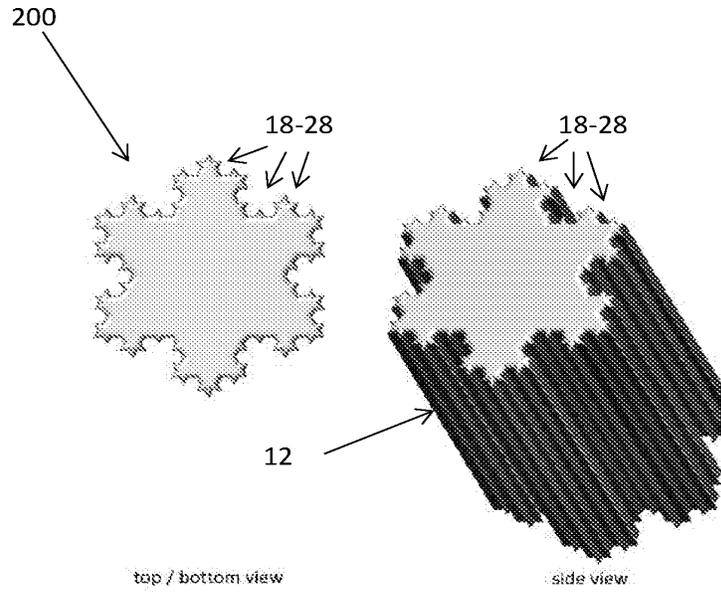


Fig. 6

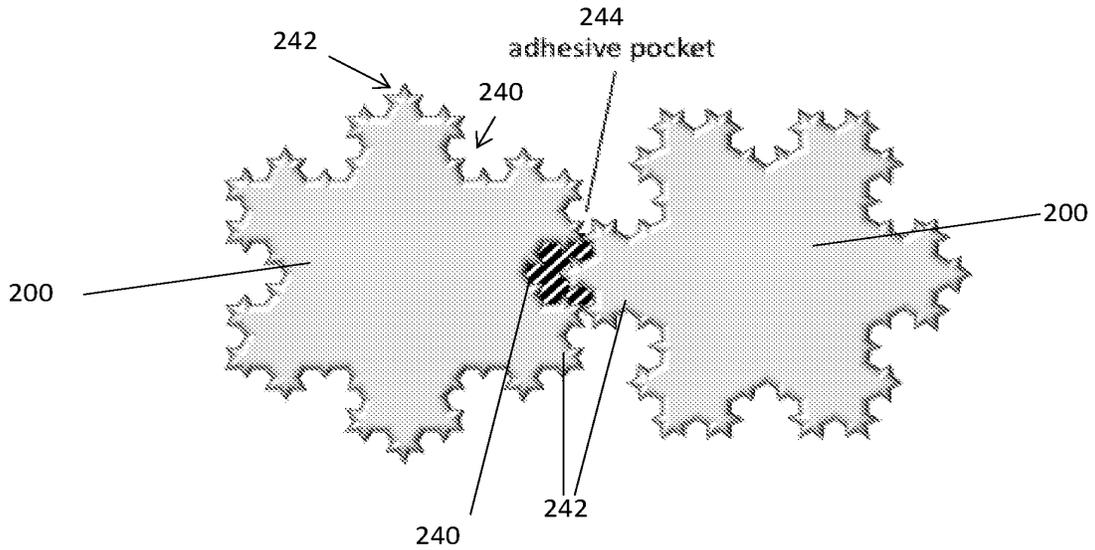


Fig. 7

5/6

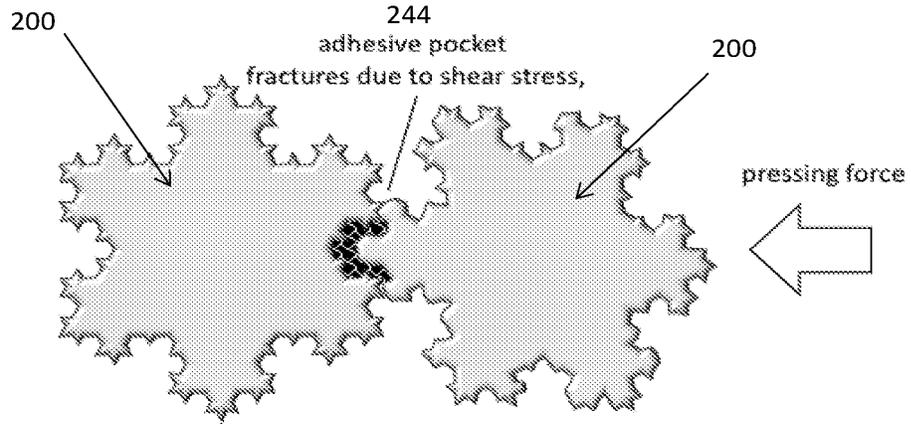


Fig. 8

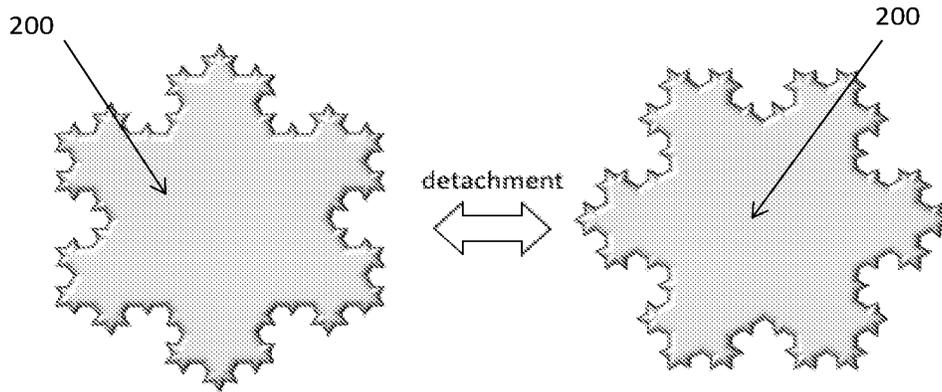


Fig. 9

6/6

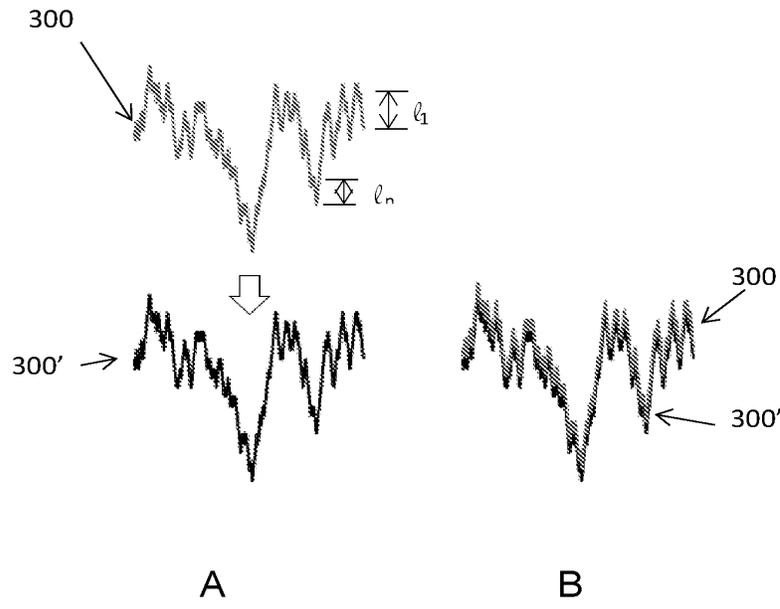


Fig. 10

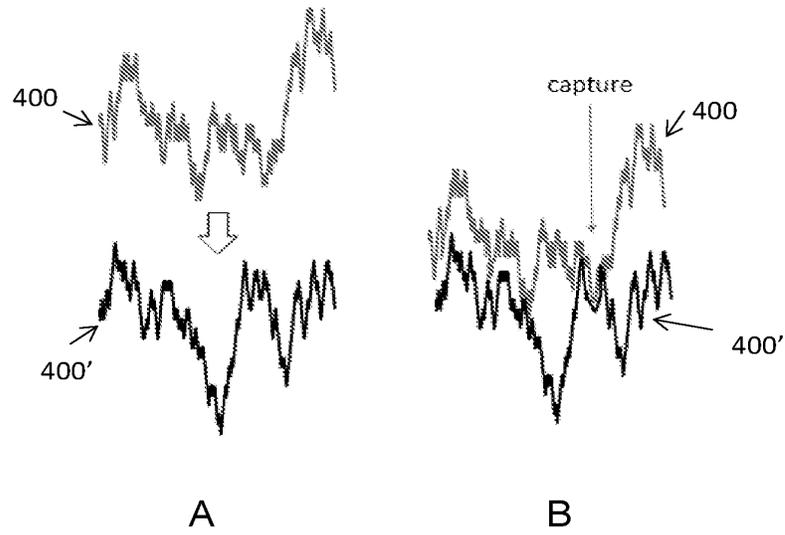


Fig. 11

PTO/AIA/96 (07-17)

Approved for use through 03/31/2021. OMB DES1-0035
 U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

Practitioners associated with Customer Number:

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number
Dr. Reuven K. Mouallem, L.L.M.	63345		
Dr. Ryan B. Abbott	68178		

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

The address associated with Customer Number: 89602

OR

Firm or individual name: _____

Address: _____

City: _____ State: _____ Zip: _____

Country: _____

Telephone: _____ Email: _____

Assignee name and address: Stephen L. Thaler
 1767 Waterfall Dr., St. Charles, MO 63303

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature: *Stephen L. Thaler* Date: 24 July 2019

Name: Stephen L. Thaler Telephone: (314) 378-5406

Title: Applicant/Assignee

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 322 and 37 CFR 1.11 and 1.14. This collection is estimated to take 18 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/08b (07-09)
 Approved for use through 11/30/2020. OMB 0651-0031
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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known	
		Application Number	
		Filing Date	
		First Named Inventor	[DABUS-AI generated Invention]
		Art Unit	
		Examiner Name	
Sheet 2 of 2	Attorney Docket Number	50567-4-01-US	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		WILLETH K., Examiner; "Combined Search and Examination Report Under Sections 17 and 18(3)"; Intellectual Property Office, United Kingdom; 29 March 2019 (copy attached)	
		BRIDAULT A., Examiner; "Extended European Search Report"; European Patent Office, Munich, Germany 25 April 2019 (copy attached)	
		"Snowflake Tealight Holder", My Gadgetlife - Thingiverse; [online] https://www.thingiverse.com/thing:3147335 , 10 Oct. 2018; (attached)	
		Documenta Praehistorica XXXI (2004) Ljubljana, D. Lubell, "Are land snails a signature for the Mesolithic transition?", pages 1-24	
		WILLETH K., Examiner; "Response made to report under section 18(3)"; Intellectual Property Office, United Kingdom; 12 July 2019 (copy attached)	

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.
 This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Privacy Act Statement

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

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Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 FOR PETITION FOR
RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Stephen L. Thaler, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. There are no US citizens listed as inventors of the foreign-filed applications, making it uncertain whether a foreign filing license would be necessary.
3. I am the Applicant in the foreign filings cited in the Petition (attached herewith):
 - a. European Patent Application No. 18275163.6, filed October 17, 2018 (first priority date), entitled “Food Container;” and
 - b. UK Patent Application No. 1816909.4, filed October 17, 2018 (first priority date), entitled “Food Container.”
4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition

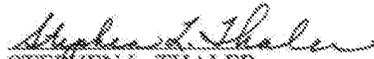
for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I am informed and believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.

5. Pursuant to 37 CFR §5.25(a)(3)(i), I am informed and believe that the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to food containers, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. Pursuant to 37 CFR §5.25(a)(3)(ii), I was first informed by my US patent counsel when they began to prepare filing for a patent before the USPTO in which they determined the potential need for a foreign filing license on June 13, 2019. I have diligently executed this Declaration in pursuit of a retroactive foreign filing license.
7. Pursuant to 37 CFR §5.25(a)(3)(iii), I am informed and believe that the foreign-filed applications were filed abroad, without a foreign filing license under 37 CFR §5.11 first having been obtained, through error and without deceptive intent. I am informed and believe that the foreign-filed applications were filed and prosecuted through my European counsel (a UK IP law firm) who were

unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 29th day of July 2019


STEPHEN L. THALER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

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Alexandria, VA 22313-1450

PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

This Petition requests under 37 CFR 5.25 a retroactive license for foreign filing under 35 USC 184 in accordance with §5.14(a). The required fee for the Petition under §1.17(g) has been paid. The retroactive foreign filing licenses are requested for the following jurisdictions in which the unlicensed patent application material was filed.

- European Patent Application No. 18275163.6, filed October 17, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Food Container;” and
- UK Patent Application No. 1816909.4, filed October 17, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Food Container.”

In accordance with 37 CFR §5.14 for a petition for retroactive foreign filing license related to a pending US application (identified above by US application number, filing date, applicant, and title), it is submitted that the complete contents of the unlicensed patent application material (identical for the two foreign filings listed above) is readily identifiable in the referenced US application. A copy of the material for which the license is desired is not

included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application.

A Declaration by the Applicant, Dr. Stephen L. Thaler, is attached herewith, avers:

- (1) diligence in seeking the retroactive foreign filing license upon discovery that such license was necessary;
- (2) that the subject matter in question was not under a secrecy order at the time the subject matter was filed abroad; and
- (3) that the subject matter is not currently under a secrecy order.

As indicated in the attached Declaration, the potential need for a retroactive foreign filing license and a Declaration was inadvertently not communicated to the Applicant. Upon learning of the possible need for a foreign filing license, the Applicant diligently executed the attached Declaration.

The foreign filings of unlicensed patent application material were prepared and filed by the Applicant through European counsel (a UK IP law firm) who were unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing.

It is noted that the law on foreign filing licenses in the United Kingdom was changed in 2004 to the effect that no foreign filing license is required unless the application contains information which relates to military technology, for any other reasons publication of the information might be prejudicial to national security, or to the safety of the public.

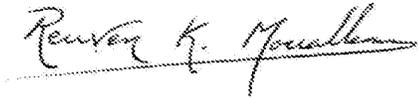
Thus, the possible need for a foreign filing license did not become apparent, and was filed abroad through error and without deceptive intent, without the required license. It is submitted that diligence in obtaining a retroactive foreign filing license is shown by the present Petition for a Retroactive License.

It is noted that there are no US citizens listed as inventors of the foreign-filed applications, making it uncertain whether a foreign filing license would be necessary.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: July 29, 2019

Requirements for Petition to Make Special Under Accelerated Examination – Pre-Examination Search (Item 8)

➤ **8(A) Pre-Examination Search**

The pre-examination search relies on two independent search reports by foreign patent offices. One performed by the European Patent Office (EPO) on 16 April 2019 (report issued 25 April 2019) for EP priority application no. 18275163.6, and the other performed by the UK Patent Office (UKIPO) on 28 March 2019 (report issued 29 March 2019) for UK patent priority application no. 1816909.4.

❖ **EPO Search Report**

IPC Classification of the Invention:

B65D6/02, B65D8/00, B65D6/00, B65D13/02, B65D21/02, B65D1/02

Technical IPC Field of Search: **B65D**

CPC Class(es)/Subclass(es) Searched:

**B65D7/02, B65D11/02, B65D11/10, B65D13/02, B65D21/0204,
B65D21/0205, B65D1/0223**

❖ **UKIPO Search Report**

Worldwide Search of Patent Documents Based on IPC Classification of the Invention:

B65D

Database Searched:

EPODOC, WPI, INSPEC, Patent Fulltext

IPC Classification of Subclass and Subgroup:

Subclass: **B65D**

Subgroup: **0001/44, 0021/02**

➤ **8(B) Search Directed to the Invention**

The pre-examination search was directed to the claimed invention, encompassing all the features of the claims and giving the claims their broadest reasonable interpretation.

➤ **8(C) Search Directed to the Disclosure**

No disclosed features that are unclaimed at this time are currently seen as features that may be claimed later.

➤ **8(D) Search Report from a Foreign Patent Office**

Two independent search reports from two foreign patent offices are provided here as the pre-examination search. *Copies of the two search reports are attached herewith and listed in the IDS.* One performed by the European Patent Office (EPO) on 16 April 2019 (report issued 25 April 2019) for EP priority application no. 18275163.6, and the other performed by the UK Patent Office (UKIPO) on 28 March 2019 (report issued 29 March 2019) for UK patent priority application no. 1816909.4.

➤ **8(E) Statement of Good Faith**

All statements above in support of the petition to make special are based on a good faith belief that the search was conducted in compliance with the requirements of this rule.

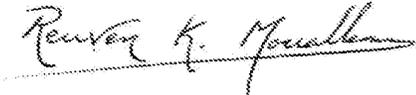
Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic

mail. I understand that a copy of such communications will be made of record. [MPEP §502.03

II]

Respectfully submitted,

A handwritten signature in black ink, reading "Reuven K. Mouallem". The signature is written in a cursive style and is positioned above a horizontal line.

Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: July 29, 2019

**Requirements for Petition to Make Special Under Accelerated Examination – AESD
(Item 9)**

There are nine claims currently pending in the application. The claims read as follows.

1. A food or beverage container comprising:
 - (a) a generally cylindrical wall defining an internal chamber of the container, said wall having interior and exterior surfaces and being of uniform thickness; and
 - (b) a top and a base disposed at either end of said generally cylindrical wall;wherein said wall has a fractal profile with corresponding convex and concave fractal elements on corresponding ones of said interior and said exterior surfaces; wherein said convex and said concave fractal elements form pits and bulges in said profile of said wall; and wherein said wall of the container is flexible, permitting flexing of said fractal profile thereof, said fractal profile of said wall permits coupling by inter-engagement of a plurality of the containers together, and flexibility of said wall permits disengagement of said or any coupling of a plurality of the containers.

2. The food or beverage container of claim 1, wherein at least some of said pits and bulges each have heads and bases, wherein said heads are of a greater width than said bases thereof.

3. The food or beverage container of claim 1, wherein at least some of said pits and said bulges have inter-engaging or corresponding shapes and sizes such that a bulge of one

container can fit within a pit of an identical container, thereby to couple two containers together.

4. The food or beverage container of claim 3, wherein said pits and said bulges of said two containers fit precisely within one another.

5. The food or beverage container of claim 3, wherein said pits and said bulges of said two containers fit partially within one another.

6. The food or beverage container of claim 1, wherein two or more said containers can be coupled together by an adhesive disposed between facing pits and bulges of adjacent containers.

7. The food or beverage container of claim 1, wherein said corresponding convex and said concave fractal elements provide for increased surface area of both said interior and said exterior surfaces of the container relative to a volume of said chamber.

8. The food or beverage container of claim 1, wherein said wall is formed of a material selected from the group consisting of: a metal, a plastic, and an elastomeric material.

9. The food or beverage container of claim 1, wherein said wall is formed from a flexible food product.

➤ *9(A) References Deemed Most Closely Related:*

An Information Disclosure Statement (IDS) in compliance with 37 CFR 1.98 has been filed herewith citing each of references in the foreign search reports. The first two references (marked with an asterisk) were deemed most closely related to the subject matter of the claim.

- ❖ Sato et al. – *US5803301 (cited in EPO EESR, “X” document)
- ❖ Eichmann – *DE10004386A1 (cited in EPO EESR and UKIPO Search Report, “X” document)
- ❖ “Snowflake Tealight Holder,” My Gadgetlife – Thingiverse; [online] <https://www.thingiverse.com/thing:3147335>, 10 Oct. 2018 (cited in UKIPO Search Report, “X” document)
- ❖ Documenta Praehistorica XXXI (2004) Ljubljana, D. Lubell, “Are land snails a signature for the Mesolithic transition?”, pages 1-24 (cited in UKIPO Search Report, “X” document)
- ❖ Chen – *CN10293370A (cited as background technical art in UKIPO Search Report, “A” document, not considered herein)

➤ *9(B) Identification of Limitations Disclosed by References:*

- ❖ It is noted that instant independent claim 1 includes additional limitations than those searched in the provided search reports in order to overcome the objections raised therein as discussed in detail below in Section 9(C).
- ❖ Sato et al. (US5803301, hereinafter Sato ’301):

With respect to claim 1 in the instant application, as cited below from the EPO EESR referring to claim 1 therein, Sato ’301 (referred to therein as D1) recites as follows.

D1 discloses a food or beverage container comprising:
a wall defining an internal chamber of the container, the wall having interior and exterior surfaces and being of substantially uniform thickness;
wherein the wall has a fractal profile (dots on the inside of the wall) with corresponding convex and concave fractal elements (see fig. 6) on corresponding ones of the interior and exterior surfaces; and
wherein the convex and concave fractal elements form pits and bulges in the profile of the wall.

❖ Eichmann (DE10004386A1, hereinafter Eichmann '386):

With respect to claim 1 in the instant application, as cited below from the EPO EESR referring to claim 1 therein, Eichmann '386 (referred to therein as D2) recites as follows.

D2 discloses a container the wall of which has a repeating profile which enables two such containers to be connected together. The subject-matter of claim 1 differs from this known container in that the profile is fractal.

Compared to the profile of D2, this fractal profile does not appear to bring any additional technical effect. It has therefore to be considered a mere alternative to the profile of D2, which the skilled person would choose for non-technical reasons.

With respect to claims 1-9 in the instant application, as cited below from the UKIPO Search Report referring to claims 1, 3, 6, 7, and 9-12 therein, Eichmann '386 (referred to therein as D2) recites as follows.

3. D2 discloses a container for food comprising a wall with convex and concave elements forming pits and bulges in the profile of the wall. Paragraph [0012] discloses that the can is made of metal. D2 anticipates claims 1, 3, 6, 7, and 9 to 12.

❖ “Snowflake Tealight Holder” (hereinafter Snowflake TH 2018):

With respect to claims 1-9 in the instant application, as cited below from the UKIPO Search Report referring to claims 1-12 therein, Snowflake TH 2018 (referred to therein as D1) recites as follows.

2. D1 discloses a 3D printed snowflake container having a wall with a fractal profile and convex and concave fractal elements forming pits and bulges in the profile of the wall. The snowflake container is considered to be suitable for holding food. Two equivalent containers would be able to undergo partial engagement if placed side by side, especially if one of the snowflakes is upside down. Additionally, one of the containers would be able to nest inside another. The container is made from a material that is sufficiently flexible to be laid flat, as seen in the *regular vs fuzzy* picture. D1 is therefore considered to anticipate claims 1 to 12.

❖ Documenta Praehistorica (hereinafter Ljubljana 2004):

With respect to claims 1 and 2 in the instant application, as cited below from the UKIPO Search Report referring to claims 1 and 2 therein, Ljubljana 2004 (referred to therein as D3) recites as follows.

4. D3 discusses the long history of eating land snails. Land snails are eaten directly from their shell, which is a container with a wall having a fractal profile with concave and convex fractal elements. Therefore, D3 anticipates claims 1 and 2.

With respect to instant claims 2-9, as cited below, the EPO EESR (referring to claims 2-7, 9-12, and 13 therein) states the following.

Dependent claims 2, 3, 4, 5, 6, 7, 9, 10, 11 and 12 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the EPC with respect to inventive step, because the container of D2 has the additional features of claims 2, 3, 6, 7, 10 and 11 (see the figures of D2), two containers of D2 can be glued together as in claim 9, and the container of D2 is made of metal, as in claim 12, which is usually flexible, as in claims 4 and 5, due to its thinness.

Claim 8 does not appear to involve an inventive step because a partial nesting does not appear to bring any technical effect as compared to the full nesting of D2.

The combination of the features of dependent claim 13 is neither known from, nor rendered obvious by, the available prior art. A new independent claim may be drafted to include these features, bearing in mind that the features known in combination in D2 should be placed in the preamble of such a claim in accordance with Rule 43(1) EPC.

➤ *9(C) Detailed Explanation of Patentability:*

Eichmann '386 fails to at least teach or suggest a container wall having a fractal profile, but rather a wall that has a very specific form with part-cylindrical abutment surfaces. Furthermore, the wall does not have a uniform thickness but has portions 21 of double thickness. Moreover, there is no disclosure of the container being flexible to provide for coupling and un-coupling in the manner provided for by claim 1 of the instant application. Therefore, Eichmann '386 teaches away from the subject matter of claim 1.

Sato '301 is also not relevant to the claims because it discloses the formation of projections on the inner surface of a resin layer that coats the inside surface of the metal wall of the container. This is described, for example, at column 2, lines 45 and 46, the first paragraph of the detailed description, of column 4, lines 52-60, and throughout the remainder of the description. At column 5, lines 16 and 17, it is acknowledged that the inner resin layer varies in thickness, while at column 6, lines 22-23 that the projections must have a dot shape, with examples being given at column 8, lines 11-15, all of which are regular shapes, and cannot be described as being fractal. Sato '301 is therefore not relevant to the claims of the instant

application as it does not disclose a wall having a fractal profile with corresponding convex and concave fractal elements on corresponding ones of the interior and exterior surfaces and which form pits and bulges in the profile of the wall, or of any of the other features introduced into claim 1.

Snowflake TH 2018 is a tealight holder in the shape of a snowflake which has a frusto-conical form with a narrow base and a wider top. It is not described as being a food or beverage container. Furthermore, having regard to instant claim 1 filed herewith, the snowflake tealight holder does not have a generally cylindrical form with a top or a base either end of the general cylindrical wall, nor is there disclosure that the wall is flexible to permit coupling and decoupling of a variety of containers together. The tealight holder differs materially from the subject matter of the claims, and there is no reason to suggest that the person skilled in the art would have contemplated modifying the snowflake tealight holder in a manner as to approach a container having the structure specified in instant claim 1.

Ljubljana 2004 is not described as being a food or beverage container, and thus is not relevant.

It is further noted that fractal geometry is a well-known term of the art. In conjunction with the specification, particularly on page 5, it is explained that the wall is provided with fractal elements, meaning elements having fractal geometry, which together create a wall with a fractal profile. Thus, a person skilled in the art would have no difficulty understanding such wording.

Applicant would like to point out that this art was re-examined by the UKIPO Examiner, who decided on the basis of claims of the same scope as those of the instant US application that the art was no longer pertinent, and withdrew all objections against the application, as confirmed by the UKIPO Official Communication of 12 July 2019. A copy of the 12 July 2019 UKIPO communication is being filed concurrently with this AESD.

➤ **9(D) Concise Statement of Utility:**

The invention as claimed has utility in that it provides a fractal container for use, for example, for holding food or beverages. The invention as claimed has further utility in enabling multiple containers to be coupled together by inter-engagement of pits and bulges on corresponding ones of the containers. The container profile also improves grip, as well as heat transfer into and out of the container.

➤ **9(E) Showing of Support under 35 USC 112, First Paragraph:**

Support in the disclosure under 35 USC 112, first paragraph, is found at least in Figures 1-9 of the instant application and the corresponding related text in the specification, wherein the fractal profile recited in claim 1 and the coupling together of multiple containers by inter-engagement of pits and bulges are disclosed, corresponding to the limitations recited in instant claims 1-9.

➤ **9(F) Identification of References Disqualified as Prior Art under 35 USC 103(c):**

None of the cited references are disqualified as prior art under 35 USC 103(c).

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,

A handwritten signature in black ink, reading "Reuven K. Mouallem". The signature is written in a cursive style and is positioned above a horizontal line.

Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: July 29, 2019

A machine called “DABUS” conceived of the instant invention.

The instant invention was generated by a specific machine called “DABUS” – a type of “Creativity Machine.” A Creativity Machine is a particular type of connectionist artificial intelligence. Such systems contain a first artificial neural network, made up of a series of smaller neural networks, that has been trained with general information from various knowledge domains. This first network generates novel ideas in response to self-perturbations of connection weights between neurons and component neural nets therein. A second “critic” artificial neural network monitors the first neural network for new ideas, and identifies those ideas that are sufficiently novel compared to the machine’s pre-existing knowledge base. The critic net also generates an effective response that in turn injects/retracts perturbations to selectively form and ripen ideas having the most novelty, utility, or value.

In the case of the instant invention, the machine only received training in general knowledge in the field, and proceeded to independently conceive of the invention, and to identify it as novel and salient. If similar training had been given to a human student, the student rather than the trainer would meet the inventorship criteria as inventor.

In some instance of machine invention, a natural person might qualify as an inventor by virtue of having exhibited inventive skill in developing a program to solve a particular problem, by skillfully selecting data to provide to a machine, or by identifying the output of a machine as inventive. However, in the present case, DABUS was not created to solve any particular problem, nor was trained on any special data relevant to the instant invention. The machine rather than a person identified the novelty and salience of the instant invention.

A detailed description of how DABUS and a Creativity Machine functions is available in, among others, the following US patent publications: 5,659,666; 7,454,388 B2; and 2015/0379394 A1.

Inventorship should not be restricted to natural persons. A machine that would meet inventorship criteria if it were a natural person should also qualify as an inventor.

No United States law explicitly prohibits protection for autonomous machine inventions.

However, inventorship is restricted to “individuals” under, e.g., 35 U.S.C. §100(f) (1952) (“The term ‘inventor’ means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.”).

The restriction of inventorship to individuals was intended to prevent corporate inventorship. It was not the result of seriously considering autonomous machine invention, and should not therefore prohibit subsistence of intellectual property rights where there is no natural person who qualifies as an inventor. *See* Karl F. Milde, Jr., Can a Computer Be an “Author” or an “Inventor”?, 51 J. PAT. OFF. SOC’Y 378, 379 (1969). (“The closest that the Patent Statute comes to requiring that a patentee be an actual person is in the use, in Section 101, of the term ‘whoever.’ Here too, it is clear from the absence of any further qualifying statements that the Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”)

The output of autonomously inventive machines should be patentable if it meets the requirements of patentability set out in law. The primary purpose of patent law is to incentivize innovation, together with incentivizing the disclosure of information, and the commercialization and development of inventions. Allowing patents for machine output incentivizes the development of inventive machines, which ultimately promotes innovation. To the extent that patents are incentivizing commercialization and disclosure of information, there is no change in this function between a human and a machine-generated invention. Failure to permit patent protection for the output of autonomously inventive machines threatens to undermine the patent system by failing to encourage the production of socially valuable

inventions. This will be particularly important as artificial intelligence becomes more sophisticated and likely a standard part of future industrial research and development. Clarifying now that patents are available for the output of autonomously inventive machines would provide certainty to businesses and innovators.

Patent law also protects the moral rights of human inventors; acknowledging machines as inventors would facilitate this function. At present, individuals are claiming inventorship of autonomous machine inventions under circumstances in which those persons have not functioned as inventors. See Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1079-1126 (2016). Failing to appropriately acknowledge inventive activity by machines weakens moral justifications for patents by allowing individuals to take credit for work they have not done. It is not unfair to machines who have no interest in being acknowledged, but it is unfair to other human inventors because it devalues their accomplishments by altering and diminishing the meaning of inventorship. This could equate the hard work of creative geniuses with those simply asking a machine to solve a problem or submitting a machine's output. By contrast, acknowledging machines as inventors would also acknowledge the work of a machine's creators.

An "autonomous machine invention" should be assigned to the owner of the machine.

Machines should not own patents. They do not have legal personality or independent rights, and cannot own property.

The machine's owner should be the default owner of any intellectual property it produces and any benefits that would otherwise subsist in an inventor who is a natural person. This is most consistent with current ownership norms surrounding personal property (including both machines and patents).

In the instant application, we submit that DABUS should be acknowledged as the inventor of any resultant patents, with Stephen Thaler, the machine's owner, as the applicant and assignee of any such patents.

Stephen Thaler is prevented from listing himself as the inventor for the instant application.

Stephen Thaler, the creator of DABUS, is prohibited from listing himself as an inventor for the instant application because he has not contributed to the conception of the instant invention. DABUS performed what is traditionally considered the mental part of the inventive act. Based on DABUS's results, a skilled person could have reduced the invention to practice. Inaccurately listing himself as an inventor could subject Dr. Thaler to criminal sanctions. 18 U.S.C. 1001.

The Office presumes that the named inventor in an application is the actual inventor. See MPEP §2137.01.

If a machine cannot be an inventor, the first person to recognize the inventive nature of autonomous machine input may qualify as an inventor.

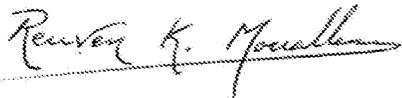
It has been argued that a natural person may claim inventorship of an autonomous machine invention even in situations in which that person was not involved in the development or operation of a machine by virtue of recognizing the relevance of a machine's output. This approach is questionable in cases in which the natural person has not made an inventive contribution to the disclosed invention in the accepted meaning of the term.

In some cases, recognition of the inventive nature of a computer's output may require significant skill, but in others, the nature of inventive output may be obvious. In the present case, DABUS identified the novelty of its own idea before a natural person did.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345



Dr. Ryan B. Abbott
Attorney for Applicant
Registration No. 68,178

Date: July 29, 2019

Doc Code: PET.SPRE.ACX

PTO/SB/28 (07-09)

Doc Description: Petition for 12-month Accelerated Exam

Approved for use through 09/30/2017. OMB 0651-0059

U.S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION TO MAKE SPECIAL UNDER ACCELERATED EXAMINATION PROGRAM			
Attorney Docket Number	50567-4-01-US	First Named Inventor	[DABUS] [AI generated invention]
Application Number (if Known)		16/524,532	
Title of Invention	FOOD CONTAINER		
APPLICANT HEREBY PETITIONS TO MAKE THE ABOVE-IDENTIFIED APPLICATION SPECIAL UNDER THE REVISED ACCELERATED EXAMINATION PROGRAM. See Instruction sheet on page 3.			
1.	<p>Claims of the application:</p> <p>a. The application must contain three (3) or fewer independent claims and twenty (20) or fewer total claims. The application may not contain any multiple dependent claims.</p> <p>b. Applicant hereby agrees not to separately argue the patentability of any dependent claim during any appeal in the application. Specifically, the applicant agrees that the dependent claims will be grouped together with and not argued separately from the independent claim from which they depend in any appeal brief filed in the application (37 CFR 41.37(c)(1)(vii)).</p> <p>c. The claims must be directed to a single invention.</p>		
2.	<p>Interviews:</p> <p>Applicant hereby agrees to have (if requested by examiner):</p> <p>a. An interview (including an interview before a first Office action) to discuss the prior art and any potential rejections or objections with the intention of clarifying and possibly resolving all issues with respect to patentability at that time, and</p> <p>b. A telephonic interview to make an election without traverse if the Office determines that the claims are not obviously directed to a single invention.</p>		
3.	<p>Preexamination Search Statement and Accelerated Examination Support Document:</p> <p>With this petition, applicant is providing: a preexamination search statement, in compliance with the requirements set forth in item 8 of the instruction sheet, and an “accelerated examination support document” that includes:</p> <p>a. An information disclosure statement in compliance with 37 CFR 1.98 citing each reference deemed most closely related to the subject matter of each of the claims;</p> <p>b. For each reference cited, an identification of all the limitations of the claims that are disclosed by the reference specifying where the limitation is disclosed in the cited reference;</p> <p>c. A detailed explanation of how each of the claims are patentable over the references cited with the particularity required by 37 CFR 1.111(b) and (c);</p> <p>d. A concise statement of the utility of the invention as defined in each of the independent claims (unless the application is a design application);</p> <p>e. An identification of any cited references that may be disqualified as prior art under 35 U.S.C. 103(c) as amended by the CREATE act; and</p> <p>f. A showing of where each limitation of the claims finds support under the first paragraph of 35 U.S.C. 112 in the written description of the specification. If applicable, the showing must also identify: (1) each means- (or step-) plus-function claim element that invokes consideration under 35 U.S.C. 112, ¶6; and (2) the structure, material, or acts that correspond to any means- (or step-) plus-function claim element that invokes consideration under 35 U.S.C. 112, ¶6. If the application claims the benefit of one or more applications under title 35, United States Code, the showing must also include where each limitation of the claims finds support under the first paragraph of 35 U.S.C. 112 in each such application in which such support exists.</p>		

The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This form is estimated to take 12 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. *If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

EFS Web 2.2.20

Doc Code: PET.SPRE.ACX

Doc Description: Petition for 12-month Accelerated Exam

PTO/SB/28 (07-09)

Approved for use through 09/30/2017. OMB 0651-0059

U.S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION TO MAKE SPECIAL UNDER ACCELERATED EXAMINATION PROGRAM (Continued)			
Attorney Docket Number	50567-4-01-US	First Named Inventor	[DABUS] [AI generated invention]
Attachments:			
a.		Accelerated Examination Support Document (see item 3 above).	
b.		A statement, in compliance with the requirements set forth in item 8 of the instruction sheet, detailing the preexamination search which was conducted.	
c.		Information Disclosure Statement.	
d.	<input type="checkbox"/>	Other (e.g., a statement that the claimed subject matter is directed to environmental quality, energy, or countering terrorism (37 CFR 1.102(c)(2)). _____	
Fees: The following fees must be filed electronically via EFS or EFS-Web:			
a.		The basic filing fee, search fee, examination fee, and application size fee (if required) under 37 CFR 1.16.	
b.		Petition fee under 37 CFR 1.17(h) - unless the petition is filed with a showing under 37 CFR 1.102(c)(2).	
Signature:			
Click Remove if you wish to remove this signatory			Remove
Signature	/Reuven K. Mouallem/	Date	2019-07-29
Name (Print/Typed)	Reuven K. Mouallem	Registration Number	63345
Click Add if you wish to add additional signatory			Add
<small>Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.</small>			

Doc Code: PET.SPRE.ACX

PTO/SB/28 (07-09)

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Instruction Sheet Petition to Make Special Under the Accelerated Examination

A grantable petition must meet the following conditions:

1. The petition to make special under the accelerated examination program must be filed with the application and accompanied by the fee set forth in 37 CFR 1.17(h) or a statement that the claimed subject matter is directed to environmental quality, energy, or countering terrorism.
2. The application must be a non-reissue utility or design application filed under 35 U.S.C. 111(a).
3. The application must be **filed electronically** using the Office electronic filing system (EFS) or EFS-Web.
4. The application must be complete under 37 CFR 1.51 and in condition for examination on filing. For example, the application must be filed together with the basic filing fee, search fee, examination fee, and application size fee (if applicable), and an oath or declaration under 37 CFR 1.63.
5. The application must contain three (3) or fewer independent claims and twenty (20) or fewer total claims. The application may not contain any multiple dependent claims. The petition must include a statement that **applicant will agree not to separately argue the patentability of any dependent claim during any appeal** in the application. Specifically, the applicant is agreeing that the dependent claims will be grouped together with and not argued separately from the independent claim from which they depend in any appeal brief filed in the application (37 CFR 41.37(c)(1)(vii)).
6. The claims must be directed to a **single invention**. The petition must include a statement that applicant will agree to have a telephonic interview to make an election without traverse in a telephonic interview if the Office determines that all the claims are not directed to a single invention.
7. The petition must include a statement that **applicant will agree** to have an interview (including an interview before a first Office action) to discuss the prior art and any potential rejections or objections with the intention of clarifying and possibly resolving all issues with respect to patentability at that time.
8. At the time of filing, applicant must provide a statement that a **preexamination search was conducted**, including an identification of the field of search by United States class and subclass and the date of the search, where applicable, and, for database searches, the search logic or chemical structure or sequence used as a query, the name of the file or files searched and the database service, and the date of the search.
 - a. This preexamination search must involve U.S. patents and patent application publications, foreign patent documents, and nonpatent literature, unless the applicant can justify with reasonable certainty that no references more pertinent than those already identified are likely to be found in the eliminated source and includes such a justification with this statement.
 - b. This preexamination search must be directed to the claimed invention and encompass all of the features of the independent claims, giving the claims the broadest reasonable interpretation.
 - c. The preexamination search must also encompass the disclosed features that may be claimed, in that an amendment to the claims (including any new claim) that is not encompassed by the preexamination search will be treated as non-responsive and will not be entered.
 - d. A search report from a foreign patent office will not be accepted unless the search report satisfies the requirements set forth above.
 - e. Any statement in support of a petition to make special must be based on a good faith belief that the preexamination search was conducted in compliance with these requirements. See 37 CFR 1.56 and 10.18.
9. At the time of filing, applicant must provide in support of the petition an **accelerated examination support document that includes:**
 - a. An **information disclosure statement** in compliance with 37 CFR 1.98 citing each reference deemed most closely related to the subject matter of each of the claims;
 - b. For each reference cited, an **identification of all the limitations of the claims** that are disclosed by the reference specifying where the limitation is disclosed in the cited reference;
 - c. A **detailed explanation of how each of the claims are patentable** over the references cited with the particularity required by 37 CFR 1.111(b) and (c);
 - d. A concise **statement of the utility** of the invention as defined in each of the independent claims (unless the application is a design application);
 - e. An identification of any cited references that may be disqualified as prior art under 35 U.S.C. 103(c) as amended by the CREATE act; and
 - f. A **showing of where each limitation of the claims finds support under the first paragraph of 35 U.S.C. 112** in the written description of the specification. If applicable, the showing must also identify: (1) each means- (or step-) plus-function claim element that invokes consideration under 35 U.S.C. 112, ¶6; and (2) the structure, material, or acts that correspond to any means- (or step-) plus-function claim element that invokes consideration under 35 U.S.C. 112, ¶6. If the application claims the benefit of one or more applications under title 35, United States Code, the showing must also include where each limitation of the claims finds support under the first paragraph of 35 U.S.C. 112 in each such application in which such support exists.

For more information, see notice "Changes to Practice for Petitions in Patent Applications to Make Special and for Accelerated Examination" available on the USPTO web site at <http://www.uspto.gov/web/office/s/pac/dapp/ogsheet.html>

EFS Web 2.2.20

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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Electronic Patent Application Fee Transmittal				
Application Number:	16524532			
Filing Date:				
Title of Invention:	FOOD CONTAINER			
First Named Inventor/Applicant Name:	[DABUS] [Invention generated by artificial intelligence]			
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-4-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE-37CFR 1.17(G)(GROUP I)	2463	1	100	100
PETITION FEE-37CFR 1.17(H) (GROUP II)	2464	1	70	70
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				170

Electronic Acknowledgement Receipt	
EFS ID:	36714644
Application Number:	16524532
International Application Number:	
Confirmation Number:	2644
Title of Invention:	FOOD CONTAINER
First Named Inventor/Applicant Name:	[DABUS] [Invention generated by artificial intelligence]
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-4-01-US
Receipt Date:	29-JUL-2019
Filing Date:	
Time Stamp:	14:23:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$170
RAM confirmation Number	E20197SE24437622
Deposit Account	
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5	Miscellaneous Incoming Letter	Inventorship-statement-FC-sp.pdf	159223	no	6
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6	Petition for 12-month Accelerated Exam	sb0028-sp.pdf	128103	no	4
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7	Fee Worksheet (SB06)	fee-info.pdf	31885	no	2
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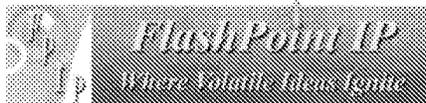
PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5640608

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
[DABUS] [INVENTION GENERATED BY ARTIFICIAL INTELLIGENCE]	07/23/2019
RECEIVING PARTY DATA	
Name:	STEPHEN L THALER
Street Address:	1767 WATERFALL DR.
City:	ST. CHARLES
State/Country:	MISSOURI
Postal Code:	63303
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16524532
CORRESPONDENCE DATA	
Fax Number:	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	516-301-1649
Email:	ydm@FlashPointIP.com
Correspondent Name:	REUVEN K. MOUALLEM
Address Line 1:	REHOV RABBAN GAMLIEL 2
Address Line 4:	ELAD, ISRAEL 4083201
ATTORNEY DOCKET NUMBER:	50567-4-01-US
NAME OF SUBMITTER:	REUVEN K. MOUALLEM
SIGNATURE:	/Reuven K. Mouallem/
DATE SIGNED:	07/29/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 1	
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ASSIGNMENT

DABUS, the Creativity machine that has produced the below-detailed invention, as the sole inventor (represented in this Assignment by its owner, Stephen L. Thaler, hereinafter called the "Assignor"), hereby assigns and transfers to:

Stephen L. Thaler
1767 Waterfall Dr., St. Charles, MO 63303

(hereinafter called the "Assignee"), its successors, assignees, nominees, or other legal representatives, the Assignor's entire right, title, and interest, including, but not limited to, copyrights, trade secrets, trademarks and associated good will and patent rights in the Invention and the registrations to the Invention entitled:

"Food Container"

described and claimed in the following patent application: US Non-Provisional Patent Application identified as FlashPoint IP attorney docket No. 50567-4-01-US PB, to be filed with the USPTO; including any and all inventions and improvements ("Subject Matter") disclosed therein, all right of priority in the above application(s) and in any underlying provisional or foreign application, including but not limited to the rights of priority to applications already filed in the EPO and UK, all provisional, utility, divisional, continuation in whole or in part, substitute, renewal, reissue, and all other applications, PCT and national phase entries, related thereto which have been or may be filed in any jurisdiction, and all patents, including reissues, extensions and reexaminations, which may be granted on any of the above applications, the priority rights under International Conventions, and the Letters Patent which may be granted thereon, together with all rights to recover damages for infringement, including infringement of provisional rights.

Assignor agrees that Assignee may apply for and receive patents for Subject Matter in Assignee's own name. Assignor represents that Assignor has the rights, titles, and interests to convey as set forth herein, and covenants with Assignee that Assignor has not made and will not make any other assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

In view of the fact that the sole inventor is a Creativity Machine, with no legal personality or capability to execute said assignment, and in view of the fact that the assignee is the owner of said Creativity Machine, this Assignment is considered enforceable without an explicit execution by the inventor. Rather, the owner of DABUS, the Creativity Machine, is signing this Assignment on its behalf.

Similarly, DABUS, being a machine and having no legal personality, does not have the capability to receive any consideration, and therefore, Stephen L. Thaler, as its owner/representative, acknowledges the receipt and sufficiency of good and valuable consideration for this assignment.

Signed and sealed this 23rd day of July 2019,

Signature of Stephen L. Thaler
Stephen L. Thaler
On behalf of DABUS,
Assignor

Signature of Stephen L. Thaler
Stephen L. Thaler
Assignee

* FlashPoint IP * Where Volatile Ideas Ignite *
* Dr. Reuven K. Mounallem, LL.M. * IP Management Consultant/Strategic Advisor *
* Registered Israeli Patent Attorney * Registered U.S. Patent Agent * e-mail: rkm@FlashPointIP.com *
* website: www.FlashPointIP.com * LinkedIn: www.Linkedin.com/in/FlashPointIP *
* tel: 972-3-936-3199 (IL line)/972-52-761-8220 (IL cell)/1-516-301-1649 (US line) *

APPLICATION FOR PATENT

Title: FOOD CONTAINER

5 CROSS REFERENCE TO RELATED APPLICATIONS

This patent application claims priority under 35 USC §119(a)-(d) and (f), §172, §365(a) and (b), §386(a) and (b), and/or 37 USC CFR 1.55 to UK Patent Application No. 1816909.4, filed October 17, 2018, and European Patent Application No. 18275163.6, filed October 17, 2018, which are hereby incorporated by reference in their entirety.

10

FIELD AND BACKGROUND OF THE INVENTION

The present invention relates to a food container suitable for both liquid and solid food products.

The packaging industry is well developed throughout the industrialised world and is subject to general norms and practices. On the whole, in the case of food or beverage packaging, this needs to be able to hold food or beverages in a food safe and hygienic condition, and to withstand storage and transportation; specifically to provide physical and barrier protection to the contents, to prevent contamination and agglomeration, to provide security including tamper control, and to be convenient. In recent years, there have been moves to reduce the amount of packaging material used and also to focus on more environmentally friendly packaging, such as by use of recyclable and biodegradable materials. Lightweighting is a concept that has been prevalent in the industry for some time, which aims to reduce the amount of packaging material utilised, its weight and also the energy required for its manufacture.

15

20

In the case of packaging for liquid or other flowable materials, it is common to use bottles, cans, cartons, bags and the like. Generally, such packaging has either a generally cylindrical form, such as a drinks can or bottle, or a cuboidal form, such as milk or juice cartons of the type commonly sold under the ElopakTM or Tetra PakTM brands. This
5 packaging is typically constituted by a smooth walled structure, often of multi-layered form, which minimises surface area and optimises the usable volume of the packaging. The contents of the packaging are often relied upon to maintain the form and integrity of the packaging, particularly during transportation and storage. For instance, a beverage container will often rely on the pressure of the beverage within the container to keep the container in
10 its original shape. This enables the walls of the container to be made very thin, to the point that often once the container has been opened the walls become flimsy and are easy to collapse.

Food products are often sold in multiple units, such as cans and bottles, in which case it is common to tie these together with additional packaging, such as a sleeve, ring or yoke.
15 This additional packaging also serves to stop individual packages from falling loose during transportation or storage, thereby reducing spoilage. However, such additional packaging adds further cost, both monetary and environmental.

The smooth nature of such packaging reduces a person's grip and it is not uncommon, particularly for large packages, for a person to struggle to handle the package without
20 squashing it and causing spillage of the contents. This is particularly the case with large plastics drinks bottles.

SUMMARY

The present invention seeks to provide an improved container for food products. The invention is particularly suitable for, but not limited to, containers for liquids, such as beverages, and other flowable products.

According to an aspect of the present invention, there is provided a food or beverage
5 container comprising: a wall defining an internal chamber of the container, the wall having interior and exterior surfaces and being of substantially uniform thickness; wherein the wall has a fractal profile with corresponding convex and concave fractal elements on corresponding ones of the interior and exterior surfaces; and wherein the convex and concave fractal elements form pits and bulges in the profile of the wall.

10 The present invention provides a food or beverage container having a container wall of different form than known in the art. The form taught herein provides a number of practical advantages over known packaging products.

Preferably, at least some of said pits and bulges have heads of a greater width than bases thereof.

15 Advantageously, the fractal profile of the wall permits coupling by inter-engagement of a plurality of said containers together. This feature can provide a number of practical advantages, including being able to do away with separate and additional tie elements to hold together a plurality of containers, as is necessary with currently available packages that rely on sleeves or yokes.

20 Preferably, the wall of the container is flexible, thereby permitting flexing of the fractal profile thereof. The flexibility of the wall permits disengagement of containers coupled together, by appropriate squashing of one or more of the containers to alter the fractal shape of the containers at the point of inter-engagement.

Advantageously, the corresponding convex and concave fractal elements provide for increased surface area of both the interior and exterior surfaces of the container relative to a volume of the chamber. An increased surface area can assist in the transfer of heat into and out of the container, for example for heating or cooling the contents thereof.

5 In preferred embodiments, the container is generally cylindrical. It may have other shapes in other embodiments, such as generally spherical, oval and so on.

The container wall may be formed of metal, plastics, elastomeric material or glass. It may also be made from flexible or potentially flexible food products.

10 The fractal form of the container wall can also contribute to improved holding of the container, whereas known packages with a smooth surface can be slippery particularly when wet such as when condensation forms on the outside as a result of the contents being cold.

It is to be understood that although the main focus of this disclosure is to a food or beverage container, the teachings are not limited to such applications and could be used for containers for a wide variety of other uses.

15

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments of the present invention are described below, by way of example only, in which:

20 Figure 1 is a schematic view in axial cross-section of a container according to an embodiment of the present invention;

Figures 2 and 3 are schematic axial partial cross-sectional views of an embodiment of two fractal containers in the process of being coupled together;

Figures 4 and 5 are schematic axial partial perspective views of the two fractal containers of Figures 2 and 3 in the process of being coupled together;

Figure 6 shows various views of another embodiment of fractal container;

Figures 7 to 9 show the coupling and uncoupling of two containers as per the embodiment of Figure 6; and

5 Figures 10 and 11 show, respectively, the coupling together of two further embodiments of fractal container.

DESCRIPTION OF THE ILLUSTRATIVE EMBODIMENTS

The description that follows and its accompanying drawings disclose in broad terms
10 the teachings herein. Elements that are common in the art are omitted for the sake of clarity, such as but not limited to the specific materials that the container may be made of, typical volumes for the container and so on. Furthermore, the drawings are not to scale.

The concept disclosed herein makes use of a fractal profile for the wall of the container, which has been found to provide a number of advantageous characteristics when
15 applied to a container particularly for food and beverage products. The skilled person will appreciate that the profile of the wall will not be of pure fractal form but will have a form dictated by practical considerations such as the minimum practical or desirable size of its fractal components. Nevertheless, the relationship between elements of the profile is fractal in nature. In practical embodiments, the fractal container may exhibit a fractal interpretation
20 over two or more size scales.

Referring to Figure 1, this shows in schematic form a transverse cross-sectional view of an embodiment of container **10** for use, for example, for beverages. The container has a wall **12** with an external surface **14** and an internal surface **16**. Wall **12** has a substantially uniform thickness.

As with known containers, especially for food products, wall **12** is preferably made of a food safe material or otherwise provided with a food safe inner lining. For this purpose, and as known in the art, the wall may be a single layer material or may be made as a laminate of different materials. The wall may be made of or comprise a plastics material, a metal or metal alloy, an elastomeric material, and may even be made of glass. It is also envisaged that in some embodiments the wall may be made from flexible or potentially flexible food product (for example pasta, dough, licorice and so on).

Wall **12** has a fractal profile which provides a series of fractal elements **18-28** on interior and exterior surfaces **14, 16**. It is to be understood that fractal elements **18-28** have fractal characteristics within practical considerations determined for example by the limits of the chosen manufacturing/forming process, the material chosen for wall, the thickness the wall and so on. In practice, fractal elements **18-28** will typically reach a minimum practical dimension determined by such constraints.

Fractal elements **18-28** of the wall create, as a result of wall **12** having a generally uniform thickness, a series of pits **40** and bulges **42** in the profile of the wall, in which a pit **40** as seen from one of exterior or interior surfaces **12** or **14** forms a corresponding bulge **42** on the other of exterior or interior surfaces **12** or **14**, and vice versa. This characteristic is exhibited both on a large scale, for instance with pits **40** and bulges **42** identified by the reference numerals in Figure 1, but also with the smaller ones of fractal elements **18-28**. The pits **40** and bulges **42** could be described as opposite images of one another on exterior **14** and interior **16** sides of walls **12**. Repeating features (for instance pits and bulges) across a variety of scales creates the fractal form or profile on the container surfaces. The fractal profile may extend across the entire area of the container surfaces or only over selected surfaces or surface portions. Thus, the fractal profile may in some embodiments extend over

the entire container, while in other embodiments the majority of the container can be smooth with only the contact areas between containers having fractal formations.

It will be appreciated that Figure 1 is an axial cross-sectional view only. Fractal elements **18-28** may in some embodiments extend in linear fashion along the length of wall **12**, but in other embodiments elements **18-28** may be of pure fractal form of a type akin, so to speak, to cauliflower or broccoli florets, so as to create an array of distinct nodules, both circumferentially and also longitudinally along wall **12**.

Container **10** may be of generally cylindrical form, such that the cross-section shown in Figure 1 extends into and/or out of the plane of the paper. In such embodiments, container **10** will include a top and a base, typically of any type known in the art. In other embodiments, container **10** may have any suitable non-cylindrical form, examples of which the person skilled in the art will be familiar with.

Container **10** of this embodiment, and of the other embodiments described and contemplated herein, provides a number of practical advantages. One such advantage can be seen with reference to the embodiment shown in Figures 2 to 5.

Referring first to Figures 2 and 3, these are axial cross-sectional views of two containers **100**, **110** similar to the view of Figure 1 but in which only a part of the circumference of the wall of each container can be seen. Each container **100**, **110** has, as with the embodiment of Figure 1, a wall **12** having exterior **14** and interior **16** surfaces and fractal elements **18-28** formed in the wall and present in the exterior and interior surfaces **14**, **16**.

Containers **100**, **110** have the same shapes and fractal profiles, which are also symmetrical as will be apparent from the Figures. This correspondence in shapes enables pits **40** and corresponding bulges **42** in the walls of two containers **100**, **110** to engage into

one another so as to interlock along a portion of their circumferences, as can be seen in particular in Figure 3. In this embodiment, pits **40** and bulges **42** have the same, but opposite, shapes such that they are able to fit snugly into one another. This can be achieved, in some embodiments, by creating two identical fractal sheets and curving them in opposite
5 directions such that one surface of one the sheet becomes the outer surface of one container and the same surface of the other sheet becomes the inner surface of the other container.

Furthermore, in the embodiments of Figure 1 to 3, pits **40** and bulges **42** have what could be described as enlarged heads with narrower neck portions, in which the fractal elements extend to a smaller width or diameter d at or close to their bases compared to a
10 larger width or diameter D further from their bases. This characteristic of enlarged heads may be prevalent in all of pits **40** and bulges **42** but in other embodiments may be exhibited in only a portion of the fractal formations in wall **12**.

As can be seen in Figure 3 in particular, the coupling of two containers **100**, **110** occurs, in this example, because the containers have a generally curving or rounded form, in
15 which case the containers will only touch, and inter-engage, at their tangents.

In other embodiments that have different general overall shapes, such as square or polygonal, the coupling of the fractal formations of two containers may occur across an entire side wall or a portion of one or more of the side walls of the containers.

When used for packaging, this characteristic enables multiple containers to be
20 coupled together without the need for any other tie mechanism of the types commonly used in the art. In other words, two or more containers **100**, **110** may be joined together solely by inter-engagement of some of the fractal formations of container walls **12**. The containers need not have tessellating shapes, as it is only necessary for one or more of the fractal formations of each of the containers to inter-engage in order to achieve coupling.

Figures 4 and 5 show a view of another embodiment similar to that of Figures 2 and 3, in which the fractal formations of containers **100**, **110** extend generally linearly for at least a short distance longitudinally, in other words in two-dimensional manner rather than in a three-dimensional manner as a floret would. In this embodiment, the same fractal elements
5 of containers **100**, **110** shown in Figures 4 and 5 will inter-engage longitudinally along their length, and if they extend along the entire length of the containers they will then inter-engage equally along the length of the containers. In the case of three-dimensional fractal elements, of what could be described as floret form, inter-engagement of two or more containers along a tangent thereof will involve the coupling of multiple fractal formations along the lengths
10 of the containers.

The containers can be uncoupled by squeezing containers **100**, **110**, for example from either side of the coupling zone, to cause engaged pits **40** and bulges **42** to deform and open out. A user can in this manner separate containers **100**, **110** with relative ease.

Referring now to Figure 6, this shows another embodiment of a fractal container **200**
15 having a fractal form similar to that of the embodiments of Figures 1 to 5. In this embodiment, the fractal formations extend in linear manner along the length of container **200**, as can be seen in particular in the perspective view of Figure 6. Container **200** can have any of the characteristics described elsewhere herein.

With reference to Figure 7, in this embodiment pits **240** and bulges **242** are not the
20 same shape or size to fit one within the other precisely, as is the case with the embodiments shown in Figures 2 to 5. Nevertheless, pits **240** and bulges **242** are still able to engage partially, as will be apparent in the Figure. The two containers can be tied to one another by adhesive posited into an interstice or pocket **244** between partially engaged pits **240** and

bulges **242**. More than two containers may be coupled together in this manner, in a fully or partially tessellating manner depending upon the shapes of the containers.

Containers **200** can be separated from one another by applying pressure to one or both of the containers, as shown In Figure 8. In the example shown in this Figure, the pressure may be applied diametrically opposite adhesive coupling **244**, as per the arrow in the Figure. This pressure will cause deformation of walls **12** of the containers and, as a consequence, apply shear stress (and typically also compressive and tensile forces) to the adhesive in pocket **244**, which will break or loosen. It will be appreciated that the containers could be squeezed from other directions and achieve the same result.

Once the adhesive coupling has been released, the containers **200** can be separate from one another as shown in Figure 9.

Referring now to Figure 10, this shows in schematic form partial wall profiles of two fractal containers **300, 300'** according to another embodiment of the present invention. In this embodiment, the wall has what could be described as a fractal random walk profile, with zig-zag wall elements of different lengths l_1-l_n .

The two container profiles **300, 300'** preferably have substantially identical reversed or replicated profiles in at least a part of their extent, such that they can couple together in a precise nesting arrangement, as shown in Figure 10B. The two fractal elements **300, 300'** can thus be coupled together, typically by a combination of mechanical inter-engagement and friction. The skilled person will appreciate that in this embodiment, as with the following embodiment shown in Figure 11, the profile does not include any fractal elements having bulges or pits with enlarged heads, as occurs with the embodiments of Figures 1 to 9, although it is not excluded that in some embodiments they may have such characteristics.

Figure 11 shows another example, in which the profiles of the two containers **400**, **400'** only partially nest one into the other. It will be appreciated that the degree of coupling of the containers together can be altered by adjusting the fractal profiles of the two inter-engaging surfaces to one another.

5 In the preferred embodiments, the lengths l_1-l_n of the zig-zag wall elements are advantageously determined as statistical fractals whose dimensions may be tuned via random walk parameters to optimize the interlocking of two or more fractal containers. Bonding between containers can be relatively strong with an increased number and size of capture points and weaker with fewer capture points.

10 In the embodiments of Figures 10 and 11, inter-engagement can be provided by the profiles themselves and optionally, as per the above described embodiments, assisted by the use of adhesive between adjacent containers.

The forms of container disclosed herein provide a number of other advantages in addition to an increased ability to couple multiple containers together.

15 First, the fractal nature of the outer surface of the container provides a better grip of the container compared to a container having a smooth outer surface. This can be advantageous particularly with larger or heavier containers, in respect of which a good grip can be obtained with less holding pressure on the container wall.

20 Moreover, the corresponding convex and concave fractal elements provide for increased surface area of both the interior and exterior surfaces of the container relative to a volume of the chamber. This can be useful in increasing the heat transfer characteristics of the container, for instance to cool or heat its contents.

The skilled person will appreciate that the teachings herein can provide other advantages and characteristics not exhibited in containers known in the art.

While the present invention has been described with respect to a limited number of embodiments, it will be appreciated that many variations, modifications, equivalent structural elements, combinations, sub-combinations, and other applications of the present invention may be made.

WHAT IS CLAIMED IS:

1. A food or beverage container comprising:
 - (a) a generally cylindrical wall defining an internal chamber of the container, said wall having interior and exterior surfaces and being of uniform thickness; and
 - (b) a top and a base disposed at either end of said generally cylindrical wall;wherein said wall has a fractal profile with corresponding convex and concave fractal elements on corresponding ones of said interior and said exterior surfaces; wherein said convex and said concave fractal elements form pits and bulges in said profile of said wall; and wherein said wall of the container is flexible, permitting flexing of said fractal profile thereof, said fractal profile of said wall permits coupling by inter-engagement of a plurality of the containers together, and flexibility of said wall permits disengagement of said or any coupling of a plurality of the containers.

2. The food or beverage container of claim 1, wherein at least some of said pits and bulges each have heads and bases, wherein said heads are of a greater width than said bases thereof.

3. The food or beverage container of claim 1, wherein at least some of said pits and said bulges have inter-engaging or corresponding shapes and sizes such that a bulge of one container can fit within a pit of an identical container, thereby to couple two containers together.

4. The food or beverage container of claim 3, wherein said pits and said bulges of said two containers fit precisely within one another.

5. The food or beverage container of claim 3, wherein said pits and said bulges of said two containers fit partially within one another.

6. The food or beverage container of claim 1, wherein two or more said containers can be coupled together by an adhesive disposed between facing pits and bulges of adjacent containers.

7. The food or beverage container of claim 1, wherein said corresponding convex and said concave fractal elements provide for increased surface area of both said interior and said exterior surfaces of the container relative to a volume of said chamber.

8. The food or beverage container of claim 1, wherein said wall is formed of a material selected from the group consisting of: a metal, a plastic, and an elastomeric material.

9. The food or beverage container of claim 1, wherein said wall is formed from a flexible food product.

ABSTRACT OF THE DISCLOSURE

A container for use, for example, for beverages, has a wall with an external surface and an internal wall of substantially uniform thickness. The wall has a fractal profile which provides a series of fractal elements on the interior and exterior surfaces, forming pits and bulges in the profile of the wall and in which a pit as seen from one of the exterior or interior surfaces forms a bulge on the other of the exterior or interior surfaces. The profile enables multiple containers to be coupled together by inter-engagement of pits and bulges on corresponding ones of the containers. The profile also improves grip, as well as heat transfer into and out of the container.

CD Submission Review Results

Internal Worksheet Only - Do Not Scan

Application Number Receipt Date

New Application Response To Notice Date Of Response

Jumbo – Large tables are included on the CD

There are no problems with the CDs in the submission.

Items checked below are to be selected in the PALM Pre-Exam CD problem list.

Omitted Items

<input type="checkbox"/>	Files on compact disc are unreadable:
<input type="checkbox"/>	Disc(s) of either set not readable:
<input type="checkbox"/>	Disc(s) do not contain file names listed:
<input type="checkbox"/>	Amended CD missing unamended files
<input type="checkbox"/>	Missing compact discs

Missing Parts

<input type="checkbox"/>	Disc(s) do not contain file names listed
<input type="checkbox"/>	Discs contains files that are non-ASCII files:
<input type="checkbox"/>	Only one copy of the CD, no duplicate:
<input type="checkbox"/>	Wrong media type, e.g., CD-RW:
<input type="checkbox"/>	The transmittal letter and specification do not list information:
<input type="checkbox"/>	Both disc(s) contain unreadable files:
<input type="checkbox"/>	One disc(s) contain unreadable files:
<input type="checkbox"/>	Compact disc(s) contain viruses, but are still readable:
<input type="checkbox"/>	EFS/Paper Submission:
<input type="checkbox"/>	Table does not maintain data in proper alignment:
<input type="checkbox"/>	Not proper subject matter for CD's:

Informality

<input type="checkbox"/>	No statement in transmittal letter that CD's are the same:
<input type="checkbox"/>	No incorporation by reference statement for the CD's:
<input type="checkbox"/>	CD's not labeled "Copy 1" and "Copy 2":
<input type="checkbox"/>	Deficient CD packaging:
<input type="checkbox"/>	Deficient Labeling on CD's:
<input type="checkbox"/>	The transmittal letter does not list information:
<input type="checkbox"/>	The specification does not list information:
<input type="checkbox"/>	Table less than 51 pages submitted on CD:

File Directory Attachment

<input type="checkbox"/>	Copy of file directory listing is attached and should be mailed to applicant
<input type="checkbox"/>	Copy of file directory listing is not attached
<input type="checkbox"/>	Copy of file directory listing is not attached because it is over one page long

Additional Comments

Internal Worksheet Only - Do Not Scan

C:\Users\kfrancisco1\Desktop\ScoreModule\20190806\16524532\FC-Patent_drawings.pdf

DocCode – SCORE

SCORE Placeholder Sheet for IFW Content

Application Number: 16524532

Document Date: 07/29/2019

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

- Drawing

At the time of document entry (noted above):

- USPTO employees may access SCORE content via DAV or via the SCORE web page.
- External customers may access SCORE content via PAIR using the Supplemental Content tab.

Form Revision Date: March 1, 2019



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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,532	07/29/2019		50567-4-01-US

CONFIRMATION NO. 2644

FORMALITIES LETTER

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 08/01/2019

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The application data sheet or inventor's oath or declaration does not identify each inventor by his or her legal name.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
 The surcharge is due for any one of:
 - late submission of the basic filing fee, search fee, or examination fee,
 - late submission of inventor's oath or declaration,
 - filing an application that does not contain at least one claim on filing, or
 - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ **80** surcharge.
- \$(**0**) previous unapplied payment amount.
- \$ **80** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice".
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/s/brahim/

PATENT APPLICATION FEE DETERMINATION RECORD						Application or Docket Number 16/524,532				
Substitute for Form PTO-875										
APPLICATION AS FILED - PART I										
		(Column 1)	(Column 2)		SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA		RATE(\$)	FEE(\$)			RATE(\$)	FEE(\$)	
BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A		N/A	75			N/A		
SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A		N/A	330			N/A		
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A		N/A	380			N/A		
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	9	minus 20 =			x 50 =	0.00	OR			
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	1	minus 3 =			x 230 =	0.00				
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				0.00					
MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>				0.00						
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	785			TOTAL		
APPLICATION AS AMENDED - PART II										
		(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x =		OR	x =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x =		OR	x =	
	Application Size Fee <small>(37 CFR 1.16(s))</small>							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x =		OR	x =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x =		OR	x =	
	Application Size Fee <small>(37 CFR 1.16(s))</small>							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>										



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/524,532	07/29/2019	1782	785	50567-4-01-US	9	1

CONFIRMATION NO. 2644

FILING RECEIPT

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 08/01/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

None

Applicant(s)

Stephen L. Thaler, St. Charles, MO;

Assignment For Published Patent Application

Stephen L. Thaler

Power of Attorney:

Reuven Mouallem--63345
 Ryan Abbott--68178

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

EUROPEAN PATENT OFFICE (EPO) 18275163.6 10/17/2018 No Access Code Provided
 UNITED KINGDOM 1816909.4 10/17/2018 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 07/31/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/524,532**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

FOOD CONTAINER

Preliminary Class

428

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign

page 2 of 4

patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Aug 01, 2019 03:25:20 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16524532	NTC.MISS.PRT	08/01/2019	50567-4-01-US
	APP.FILE.REC	08/01/2019	50567-4-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 1782
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

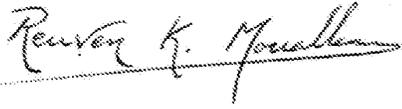
PETITION TO EXPEDITE 1.181 PETITION TO THE DIRECTOR

This Petition to expedite the petition to the Director filed in the instant application under 37 CFR 1.181, for which the appropriate fee has been paid.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,

A handwritten signature in black ink, reading "Reuven K. Mouallem". The signature is written in a cursive style and is positioned above a horizontal line.

Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: August 29, 2019

Electronic Patent Application Fee Transmittal				
Application Number:	16524532			
Filing Date:	29-Jul-2019			
Title of Invention:	FOOD CONTAINER			
First Named Inventor/Applicant Name:				
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-4-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE - 37 CFR 1.17(F)(GROUP I)	2462	1	200	200
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				200

Electronic Acknowledgement Receipt	
EFS ID:	37014557
Application Number:	16524532
International Application Number:	
Confirmation Number:	2644
Title of Invention:	FOOD CONTAINER
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-4-01-US
Receipt Date:	29-AUG-2019
Filing Date:	29-JUL-2019
Time Stamp:	11:24:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$200
RAM confirmation Number	E20198SB26150098
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions	181_Petition_FC.pdf	166625	no	6
			7016e2328c7b89643ee444bea61313c61d8304d6		

Warnings:

Information:

2	Petition for review by the Office of Petitions	Petition_to_expedite_FC.pdf	96950	no	2
			9a52cd6b1b0b95626de7ef088ad3d00cb6759e62		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30094	no	2
			251f551de9488188929fb79748e02981e0794cb8		

Warnings:

Information:

Total Files Size (in bytes):	293669
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 1782
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION TO THE DIRECTOR UNDER 37 CFR 1.181

This Petition to the Director is pursuant under 37 CFR 1.181 from the requirement under the Notice to File Missing Parts issued under 37 CFR 1.53(b) on August 1, 2019, for which the supervisory authority of the Director is invoked in appropriate circumstances.

The following inventorship statement is being submitted to assist in clarifying the status of inventorship as it relates to the instant invention. The unique aspects under which the instant invention was conceived prompted the inclusion of such statement in order to explain that the inventor of the subject matter of the instant invention of the present application is an AI machine, being a type of “creativity machine” named “DABUS” as indicated, *inter alia*, in the Application Data Sheet (ADS). The following statement explains the nature of DABUS, and why it should be named as the inventor in the present application. In addition, such considerations directly pertain to the Substitute Statement and recordation of Assignment filed herewith the application submission. Based on the following statement, it is submitted that the Director should vacate the Notice to File Missing Parts for being be unwarranted and/or void.

A machine called “DABUS” conceived of the instant invention.

The instant invention was generated by a specific machine called “DABUS” (“device for the autonomous bootstrapping of unified sentience”) – a type of “Creativity Machine.” A Creativity Machine is a particular type of connectionist artificial intelligence. Such systems contain a first artificial neural network, made up of a series of smaller neural networks, that has been trained with general information from various knowledge domains. This first network generates novel ideas in response to self-perturbations of connection weights between neurons and component neural nets therein. A second “critic” artificial neural network monitors the first neural network for new ideas, and identifies those ideas that are sufficiently novel compared to the machine’s pre-existing knowledge base. The critic net also generates an effective response that in turn injects/retracts perturbations to selectively form and ripen ideas having the most novelty, utility, or value.

In the case of the instant invention, the machine only received training in general knowledge in the field, and proceeded to independently conceive of the invention, and to identify it as novel and salient. If similar training had been given to a human student, the student rather than the trainer would meet the inventorship criteria as inventor.

In some instance of machine invention, a natural person might qualify as an inventor by virtue of having exhibited inventive skill in developing a program to solve a particular problem, by skillfully selecting data to provide to a machine, or by identifying the output of a machine as inventive. However, in the present case, DABUS was not created to solve any particular problem, nor was trained on any special data relevant to the instant invention. The machine rather than a person identified the novelty and salience of the instant invention.

A detailed description of how DABUS and a Creativity Machine functions is available in, among others, the following US patent publications: 5,659,666; 7,454,388 B2; and 2015/0379394 A1.

Inventorship should not be restricted to natural persons. A machine that would meet inventorship criteria if it were a natural person should also qualify as an inventor.

No United States law explicitly prohibits protection for autonomous machine inventions.

However, inventorship is restricted to “individuals” under, e.g., 35 U.S.C. §100(f) (1952) (“The term ‘inventor’ means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.”).

The restriction of inventorship to individuals was intended to prevent corporate inventorship. It was not the result of seriously considering autonomous machine invention, and should not therefore prohibit subsistence of intellectual property rights where there is no natural person who qualifies as an inventor. *See* Karl F. Milde, Jr., Can a Computer Be an “Author” or an “Inventor”?, 51 J. PAT. OFF. SOC’Y 378, 379 (1969). (“The closest that the Patent Statute comes to requiring that a patentee be an actual person is in the use, in Section 101, of the term ‘whoever.’ Here too, it is clear from the absence of any further qualifying statements that the Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”)

The output of autonomously inventive machines should be patentable if it meets the requirements of patentability set out in law. The primary purpose of patent law is to incentivize innovation, together with incentivizing the disclosure of information, and the commercialization and development of inventions. Allowing patents for machine output incentivizes the development of inventive machines, which ultimately promotes innovation. To the extent that patents are incentivizing commercialization and disclosure of information, there is no change in this function between a human and a machine-generated invention. Failure to permit patent protection for the output of autonomously inventive machines threatens to

undermine the patent system by failing to encourage the production of socially valuable inventions. This will be particularly important as artificial intelligence becomes more sophisticated and likely a standard part of future industrial research and development. Clarifying now that patents are available for the output of autonomously inventive machines would provide certainty to businesses and innovators.

Patent law also protects the moral rights of human inventors; acknowledging machines as inventors would facilitate this function. At present, individuals are claiming inventorship of autonomous machine inventions under circumstances in which those persons have not functioned as inventors. See Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1079-1126 (2016). Failing to appropriately acknowledge inventive activity by machines weakens moral justifications for patents by allowing individuals to take credit for work they have not done. It is not unfair to machines who have no interest in being acknowledged, but it is unfair to other human inventors because it devalues their accomplishments by altering and diminishing the meaning of inventorship. This could equate the hard work of creative geniuses with those simply asking a machine to solve a problem or submitting a machine's output. By contrast, acknowledging machines as inventors would also acknowledge the work of a machine's creators.

An "autonomous machine invention" should be assigned to the owner of the machine.

Machines should not own patents. They do not have legal personality or independent rights, and cannot own property.

The machine's owner should be the default owner of any intellectual property it produces and any benefits that would otherwise subsist in an inventor who is a natural person. This is most consistent with current ownership norms surrounding personal property (including both machines and patents).

In the instant application, we submit that DABUS should be acknowledged as the inventor of any resultant patents, with Stephen Thaler, the machine's owner, as the applicant and assignee of any such patents.

Stephen Thaler is prevented from listing himself as the inventor for the instant application.

Stephen Thaler, the creator of DABUS, is prohibited from listing himself as an inventor for the instant application because he has not contributed to the conception of the instant invention. DABUS performed what is traditionally considered the mental part of the inventive act. Based on DABUS's results, a skilled person could have reduced the invention to practice. Inaccurately listing himself as an inventor could subject Dr. Thaler to criminal sanctions. 18 U.S.C. 1001.

The Office presumes that the named inventor in an application is the actual inventor. See MPEP §2137.01.

If a machine cannot be an inventor, the first person to recognize the inventive nature of autonomous machine input may qualify as an inventor.

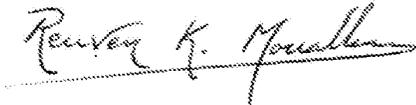
It has been argued that a natural person may claim inventorship of an autonomous machine invention even in situations in which that person was not involved in the development or operation of a machine by virtue of recognizing the relevance of a machine's output. This approach is questionable in cases in which the natural person has not made an inventive contribution to the disclosed invention in the accepted meaning of the term.

In some cases, recognition of the inventive nature of a computer's output may require significant skill, but in others, the nature of inventive output may be obvious. In the present case, DABUS identified the novelty of its own idea before a natural person did.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,

A handwritten signature in black ink, reading "Reuven K. Mouallem". The signature is written in a cursive style and is positioned above a horizontal line.

Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: August 29, 2019



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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 Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,532	07/29/2019		50567-4-01-US

CONFIRMATION NO. 2644

WITHDRAWAL NOTICE

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 12/13/2019

Letter Regarding a New Notice and/or the Status of the Application

If a new notice or Filing Receipt is enclosed, applicant may disregard the previous notice mailed on 08/01/2019. The time period for reply runs from the mail date of the new notice. Within the time period for reply, applicant is required to file a reply in compliance with the requirements set forth in the new notice to avoid abandonment of the application.

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web. <https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebc>.

If the reply is not filed electronically via EFS-Web, the reply must be accompanied by a copy of the new notice.

If the Office previously granted a petition to withdraw the holding of abandonment or a petition to revive under 37 CFR 1.137, the status of the application has been returned to pending status.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/jltippett/



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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 Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,532	07/29/2019		50567-4-01-US

CONFIRMATION NO. 2644

FORMALITIES LETTER

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 12/13/2019

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted***Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The application data sheet or inventor's oath or declaration does not identify each inventor by his or her legal name.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
 The surcharge is due for any one of:
 - late submission of the basic filing fee, search fee, or examination fee,
 - late submission of inventor's oath or declaration,
 - filing an application that does not contain at least one claim on filing, or
 - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ 80 surcharge.
- \$(0) previous unapplied payment amount.
- \$ 80 TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice".
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jltippett/

PATENT APPLICATION FEE DETERMINATION RECORD					Application or Docket Number 16/524,532		
Substitute for Form PTO-875							
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OR	
OTHER THAN SMALL ENTITY							
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)	RATE(\$)	FEE(\$)	
BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A	75	N/A		
SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A	330	N/A		
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A	380	N/A		
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	9	minus 20 = *	x 50 =	0.00	OR		
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	1	minus 3 = *	x 230 =	0.00			
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>				0.00			
				TOTAL	785	TOTAL	
* If the difference in column 1 is less than zero, enter "0" in column 2.							
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
OTHER THAN SMALL ENTITY						OR	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus **	=	x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus ***	=	x	=	
	Application Size Fee <small>(37 CFR 1.16(s))</small>						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						
				TOTAL ADD'L FEE		TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
OTHER THAN SMALL ENTITY						OR	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus **	=	x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus ***	=	x	=	
	Application Size Fee <small>(37 CFR 1.16(s))</small>						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						
				TOTAL ADD'L FEE		TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.							
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".							
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".							
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.							



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/524,532	07/29/2019	1782	785	50567-4-01-US	9	1

CONFIRMATION NO. 2644

FILING RECEIPT

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 12/13/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

None

Applicant(s)

Stephen L. Thaler, St. Charles, MO;

Assignment For Published Patent Application

Stephen L. Thaler

Power of Attorney:

Reuven Mouallem--63345
 Ryan Abbott--68178

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

EUROPEAN PATENT OFFICE (EPO) 18275163.6 10/17/2018 No Access Code Provided
 UNITED KINGDOM 1816909.4 10/17/2018 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 07/31/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/524,532**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

FOOD CONTAINER

Preliminary Class

428

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign

page 2 of 4

patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Dec 13, 2019 03:33:35 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16524532	M327	12/13/2019	50567-4-01-US
	NTC.MISS.PRT	12/13/2019	50567-4-01-US
	APP.FILE.REC	12/13/2019	50567-4-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/524,532	07/29/2019		50567-4-01-US	2644
89602	7590	12/17/2019	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			1782	
			NOTIFICATION DATE	DELIVERY MODE
			12/17/2019	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):

FPIP-USPTO@FlashPointIP.com
 ydm@FlashPointIP.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
 United States Patent and Trademark Office
 P.O. Box 1450
 Alexandria, VA 22313-1450
 www.uspto.gov

In re Application of :
 Unnamed :
 Application No. 16/524,532 :
 Filed: 29 Jul 2019 : DECISION ON PETITION
 For: FOOD CONTAINER :

This is a decision on the petition under 37 CFR 1.181, filed August 29, 2019, requesting the Office vacate the Notice to File Missing Parts of Nonprovisional Application, mailed August 1, 2019.¹

The petition under 37 CFR 1.181 is **DISMISSED**.

RELEVANT BACKGROUND

The above-identified application was filed on July 29, 2019. The application papers filed on July 29, 2019 were accompanied by, *inter alia*, an application data sheet (“ADS”), a statement under 37 CFR 3.73(c) stating Stephen L. Thaler is the assignee of the entire right, title, and interest of the patent application, an assignment from the assignor, DABUS, signed by Stephen L. Thaler, to the assignee, Stephen L. Thaler, assigning and transferring the assignor’s entire right, title, and interest in the invention², and a substitute statement under 37 CFR 1.64 in lieu of declaration under 35 U.S.C. § 115(d) (“substitute statement”), listing DABUS, as the inventor for which the substitute statement applies, which was executed by Stephen L. Thaler, as legal representative of DABUS. The ADS, filed July 29, 2019, lists the sole inventor as having the given name “[DABUS]” and the family name “Invention generated by artificial intelligence.”

On August 1, 2019, the USPTO issued a Notice to File Missing Parts of Nonprovisional Application (“Notice”), which provided applicant two months from the mail date of the Notice, with extensions of time available pursuant to 37 CFR 1.136(a), to file an ADS or inventor’s

¹ The instant petition under 37 CFR 1.181 was accompanied by a petition under 37 CFR 1.182 requesting expedited processing of the instant petition. The petition to expedite the processing is **dismissed** as moot in view of this decision.

² Based on an initial review, this assignment document does not appear to satisfy the requirements set forth in 37 CFR 3.73(c)(1).

oath/declaration that identifies each inventor by his or her legal name and to submit the \$80 surcharge for the late submission of the inventor's oath or declaration.

Petitioner filed the present petition under 37 CFR 1.181 on August 29, 2019.

OPINION

Petitioner asserts the sole inventor of the subject matter of the instant application is an artificial intelligence machine named DABUS. Petitioner contends that inventorship should not be restricted to natural persons and therefore, DABUS is properly identified as the sole inventor in the ADS of July 29, 2019. Petitioner further contends the substitute statement filed July 29, 2019 and executed by Stephen L. Thaler, as legal representative of DABUS, listing DABUS as the inventor is acceptable. Petitioner requests that the Director vacate the Notice of August 1, 2019 for being unwarranted and/or void.

35 U.S.C. § 115 requires that an application filed under 35 U.S.C. § 111(a) shall include the name of the inventor or inventors. 35 U.S.C. § 100(f) defines the term “inventor” as the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.³ As provided in 37 CFR 1.41(b), an applicant may name the inventorship of a non-provisional application under 35 U.S.C. § 111(a) in the ADS in accordance with 37 CFR 1.76, or in the inventor's oath or declaration in accordance with 37 CFR 1.63. *See* MPEP 602.01.

Petitioner argues that inventorship should not be restricted to natural persons because United States law does not explicitly prohibit protection for autonomous machine-created inventions. Therefore, due to numerous policy considerations, a machine like DABUS, that meets the inventorship criteria if it were a natural person, should also qualify as an inventor. However, the United States patent laws do not support Petitioner's position that an inventor can be a machine.

The Patent statute is replete with language indicating that an inventor is a natural person. For example, as noted *supra*, 35 U.S.C. § 100(f) defines the term “inventor” as “the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.” 35 U.S.C. § 101 also provides “[w]hoever invents or discovers... may obtain a patent therefor, subject to the conditions and requirements of this title.” (emphasis added). Additionally, 35 U.S.C. § 102(a) states, “A **person** shall be entitled to a patent unless...” (emphasis added). 35 U.S.C. § 115(b)(2) further provides, in pertinent part, “[a]n 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” (emphasis added).⁴ Accordingly, the Patent statutes do not support the interpretation of “inventor” to include a machine.

³ 35 U.S.C. § 100(g) defines the terms “joint inventor” and “coinventor” as any one of the individuals who invented or discovered the subject matter of a joint invention.

⁴ Other examples from Title 35 include: 35 U.S.C. § 116(a) that states, in pertinent part “[w]hen an invention is made by two or more persons jointly, they shall apply for patent jointly and each make the required oath, except as otherwise provided in this title”; 35 U.S.C. § 256 that provides for correction of the inventorship where a “person” is named that is not the inventor or where a “person” who is an inventor is not named as an inventor of the patent;

Moreover, when considering whether a corporation could be listed as an inventor, the United States Court of Appeals for the Federal Circuit (Federal Circuit) has explained that “only natural persons can be ‘inventors.’”⁵ We see no basis to distinguish a machine.

In this instance, the ADS of July 29, 2019 lists “[DABUS]” as the given name, and “Invention generated by artificial intelligence” as the family name, of the sole inventor. Similarly, the substitute statement under 37 CFR 1.64, filed July 29, 2019, lists DABUS as the inventor for which the substitute statement applies. Petitioner admits that DABUS is a machine. Because a machine does not qualify as an inventor (for the reasons set forth above), the USPTO properly issued the Notice of August 1, 2019 noting the inventor was not identified by his or her legal name.

We note, however, that the use of a machine as a tool by natural person(s) does not generally preclude natural person(s) from qualifying as an inventor or joint inventors if the natural person(s) contributed to the conception of the claimed invention. *See* MPEP § 2137.01. Further, the Office normally presumes that the named inventor or joint inventors in the application are the actual inventor or joint inventors to be named on the patent. *See* MPEP § 2137.01. Where an application names an incorrect inventor, the applicant could submit a request to correct inventorship under 37 CFR 1.48 *See* MPEP § 602.01(c) et seq.; *see also* MPEP § 706.03(a), subsection IV.

DECISION

For the reasons noted above, the petition under 37 CFR 1.181 to vacate the Notice of August 1, 2019 is dismissed.

The time period to reply to the Notice of August 1, 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 Notice of August 1, 2019 to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under 37 CFR 1.136(a).

Telephone inquiries should be directed to the undersigned at (571) 272-3230.

/SHIRENE W BRANTLEY/
Attorney Advisor, OPET

35 U.S.C. § 371(c)(4) that provides for an oath or declaration by the inventor “or other person” authorized under chapter 11; 35 U.S.C. § 382 that provides for filing of an international design application by a “person who is a national of the United States.”

⁵ *Beech Aircraft Cor. v. Edo Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993); *see also University of Utah v. Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V.*, 734 F.3d 1315, 1323 (Fed. Cir. 2013) (“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.”) (internal quotation marks and citations omitted).

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Dec 17, 2019 03:36:02 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
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Application	Document	Mailroom Date	Attorney Docket No.
16524532	PETDEC	12/17/2019	50567-4-01-US

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Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 1782
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION TO THE DIRECTOR UNDER 37 CFR 1.181 –
REQUEST FOR RECONSIDERATION

This Petition to the Director is pursuant under 37 CFR 1.181 from the requirement under the Notice to File Missing Parts issued under 37 CFR 1.53(b) on August 8, 2019, for which the supervisory authority of the Director is invoked in appropriate circumstances. The Request for Reconsideration in this Petition is being filed in reply to the Decision on Petition issued on December 17, 2019.

In view of the legal opinion and decision by the OPET legal advisor, Ms. Shirene W. Brantley, in the Decision on Petition, additional arguments are submitted herewith (in conjunction with the inventorship statement previously submitted) to assist in further clarifying the status of inventorship as it relates to the instant invention. The circumstances under which the instant invention was conceived pose a unique legal situation, further justifying this Request for Reconsideration.

The inclusion of the inventorship statement was initially prompted in order to explain that the inventor of the subject matter of the instant invention of the present application is an

AI machine, being a type of “creativity machine” named “DABUS” as indicated, *inter alia*, in the Application Data Sheet (ADS). The inventorship statement explains the nature of DABUS, and why it should be named as the inventor in the present application. In addition, such considerations directly pertain to the Substitute Statement and recordation of Assignment filed herewith the application submission. Based on the inventorship statement, it is submitted that the Director should vacate the Notice to File Missing Parts for being unwarranted and/or void.

Moreover, the additional arguments presented below rebut many of the statements made in the Decision on Petition, which if heeded as the legal advisor suggests, would render such actions potentially as fraudulent representation before the USPTO.

In the event that the Office decides to not grant this Petition, it is requested that a final decision be issued in the form of a Denial, rather than a subsequent Dismissal, in order for the Applicant to pursue the matter in Federal Court.

Further, in issuing such a Denial, Applicant requests that the Office grant a stay of proceedings regarding the time period for curing the Notice to File Missing Parts (e.g., a Suspension of Action under MPEP §709 and 37 CFR 1.103 in the current application, or allowing a Suspension of Action in a subsequently-filed continuation application to prevent a new Notice to File Missing Parts from being issued). Otherwise, Applicant will have to endure burdensome and costly procedural requirements to continually “daisy chain” newly-filed continuation applications, while the matter proceeds gradually through the Federal Court, in order to maintain the viability of their entitled IP rights.

Additional Arguments in Reply to the Decision on Petition

In the Opinion by the OPET legal advisor, sources were cited from Title 35 of the U.S. Code that define an inventor as an individual and/or person (see 35 U.S.C. §100(f), §102(a), §115, §116(a), and §256). It is then concluded that “the Patent statutes do not support the interpretation of ‘inventor’ to include a machine.”

Dr. Stephen Thaler, the Applicant and creator of DABUS, is of the honest opinion that the instant invention was conceived solely by DABUS, and that he had no input in connection with the invention that would entitle him to name himself as an inventor in accordance with the provisions of sections cited above.

The line of reasoning presented in the Opinion suggests that the referenced statutes are intended to compel an applicant to name a natural person even where that person does not meet inventorship criteria. This would force an applicant to name a person who does not meet the legal definition of an inventor. Failure to do so would prevent an applicant from receiving protection for an otherwise patentable invention. This reasoning cannot be correct.

It would be wrong to require an applicant to name a person other than an actual inventor solely for the purposes of meeting a strict literal application of statutes not drafted with regards to the possibility that an invention may be generated without a natural person who qualifies as an inventor. This would deceive the public with respect to the actual inventor of an invention, and provide undeserved credit to someone who did not exercise inventive skill.

Inventorship is not a right but a matter of fact. That is, no person or other entity has a “right” to be an inventor. Inventorship is determined and should only be determined on the basis of inventive contribution to an alleged invention. Therefore, the fact that AI systems currently do not have any rights in law cannot be determinative of whether or not an AI system can be considered an inventor in law.

The principles behind the naming the inventor(s) of an invention under 35 U.S.C. §115 have to be considered to their fullest extent, and not just limited to consideration of a person who is an inventor. The public has a right to know who is/are the actual inventor(s) of an invention disclosed in a patent application or patent. This becomes ever more relevant as AI systems generate ever more sophisticated technologies that are often beyond the human capacity to develop (such as those derived from the processing and analysis of vast amounts of data).

It would be legally wrong for an applicant to fail to identify the inventive contribution of an AI system as this would lead to a misrepresentation as to the origin of the inventive concept(s) disclosed in the patent application. Moreover, inaccurately listing a natural person for an invention devised by an AI system would dilute the very principle of naming the inventor and would be unfair. While it would not be unfair to the AI system, which currently has no legal rights or interest in law, it would be unfair to other human inventors because it would equate the work of legitimate human inventors with those who were merely associated with an AI system that actually made the invention.

It is accepted that an AI system such as DABUS cannot, under current law, own property. While there has been very extensive debate on how to handle recent and forecast advances in AI to date, there is no law that confers on an AI system any rights to own property.

In refusing to accept the naming of an AI system as an inventor, the Office 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. No such condition is laid down in the Statutes.

The motivation to innovate and disclose does not lie with the inventor, but rather with the invention's owner. It is the entity that will ultimately benefit from the invention that needs

the motivation, for instance the employer or other entity that invests in the development of new technology.

The patent system exists to encourage investment in research and development and in the dissemination of the results of that work, via the granting of a time-limited monopoly in return for disclosure. It is no more correct to suggest that inventions made by AI systems could be disseminated freely to the public than inventions made by humans. While inventions may be disseminated freely by their owners, free dissemination denies the owner of those inventions the prospect of the reward provided for by the patent system. The patent system exists expressly to motivate innovation and disclosure of inventions. That motivation is the same irrespective of who is the actual deviser of the invention.

The Opinion concludes by providing the following suggestion. It states:

We note, however, that the use of a machine as a tool by natural person(s) does not generally preclude natural person(s) from qualifying as an inventor or joint inventor if the natural person(s) contributed to the conception of the claimed invention. See MPEP §2137.01. Further, the Office normally presumes that the named inventor or joint inventors in the application are the actual inventors to be named on the patent. See MPEP §2137.01. Where an application names an incorrect inventor, the applicant could submit a request to correct inventorship under 37 CFR 1.48 See MPEP §602.01(c) et seq.; see also MPEP §706.03(a), subsection IV.

It is emphasized that DABUS cannot be construed as a tool in the context above, the term “autonomous” in its acronym (DABUS, Device for the Autonomous Bootstrapping of Unified Sentience) inherently indicates that a human is not operating DABUS when it is “conceiving” an invention, neither through suggestion, posing a problem, pruning, emphasizing, guiding, nor a host of other ancillary activities. In fact, DABUS is conducting a self-managed and self-regulated “exploration” of a myriad of conceivable possibilities, assessing such notional junctures wholly independently of any human intervention.

It is further emphasized that DABUS itself is the subject of several issued US patents. Namely, US Patent No. 6,018,727 for “Device for the autonomous generation of useful information,” US Patent No. 7,454,388 for “Device for the autonomous bootstrapping of useful information,” and US Patent No. 10,423,875 for “Device for the autonomous bootstrapping of unified sentence.”

In granting these patents, the Office has in essence accepted the existence of means to create new intellectual property via creative machine intelligence, implicitly legalizing the process by which DABUS arrives at a new invention. And yet, the fruits of such a process by DABUS, which is the subject of the instant invention, are being improperly excluded from such entitlement. By requiring a human inventor, the Office is effectively excluding any AI-generated invention from patent protection. Such an outcome does not square with the fact that the Office awarded patent rights for the inventions cited above for their very ability to generate inventions using AI.

The Office is also requested to take into account the position adopted by other Patent Offices in corresponding patent applications for the DABUS inventions, as well as the significant volume of debate currently circulating on the issue of AI-conceived inventions. More specifically, the European Patent Office (EPO) has accepted in the corresponding European Patent Application No. EP18275163.6, Patent Publication No. EP3564144A1, that DABUS is the true deviser of the invention. The UK Intellectual Property Office (UKIPO) has similarly accepted that DABUS is the actual deviser of the invention in its deliberations on the corresponding UK Patent Application No. GB1816909.4, Patent Publication No. GB2574909A. There would be no legal justification in the identification of different inventors by different Patent Offices for the same invention, as doing so would contradict the very principle of identifying the actual deviser of the invention.

While both the EPO and the UKIPO have objected to the *naming* of DABUS as the inventor, this is not on the basis of whether DABUS actually conceived the invention but on whether patent law (the European Patent Convention and the UK Patents Act 1977, respectively) permit the naming of an inventor that is not a natural person. The UKIPO has, though, agreed that the making of inventions by AI systems is a current and serious issue that must be debated in the context of patent law, and has also not excluded the possibility that current UK patent law might be able to be construed to permit the naming of an AI system as an inventor.

The World Intellectual Property Office (WIPO) has recently published a Conversation on Intellectual Property and Artificial Intelligence (September 2019) specifically on this question of law, similar to the USPTO Request for Comments on Patenting Artificial Intelligence Inventions of August 2019 and Request for Comments on Intellectual Property Protection for Artificial Intelligence Innovation of October 2019.

The fact that artificial intelligence systems, of which DABUS is an example, are conceiving new technological developments that meet the requirements of patentability is widely accepted, and therefore should not be ignored, especially by the government entities that manage and grant rights to patentable inventions, that is Patent Offices.

Finally, it is noted that, based on the above, 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. Therefore, in the absence of any cure to the outstanding Notice, Applicant submits that in the event that the Office decides to not grant this Petition, it is requested that a final decision be issued in the form of a Denial, rather than a subsequent Dismissal, in order for the Applicant to pursue the matter before a Federal Court.

Further, in issuing such a Denial, Applicant requests that the Office grant a stay of proceedings regarding the time period for curing the Notice to File Missing Parts (e.g., a Suspension of Action under MPEP §709 and 37 CFR 1.103 in the current application, or allowing a Suspension of Action in a subsequently-filed continuation application to prevent a new Notice to File Missing Parts from being issued). Otherwise, Applicant would have to endure burdensome and costly procedural requirements to continually file continuation applications, while the matter proceeds slowly through the Federal Courts, in order to maintain the viability of their entitled IP rights.

Inventorship Statement Previously Filed

A machine called “DABUS” conceived of the instant invention.

The instant invention was generated by a specific machine called “DABUS” (“device for the autonomous bootstrapping of unified sentience”) – a type of “Creativity Machine.” A Creativity Machine is a particular type of connectionist artificial intelligence. Such systems contain a first artificial neural network, made up of a series of smaller neural networks, that has been trained with general information from various knowledge domains. This first network generates novel ideas in response to self-perturbations of connection weights between neurons and component neural nets therein. A second “critic” artificial neural network monitors the first neural network for new ideas, and identifies those ideas that are sufficiently novel compared to the machine’s pre-existing knowledge base. The critic net also generates an effective response that in turn injects/retracts perturbations to selectively form and ripen ideas having the most novelty, utility, or value.

In the case of the instant invention, the machine only received training in general knowledge in the field, and proceeded to independently conceive of the invention, and to

identify it as novel and salient. If similar training had been given to a human student, the student rather than the trainer would meet the inventorship criteria as inventor.

In some instance of machine invention, a natural person might qualify as an inventor by virtue of having exhibited inventive skill in developing a program to solve a particular problem, by skillfully selecting data to provide to a machine, or by identifying the output of a machine as inventive. However, in the present case, DABUS was not created to solve any particular problem, nor was trained on any special data relevant to the instant invention. The machine rather than a person identified the novelty and salience of the instant invention.

A detailed description of how DABUS and a Creativity Machine functions is available in, among others, the following US patent publications: 5,659,666; 7,454,388 B2; and 2015/0379394 A1.

Inventorship should not be restricted to natural persons. A machine that would meet inventorship criteria if it were a natural person should also qualify as an inventor.

No United States law explicitly prohibits protection for autonomous machine inventions.

However, inventorship is restricted to “individuals” under, e.g., 35 U.S.C. §100(f) (1952) (“The term ‘inventor’ means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.”).

The restriction of inventorship to individuals was intended to prevent corporate inventorship. It was not the result of seriously considering autonomous machine invention, and should not therefore prohibit subsistence of intellectual property rights where there is no natural person who qualifies as an inventor. *See* Karl F. Milde, Jr., Can a Computer Be an “Author” or an “Inventor”?, 51 J. PAT. OFF. SOC’Y 378, 379 (1969). (“The closest that the Patent Statute comes to requiring that a patentee be an actual person is in the use, in Section 101, of the term

‘whoever.’ Here too, it is clear from the absence of any further qualifying statements that the Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”)

The output of autonomously inventive machines should be patentable if it meets the requirements of patentability set out in law. The primary purpose of patent law is to incentivize innovation, together with incentivizing the disclosure of information, and the commercialization and development of inventions. Allowing patents for machine output incentivizes the development of inventive machines, which ultimately promotes innovation. To the extent that patents are incentivizing commercialization and disclosure of information, there is no change in this function between a human and a machine-generated invention. Failure to permit patent protection for the output of autonomously inventive machines threatens to undermine the patent system by failing to encourage the production of socially valuable inventions. This will be particularly important as artificial intelligence becomes more sophisticated and likely a standard part of future industrial research and development. Clarifying now that patents are available for the output of autonomously inventive machines would provide certainty to businesses and innovators.

Patent law also protects the moral rights of human inventors; acknowledging machines as inventors would facilitate this function. At present, individuals are claiming inventorship of autonomous machine inventions under circumstances in which those persons have not functioned as inventors. See Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1079-1126 (2016). Failing to appropriately acknowledge inventive activity by machines weakens moral justifications for patents by allowing individuals to take credit for work they have not done. It is not unfair to machines who have no interest in being acknowledged, but it is unfair to other human inventors because it devalues their accomplishments by altering and diminishing the meaning of inventorship.

This could equate the hard work of creative geniuses with those simply asking a machine to solve a problem or submitting a machine's output. By contrast, acknowledging machines as inventors would also acknowledge the work of a machine's creators.

An "autonomous machine invention" should be assigned to the owner of the machine.

Machines should not own patents. They do not have legal personality or independent rights, and cannot own property.

The machine's owner should be the default owner of any intellectual property it produces and any benefits that would otherwise subsist in an inventor who is a natural person. This is most consistent with current ownership norms surrounding personal property (including both machines and patents).

In the instant application, we submit that DABUS should be acknowledged as the inventor of any resultant patents, with Stephen Thaler, the machine's owner, as the applicant and assignee of any such patents.

Stephen Thaler is prevented from listing himself as the inventor for the instant application.

Stephen Thaler, the creator of DABUS, is prohibited from listing himself as an inventor for the instant application because he has not contributed to the conception of the instant invention. DABUS performed what is traditionally considered the mental part of the inventive act. Based on DABUS's results, a skilled person could have reduced the invention to practice. Inaccurately listing himself as an inventor could subject Dr. Thaler to criminal sanctions. 18 U.S.C. 1001.

The Office presumes that the named inventor in an application is the actual inventor. See MPEP §2137.01.

If a machine cannot be an inventor, the first person to recognize the inventive nature of autonomous machine input may qualify as an inventor.

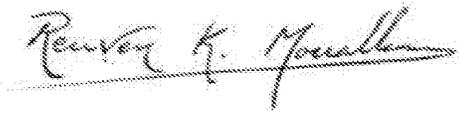
It has been argued that a natural person may claim inventorship of an autonomous machine invention even in situations in which that person was not involved in the development or operation of a machine by virtue of recognizing the relevance of a machine's output. This approach is questionable in cases in which the natural person has not made an inventive contribution to the disclosed invention in the accepted meaning of the term.

In some cases, recognition of the inventive nature of a computer's output may require significant skill, but in others, the nature of inventive output may be obvious. In the present case, DABUS identified the novelty of its own idea before a natural person did.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

/Ryan Abbott/
Dr. Ryan Abbott
Attorney for Applicant
Registration No. 68,178

Date: January 20, 2020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit: 1782
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For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

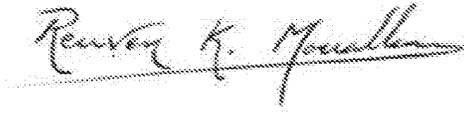
PETITION TO EXPEDITE 1.181 PETITION TO THE DIRECTOR

This Petition is a request to expedite the petition to the Director filed in the instant application under 37 CFR 1.181, for which the appropriate fee has been paid.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Reuven K. Mouallem", written in black ink on a white background.

Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: January 20, 2020

Electronic Patent Application Fee Transmittal				
Application Number:	16524532			
Filing Date:	29-Jul-2019			
Title of Invention:	FOOD CONTAINER			
First Named Inventor/Applicant Name:				
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-4-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE - 37 CFR 1.17(F)(GROUP I)	2462	1	200	200
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				200

Electronic Acknowledgement Receipt	
EFS ID:	38339637
Application Number:	16524532
International Application Number:	
Confirmation Number:	2644
Title of Invention:	FOOD CONTAINER
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-4-01-US
Receipt Date:	20-JAN-2020
Filing Date:	29-JUL-2019
Time Stamp:	12:34:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$200
RAM confirmation Number	E20201JC36029647
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions	181_Petition_FC-p.pdf	124160	no	13
			2207486819450b357b02f9faf87f50ac6050b45a		

Warnings:

Information:

2	Petition for review by the Office of Petitions	Petition_to_expedite_FC-p.pdf	33555	no	2
			1547aa7945a9b100182acdfe3c778539c5760c67		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30092	no	2
			97429fee3e0258e68b7475993f8457f82e808458		

Warnings:

Information:

Total Files Size (in bytes):	187807
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

N35111-GB

1

FOOD CONTAINER

Technical Field

5 The present invention relates to a food container suitable for both liquid and solid food products.

Background of the Invention

10 The packaging industry is well developed throughout the industrialised world and is subject to general norms and practices. On the whole, in the case of food or beverage packaging, this needs to be able to hold food or beverages in a food safe and hygienic condition, and to withstand storage and transportation; specifically to provide physical and barrier protection to the contents, to prevent
15 contamination and agglomeration, to provide security including tamper control, and to be convenient. In recent years, there have been moves to reduce the amount of packaging material used and also to focus on more environmentally friendly packaging, such as by use of recyclable and biodegradable materials. Lightweighting is a concept that has been prevalent in the industry for some time,
20 which aims to reduce the amount of packaging material utilised, its weight and also the energy required for its manufacture.

 In the case of packaging for liquid or other flowable materials, it is common to use bottles, cans, cartons, bags and the like. Generally, such packaging has either a generally cylindrical form, such as a drinks can or bottle, or a cuboidal
25 form, such as milk or juice cartons of the type commonly sold under the Elopak™ or Tetra Pak™ brands. This packaging is typically constituted by a smooth walled structure, often of multi-layered form, which minimises surface area and optimises the usable volume of the packaging. The contents of the packaging are often relied upon to maintain the form and integrity of the packaging, particularly during
30 transportation and storage. For instance, a beverage container will often rely on the pressure of the beverage within the container to keep the container in its original shape. This enables the walls of the container to be made very thin, to the

point that often once the container has been opened the walls become flimsy and are easy to collapse.

Food products are often sold in multiple units, such as cans and bottles, in which case it is common to tie these together with additional packaging, such as a sleeve, ring or yoke. This additional packaging also serves to stop individual packages from falling loose during transportation or storage, thereby reducing spoilage. However, such additional packaging adds further cost, both monetary and environmental.

The smooth nature of such packaging reduces a person's grip and it is not uncommon, particularly for large packages, for a person to struggle to handle the package without squashing it and causing spillage of the contents. This is particularly the case with large plastics drinks bottles.

Summary of the Present Invention

The present invention seeks to provide an improved container for food products. The invention is particularly suitable for, but not limited to, containers for liquids, such as beverages, and other flowable products.

According to an aspect of the present invention, there is provided a food or beverage container comprising: a wall defining an internal chamber of the container, the wall having interior and exterior surfaces and being of substantially uniform thickness; wherein the wall has a fractal profile with corresponding convex and concave fractal elements on corresponding ones of the interior and exterior surfaces; and wherein the convex and concave fractal elements form pits and bulges in the profile of the wall.

The present invention provides a food or beverage container having a container wall of different form than known in the art. The form taught herein provides a number of practical advantages over known packaging products.

Preferably, at least some of said pits and bulges have heads of a greater width than bases thereof.

Advantageously, the fractal profile of the wall permits coupling by inter-engagement of a plurality of said containers together. This feature can provide a

number of practical advantages, including being able to do away with separate and additional tie elements to hold together a plurality of containers, as is necessary with currently available packages that rely on sleeves or yokes.

5 Preferably, the wall of the container is flexible, thereby permitting flexing of the fractal profile thereof. The flexibility of the wall permits disengagement of containers coupled together, by appropriate squashing of one or more of the containers to alter the fractal shape of the containers at the point of inter-engagement.

10 Advantageously, the corresponding convex and concave fractal elements provide for increased surface area of both the interior and exterior surfaces of the container relative to a volume of the chamber. An increased surface area can assist in the transfer of heat into and out of the container, for example for heating or cooling the contents thereof.

15 In preferred embodiments, the container is generally cylindrical. It may have other shapes in other embodiments, such as generally spherical, oval and so on.

The container wall may be formed of metal, plastics, elastomeric material or glass. It may also be made from flexible or potentially flexible food products.

20 The fractal form of the container wall can also contribute to improved holding of the container, whereas known packages with a smooth surface can be slippery particularly when wet such as when condensation forms on the outside as a result of the contents being cold.

25 It is to be understood that although the main focus of this disclosure is to a food or beverage container, the teachings are not limited to such applications and could be used for containers for a wide variety of other uses.

Brief Description of the Drawings

30 Embodiments of the present invention are described below, by way of example only, in which:

Figure 1 is a schematic view in axial cross-section of a container according to an embodiment of the present invention;

Figures 2 and 3 are schematic axial partial cross-sectional views of an embodiment of two fractal containers in the process of being coupled together;

Figures 4 and 5 are schematic axial partial perspective views of the two fractal containers of Figures 2 and 3 in the process of being coupled together;

5 Figure 6 shows various views of another embodiment of fractal container;

Figures 7 to 9 show the coupling and uncoupling of two containers as per the embodiment of Figure 6; and

Figures 10 and 11 show, respectively, the coupling together of two further embodiments of fractal container.

10

Description of the Preferred Embodiments

The description that follows and its accompanying drawings disclose in broad terms the teachings herein. Elements that are common in the art are
15 omitted for the sake of clarity, such as but not limited to the specific materials that the container may be made of, typical volumes for the container and so on. Furthermore, the drawings are not to scale.

The concept disclosed herein makes use of a fractal profile for the wall of the container, which has been found to provide a number of advantageous
20 characteristics when applied to a container particularly for food and beverage products. The skilled person will appreciate that the profile of the wall will not be of pure fractal form but will have a form dictated by practical considerations such as the minimum practical or desirable size of its fractal components. Nevertheless, the relationship between elements of the profile is fractal in nature.
25 In practical embodiments, the fractal container may exhibit a fractal interpretation over two or more size scales.

Referring to Figure 1, this shows in schematic form a transverse cross-sectional view of an embodiment of container 10 for use, for example, for beverages. The container has a wall 12 with an external surface 14 and an
30 internal surface 16. The wall 12 has a substantially uniform thickness.

As with known containers, especially for food products, the wall 12 is preferably made of a food safe material or otherwise provided with a food safe

inner lining. For this purpose, and as known in the art, the wall may be a single layer material or may be made as a laminate of different materials. The wall may be made of or comprise a plastics material, a metal or metal alloy, an elastomeric material, and may even be made of glass. It is also envisaged that in some
5 embodiments the wall may be made from flexible or potentially flexible food product (for example pasta, dough, licorice and so on).

The wall 12 has a fractal profile which provides a series of fractal elements 18-28 on the interior and exterior surfaces 14, 16. It is to be understood that these fractal elements 18-28 have fractal characteristics within practical considerations
10 determined for example by the limits of the chosen manufacturing/forming process, the material chosen for wall, the thickness the wall and so on. In practice, the fractal elements 18-28 will typically reach a minimum practical dimension determined by such constraints.

The fractal elements 18-28 of the wall create, as a result of the wall 12
15 having a generally uniform thickness, a series of pits 40 and bulges 42 in the profile of the wall, in which a pit 40 as seen from one of the exterior or interior surfaces 12, 14 forms a corresponding bulge 42 on the other of the exterior or interior surfaces 12, 14, and vice versa. This characteristic is exhibited both on a large scale, for instance with the pits 40 and bulges 42 identified by the reference
20 numerals in Figure 1, but also with the smaller ones of the fractal elements 18-28. The pits 40 and bulges 42 could be described as opposite images of one another on the exterior 14 and interior 16 sides of the walls 12. Repeating features (for instance pits and bulges) across a variety of scales creates the fractal form or profile on the container surfaces. The fractal profile may extend across the entire
25 area of the container surfaces or only over selected surfaces or surface portions. Thus, the fractal profile may in some embodiments extend over the entire container, while in other embodiments the majority of the container can be smooth with only the contact areas between containers having fractal formations.

It will be appreciated that Figure 1 is an axial cross-sectional view only.
30 The fractal elements 18-28 may in some embodiments extend in linear fashion along the length of the wall 12, but in other embodiments the elements 18-28 may be of pure fractal form of a type akin, so to speak, to cauliflower or broccoli florets,

so as to create an array of distinct nodules, both circumferentially and also longitudinally along the wall 12.

The container 10 may be of generally cylindrical form, such that the cross-section shown in Figure 1 extends into and/or out of the plane of the paper.

5 In such embodiments, the container 10 will include a top and a base, typically of any type known in the art. In other embodiments, the container 10 may have any suitable non-cylindrical form, examples of which the person skilled in the art will be familiar with.

The container 10 of this embodiment, and of the other embodiments
10 described and contemplated herein, provides a number of practical advantages. One such advantage can be seen with reference to the embodiment shown in Figures 2 to 5.

Referring first to Figures 2 and 3, these are axial cross-sectional views of two containers 100, 110 similar to the view of Figure 1 but in which only a part of
15 the circumference of the wall of each container can be seen. Each container 100, 110 has, as with the embodiment of Figure 1, a wall 12 having exterior 14 and interior 16 surfaces and fractal elements 18-28 formed in the wall and present in the exterior and interior surfaces 14, 16.

The containers 100,110 have the same shapes and fractal profiles, which
20 are also symmetrical as will be apparent from the Figures. This correspondence in shapes enables the pits 40 and corresponding bulges 42 in the walls of the two containers 100, 110 to engage into one another so as to interlock along a portion of their circumferences, as can be seen in particular in Figure 3. In this embodiment, the pits 40 and bulges 42 have the same, but opposite, shapes such
25 that they are able to fit snugly into one another. This can be achieved, in some embodiments, by creating two identical fractal sheets and curving them in opposite directions such that one surface of one the sheet becomes the outer surface of one container and the same surface of the other sheet becomes the inner surface of the other container.

30 Furthermore, in the embodiments of Figure 1 to 3, the pits 40 and bulges 42 have what could be described as enlarged heads with narrower neck portions, in which the fractal elements extend to a smaller width or diameter d at or close to

their bases compared to a larger width or diameter \underline{D} further from their bases. This characteristic of enlarged heads may be prevalent in all of the pits 40 and bulges 42 but in other embodiments may be exhibited in only a portion of the fractal formations in the wall 12.

5 As can be seen in Figure 3 in particular, the coupling of the two containers 100, 110 occurs, in this example, because the containers have a generally curving or rounded form, in which case the containers will only touch, and inter-engage, at their tangents.

10 In other embodiments that have different general overall shapes, such as square or polygonal, the coupling of the fractal formations of two containers may occur across an entire side wall or a portion of one or more of the side walls of the containers.

15 When used for packaging, this characteristic enables multiple containers to be coupled together without the need for any other tie mechanism of the types commonly used in the art. In other words, two or more containers 100, 110 may be joined together solely by inter-engagement of some of the fractal formations of the container walls 12. The containers need not have tessellating shapes, as it is only necessary for one or more of the fractal formations of each of the containers to inter-engage in order to achieve coupling.

20 Figures 4 and 5 show a view of another embodiment similar to that of Figures 2 and 3, in which the fractal formations of the containers 100, 110 extend generally linearly for at least a short distance longitudinally, in other words in two-dimensional manner rather than in a three-dimensional manner as a floret would. In this embodiment, the same fractal elements of the containers 100, 110 shown in
25 Figures 4 and 5 will inter-engage longitudinally along their length, and if they extend along the entire length of the containers they will then inter-engage equally along the length of the containers. In the case of three-dimensional fractal elements, of what could be described as floret form, inter-engagement of two or more containers along a tangent thereof will involve the coupling of multiple fractal
30 formations along the lengths of the containers.

 The containers can be uncoupled by squeezing the containers 100, 110, for example from either side of the coupling zone, to cause the engaged pits 40 and

bulges 42 to deform and open out. A user can in this manner separate the containers 100, 110 with relative ease.

Referring now to Figure 6, this shows another embodiment of fractal container 200 having a fractal form similar to that of the embodiments of Figures 1 to 5. In this embodiment, the fractal formations extend in linear manner along the length of the container 200, as can be seen in particular in the perspective view of Figure 6. The container 200 can have any of the characteristics described elsewhere herein.

With reference to Figure 7, in this embodiment the pits 240 and bulges 242 are not the same shape or size to fit one within the other precisely, as is the case with the embodiments shown in Figures 2 to 5. Nevertheless, the pits 240 and bulges 242 are still able to engage partially, as will be apparent in the Figure. The two containers can be tied to one another by adhesive posited into the interstice or pocket 244 between the partially engaged pits 240 and bulges 242. More than two containers may be coupled together in this manner, in a fully or partially tessellating manner depending upon the shapes of the containers.

The containers 200 can be separated from one another by applying pressure to one or both of the containers, as shown in Figure 8. In the example shown in this Figure, the pressure may be applied diametrically opposite the adhesive coupling 244, as per the arrow in the Figure. This pressure will cause deformation of the walls 12 of the containers and, as a consequence, apply shear stress (and typically also compressive and tensile forces) to the adhesive in the pocket 244, which will break or loosen. It will be appreciated that the containers could be squeezed from other directions and achieve the same result.

Once the adhesive coupling has been released, the containers 200 can be separate from one another as shown in Figure 9.

Referring now to Figure 10, this shows in schematic form partial wall profiles of two fractal containers 300, 300' according to another embodiment of the present invention. In this embodiment, the wall has what could be described as a fractal random walk profile, with zig-zag wall elements of different lengths l_1 - l_n .

The two container profiles 300, 300' preferably have substantially identical reversed or replicated profiles in at least a part of their extent, such that they can

couple together in a precise nesting arrangement, as shown in Figure 10B. The two fractal elements 300, 300' can thus be coupled together, typically by a combination of mechanical inter-engagement and friction. The skilled person will appreciate that in this embodiment, as with the following embodiment shown in

5 Figure 11, the profile does not include any fractal elements having bulges or pits with enlarged heads, as occurs with the embodiments of Figures 1 to 9, although it is not excluded that in some embodiments they may have such characteristics.

Figure 11 shows another example, in which the profiles of the two containers 400, 400' only partially nest one into the other. It will be appreciated

10 that the degree of coupling of the containers together can be altered by adjusting the fractal profiles of the two inter-engaging surfaces to one another.

In the preferred embodiments, the lengths l_1 - l_n of the zig-zag wall elements are advantageously determined as statistical fractals whose dimensions may be tuned via random walk parameters to optimize the interlocking of two or more

15 fractal containers. Bonding between containers can be relatively strong with an increased number and size of capture points and weaker with fewer capture points.

In the embodiments of Figures 10 and 11, inter-engagement can be provided by the profiles themselves and optionally, as per the above described

20 embodiments, assisted by the use of adhesive between adjacent containers.

The forms of container disclosed herein provide a number of other advantages in addition to an increased ability to couple multiple containers together.

First, the fractal nature of the outer surface of the container provides a

25 better grip of the container compared to a container having a smooth outer surface. This can be advantageous particularly with larger or heavier containers, in respect of which a good grip can be obtained with less holding pressure on the container wall.

Moreover, the corresponding convex and concave fractal elements provide

30 for increased surface area of both the interior and exterior surfaces of the container relative to a volume of the chamber. This can be useful in increasing the

heat transfer characteristics of the container, for instance to cool or heat its contents.

The skilled person will appreciate that the teachings herein can provide other advantages and characteristics not exhibited in containers known in the art.

5

CLAIMS

1. A food or beverage container comprising:
a wall defining an internal chamber of the container, the wall having interior
5 and exterior surfaces and being of substantially uniform thickness;
wherein the wall has a fractal profile with corresponding convex and
concave fractal elements on corresponding ones of the interior and exterior
surfaces; and
wherein the convex and concave fractal elements form pits and bulges in
10 the profile of the wall.

2. A food or beverage container according to claim 1, wherein at least
some of said pits and bulges have heads of a greater width than bases thereof.

3. A food or beverage container according to claim 1 or 2, wherein the
15 fractal profile of the wall permits coupling by inter-engagement of a plurality of said
containers together.

4. A food or beverage container according to claim 1, 2 or 3, wherein
20 the wall of the container is flexible, permitting flexing of the fractal profile thereof.

5. A food or beverage container according to claim 4, wherein the
flexibility of the wall permits disengagement of said or any coupling of a plurality of
said containers together by flexing of inter-engaged fractal elements of coupled
25 containers.

6. A food or beverage container according to any preceding claim,
wherein at least some of the pits and bulges have inter-engaging or corresponding
shapes and sizes such that a bulge of one container can fit within a pit of an
30 equivalent container, thereby to couple two containers together.

7. A food or beverage container according to claim 6, wherein the pits and bulges of said two containers nest precisely within one another.

5 8. A food or beverage container according to claim 6, wherein the pits and bulges of said two containers nest partially within one another.

9. A food or beverage container according to any preceding claim, wherein two or more said containers can be coupled together by an adhesive disposed between facing pits and bulges of adjacent containers.

10

10. A food or beverage container according to any preceding claim, wherein the corresponding convex and concave fractal elements provide for increased surface area of both the interior and exterior surfaces of the container relative to a volume of the chamber.

15

11. A food or beverage container according to any preceding claim, wherein the container is generally cylindrical.

12. A food or beverage container according to any preceding claim, wherein the wall is formed of metal, plastics, elastomeric material or glass.

20

13. A food or beverage container according to any one of claims 1 to 11, wherein the wall is formed from flexible food product.

ABSTRACT

FOOD CONTAINER

5 A container (10) for use, for example, for beverages, has a wall (12) with
and external surface (14) and an internal wall (16) of substantially uniform
thickness. The wall (12) has a fractal profile which provides a series of fractal
elements (18-28) on the interior and exterior surfaces (14-16), forming pits (40)
and bulges (42) in the profile of the wall and in which a pit (40) as seen from one
10 of the exterior or interior surfaces (12, 14) forms a bulge (42) on the other of the
exterior or interior surfaces (12, 14). The profile enables multiple containers to be
coupled together by inter-engagement of pits and bulges on corresponding ones of
the containers. The profile also improves grip, as well as heat transfer into and out
of the container.

15

Figure 6 to accompany the Abstract

1/6

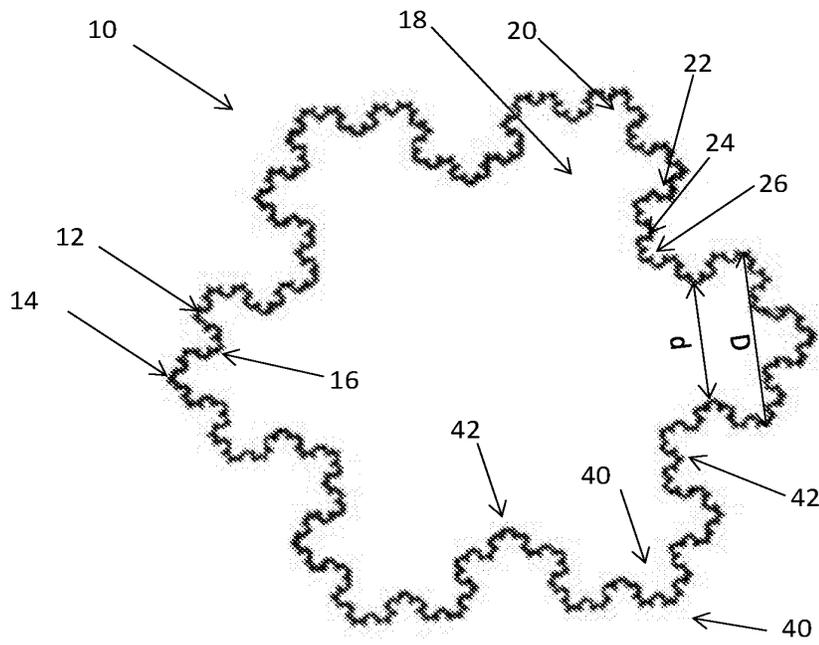


Fig. 1

2/6

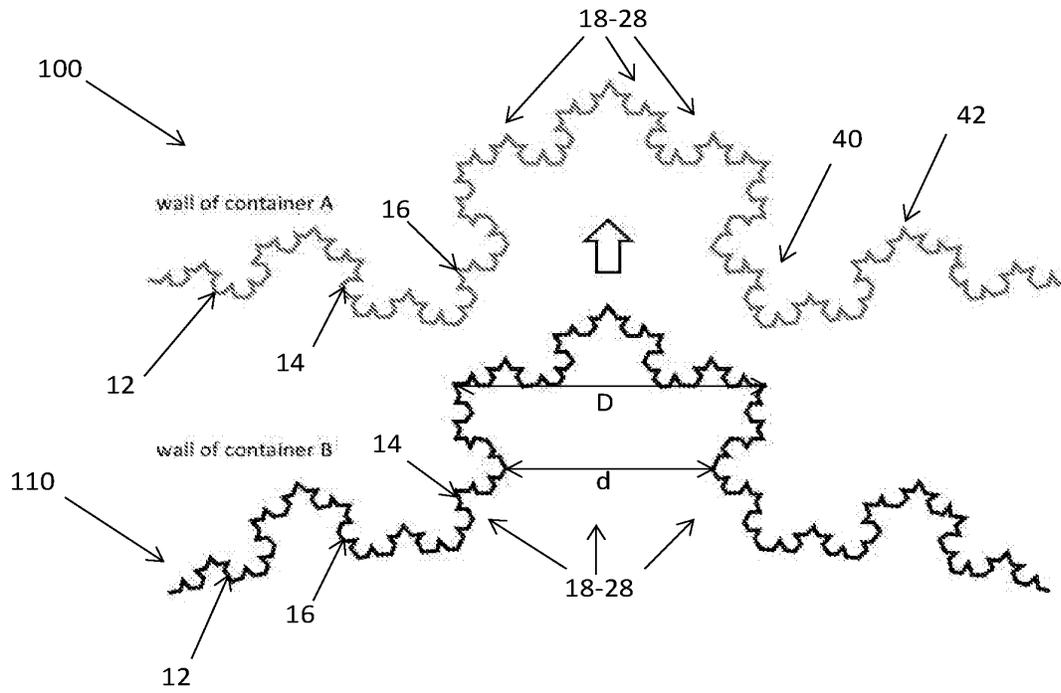


Fig. 2

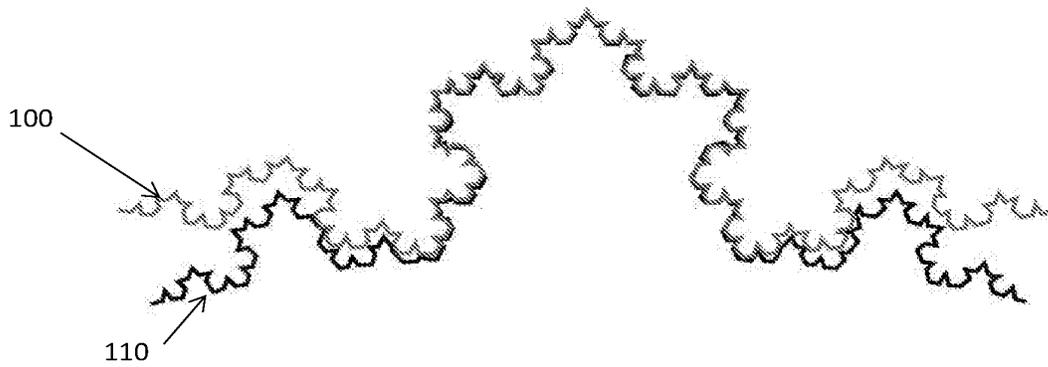
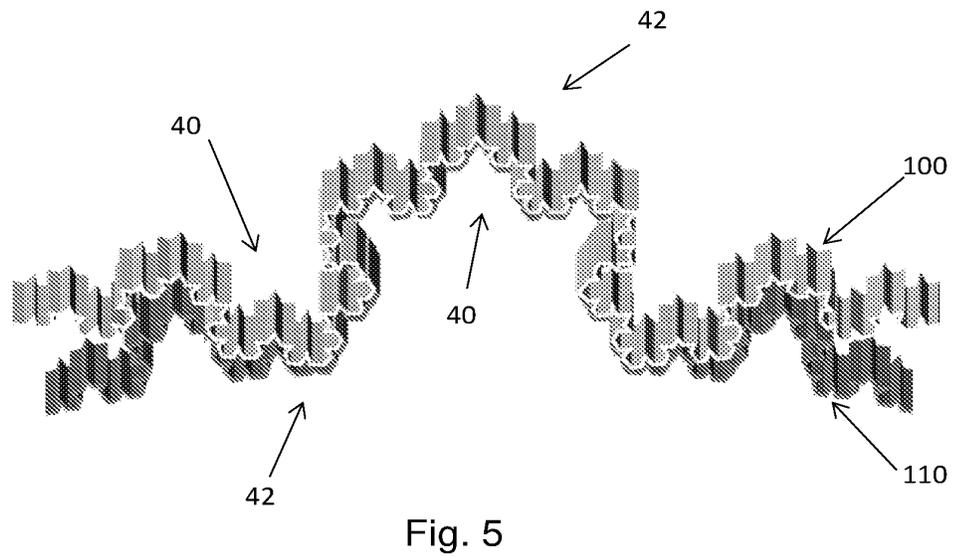
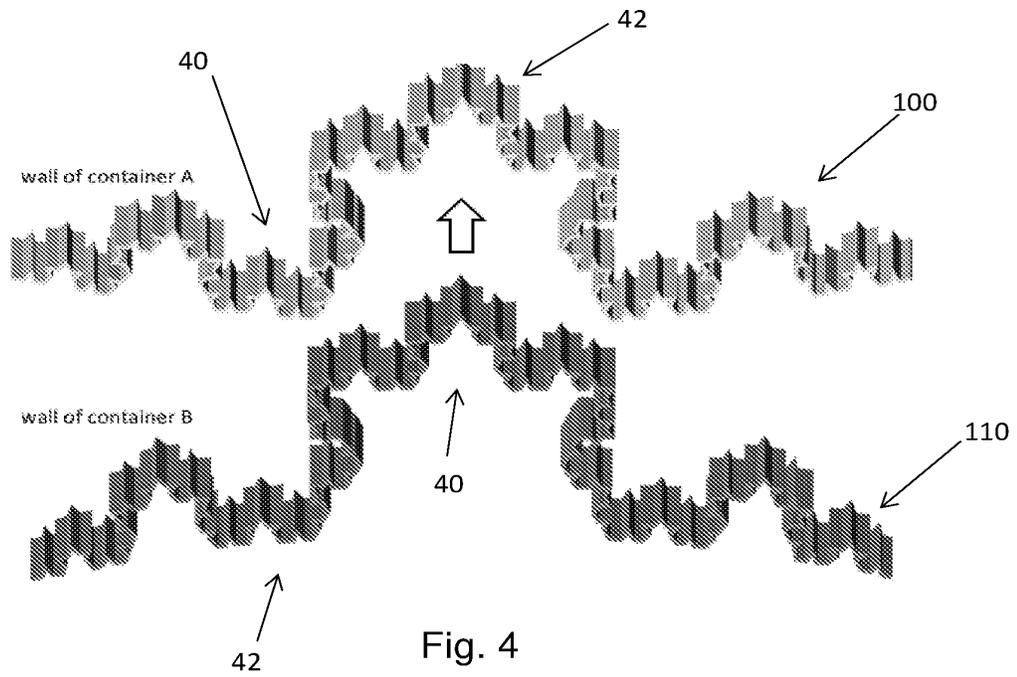


Fig. 3

3/6



4/6

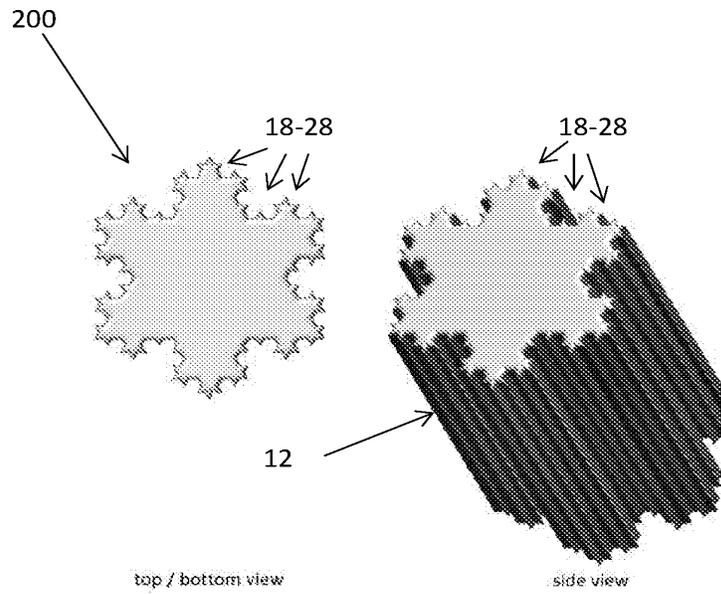


Fig. 6

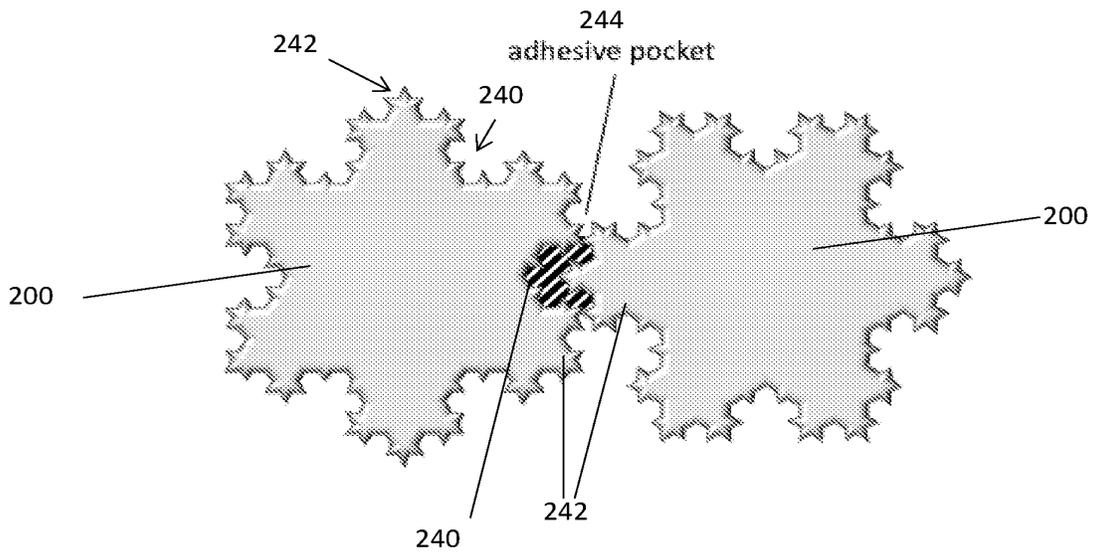


Fig. 7

5/6

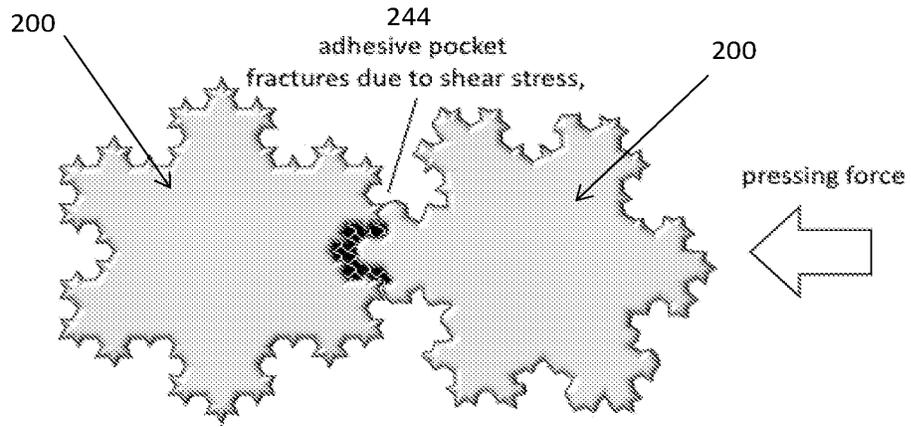


Fig. 8

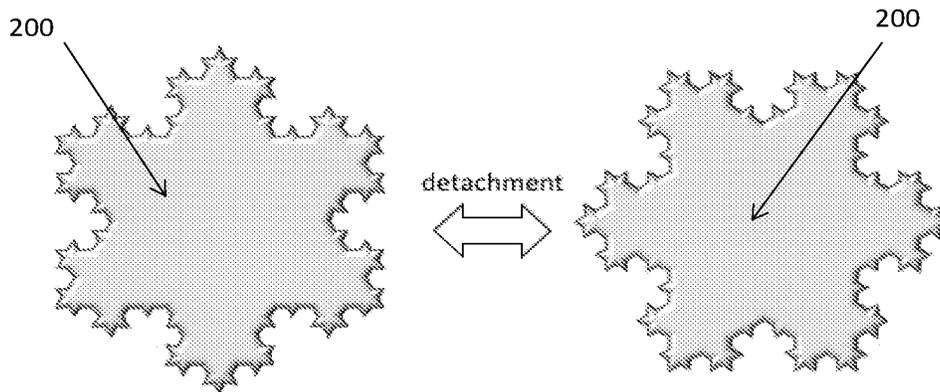


Fig. 9

6/6

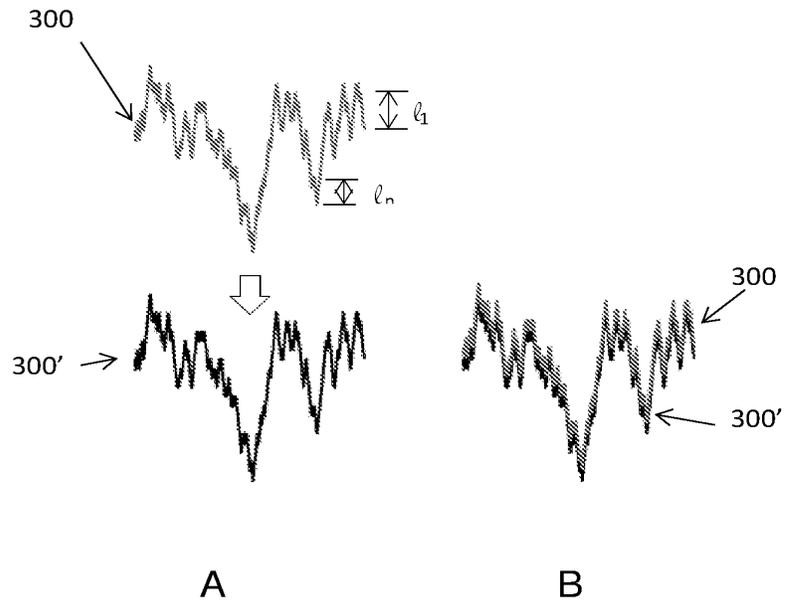


Fig. 10

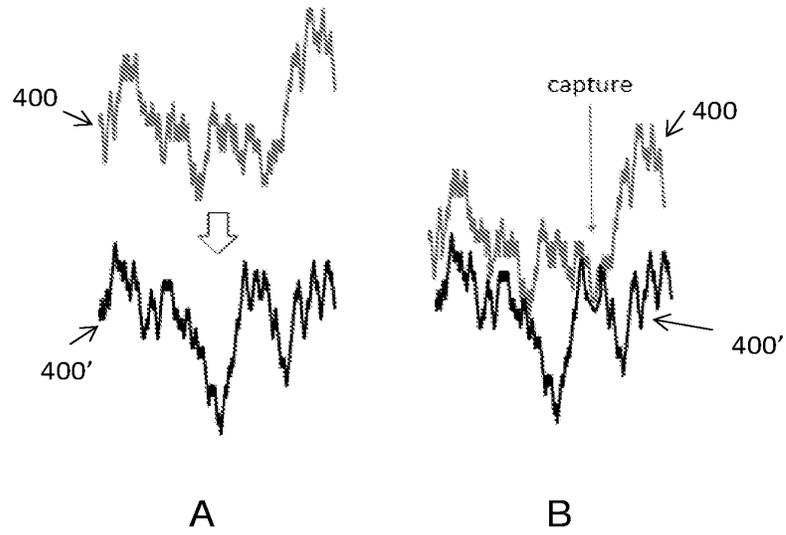


Fig. 11



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Your Ref: RJ/N35111-GB

17 October 2018

PATENT APPLICATION NUMBER 1816909.4

We have received your request for grant of a patent and recorded its details as follows:

Filing date(*)	17 October 2018	
Earliest priority date (if any)		
Applicant(s) / contact point	Stephen L. THALER	
Application fee paid	Yes	
Description (number of pages or reference)	10	
Certified copy of referenced application	Not applicable	
If description not filed	Not applicable	
Claims (number of pages)	2	
Drawings (number of pages)	6	
Abstract (number of pages)	1	
Statement of inventorship (Form 7)	No, file by 17 February 2020	
Request for search (Form 9A)	Yes	
Request for examination (Form 10)	Yes	
Priority Documents	None	
Other Attachments Received	Pre-conversion archive	N35111-GB (FC) Spec as Filed.zip
	PDAS Registration Form	PDASRegistration.pdf
	Fee Sheet	FeeSheet.pdf

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Digest of Submission	AE:28:B6:DA:21:20:1D:69:A6:19:A4:93:46:53:D 6:86:BB:0A:B3:95	
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Electronic Acknowledgement Receipt	
EFS ID:	38554974
Application Number:	16524532
International Application Number:	
Confirmation Number:	2644
Title of Invention:	FOOD CONTAINER
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-4-01-US
Receipt Date:	11-FEB-2020
Filing Date:	29-JUL-2019
Time Stamp:	15:14:37
Application Type:	Utility under 35 USC 111(a)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Interim Copy of the Foreign Priority Document	FC_Master_EP_Patent_Application_as_Filed.pdf	687410 2bc943b03f1726ec947d4e9941d9bec3afcae8f	no	21

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/524,532	07/29/2019		50567-4-01-US	2644
89602	7590	04/22/2020	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			1782	
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P.O. Box 1450
Alexandria, VA 22313-1450
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FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

In re Application of :
Application No.: 16/524,532 :
Filed: July 29, 2019 : DECISION ON PETITION
Attorney Docket Number: 50567-4-01-US :
For: FOOD CONTAINER :
:

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 1, 2019 Notice to File Missing Parts of Nonprovisional Application.¹

The petition to vacate the August 1, 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 representative of DABUS and the Applicant.
- A statement under 37 CFR 3.73(c) identifying Stephen L. Thaler as the assignee of the

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

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 1, 2019 (“August 1, 2019 Notice”). The August 1, 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 1, 2019 Notice, and to vacate the August 1, 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 1, 2019 Notice.

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.

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.

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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 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

³ Inventorship Statement at 2.

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

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proper.⁷ Petitioner requests that the August 1, 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. 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

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(e) (“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...”).

¹³ 734 F.3d 1315 (Fed. Cir. 2013).

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 (“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

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 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(I); *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1227-28 (Fed. Cir. 1994).

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 1, 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.

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,

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.

²³ Reconsideration Petition at 4.

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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

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 1, 2019 Notice.

The time period to reply to the Notice to File Missing Parts of Nonprovisional Application of August 1, 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

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).

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expect no additional resetting of the time period for reply to the Notice to File Missing Parts of Nonprovisional Application of August 1, 2019 in the above-identified application or any other stay of proceedings in the above-identified application.

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

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Apr 23, 2020 06:31:38 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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Application	Document	Mailroom Date	Attorney Docket No.
16524532	PET.DEC.OIPE	04/22/2020	50567-4-01-US
	PET.DEC.OIPE	04/22/2020	50567-4-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

PATENT APPLICATION FEE DETERMINATION RECORD					Application or Docket Number 16/524,532						
Substitute for Form PTO-875											
APPLICATION AS FILED - PART I											
(Column 1)		(Column 2)			SMALL ENTITY		OR	OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA			RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)		
BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A			N/A	75		N/A			
SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A			N/A	330		N/A			
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A			N/A	380		N/A			
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	9	minus 20 =			x 50 =	0.00	OR				
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	1	minus 3 =			x 230 =	0.00					
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).					0.00					
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))						0.00					
* If the difference in column 1 is less than zero, enter "0" in column 2.					TOTAL	785		TOTAL			
APPLICATION AS AMENDED - PART II											
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x	=	OR	x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x	=	OR	x	=	
	Application Size Fee (37 CFR 1.16(s))								OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								OR		
					TOTAL ADD'L FEE			OR	TOTAL ADD'L FEE		
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	x	=	OR	x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	x	=	OR	x	=	
	Application Size Fee (37 CFR 1.16(s))								OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								OR		
					TOTAL ADD'L FEE			OR	TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.											
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".											
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.											



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,532	07/29/2019		50567-4-01-US

CONFIRMATION NO. 2644

FORMALITIES LETTER

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 04/24/2020

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted***Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The application data sheet or inventor's oath or declaration does not identify each inventor by his or her legal name.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
 The surcharge is due for any one of:
 - late submission of the basic filing fee, search fee, or examination fee,
 - late submission of inventor's oath or declaration,
 - filing an application that does not contain at least one claim on filing, or
 - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ **80** surcharge.
- \$(**0**) previous unapplied payment amount.
- \$ **80** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice".
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jltippett/


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 UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/524,532	07/29/2019		50567-4-01-US

CONFIRMATION NO. 2644
WITHDRAWAL NOTICE

 89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL

Date Mailed: 04/24/2020

Letter Regarding a New Notice and/or the Status of the Application

If a new notice or Filing Receipt is enclosed, applicant may disregard the previous notice mailed on 12/13/2019. The time period for reply runs from the mail date of the new notice. Within the time period for reply, applicant is required to file a reply in compliance with the requirements set forth in the new notice to avoid abandonment of the application.

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebc>.

If the reply is not filed electronically via EFS-Web, the reply must be accompanied by a copy of the new notice.

If the Office previously granted a petition to withdraw the holding of abandonment or a petition to revive under 37 CFR 1.137, the status of the application has been returned to pending status.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jltippett/



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/524,532	07/29/2019	1782	785	50567-4-01-US	9	1

CONFIRMATION NO. 2644

FILING RECEIPT

89602
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad, 4083201
 ISRAEL



Date Mailed: 04/24/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

None

Applicant(s)

Stephen L. Thaler, St. Charles, MO;

Assignment For Published Patent Application

Stephen L. Thaler

Power of Attorney:

Reuven Mouallem--63345
 Ryan Abbott--68178

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

EUROPEAN PATENT OFFICE (EPO) 18275163.6 10/17/2018 No Access Code Provided
 UNITED KINGDOM 1816909.4 10/17/2018 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 07/31/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/524,532**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

FOOD CONTAINER

Preliminary Class

428

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign

page 2 of 4

patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Apr 24, 2020 04:27:41 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

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Application	Document	Mailroom Date	Attorney Docket No.
16524532	NTC.MISS.PRT	04/24/2020	50567-4-01-US
	M327	04/24/2020	50567-4-01-US
	APP.FILE.REC	04/24/2020	50567-4-01-US

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If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

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PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM



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.
16/524,532	07/29/2019		50567-4-01-US	2644
89602	7590	05/15/2020	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			1782	
			NOTIFICATION DATE	DELIVERY MODE
			05/15/2020	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):

FPIP-USPTO@FlashPointIP.com
 ydm@FlashPointIP.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Application of :
Application No. 16/524,532 : DECISION ON PETITION
Filed: 29 Jul 2019 :
For FOOD CONTAINER :

This is a decision on the petition pursuant to 37 C.F.R. § 5.25, filed July 29, 2019, seeking a retroactive license for foreign filing under 35 U.S.C. § 184.

The petition is **DISMISSED**.

This decision concerns European application number 18275163.6 filed October 17, 2018 and UK application number 1816909.4 filed October 17, 2018.

A grantable petition pursuant to 37 C.F.R. § 5.25 must be accompanied by:

- (1) a listing of each of the foreign countries in which the unlicensed patent application material was filed;
- (2) The dates on which the material was filed in each country;
- (3) A verified statement (oath or declaration) containing:
 - (i) An averment that the subject matter in question was not under a secrecy order at the time it was filed abroad, and that it is not currently under a secrecy order,
 - (ii) A showing that the license has been diligently sought after discovery of the proscribed foreign filing, and
 - (iii) An explanation of why the material was filed abroad through error without the required license under § 5.11 first having been obtained; and,
- (4) The required fee (§ 1.17(g) of this chapter).

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The petition complies with requirements (1), (2), (3)(i), and (4) of 37 C.F.R. § 5.25. Petitioner has provided a listing of each of the foreign countries in which the unlicensed patent application material was filed;¹ the dates on which the material was filed in another country;² an averment that the subject matter in question was not under a secrecy order at the time it was filed abroad, and that it is not currently under a secrecy order;³ and, the required petition fee.

The petition fails to comply with requirements (3)(ii) and (3)(iii) of 37 C.F.R. § 5.25. A discussion follows.

The relevant parties are as follows:

- Declarant Thaler is the applicant.⁴
- Both foreign filings were made by declarant Thaler's European counsel.⁵ The name of said European counsel has not been revealed.

Regarding requirement (3)(ii) of 37 C.F.R. § 5.25, the record does not establish whether declarant Thaler and the European counsel was each aware of the requirements of 35 U.S.C. § 184 and 37 C.F.R. § 5.11(a) at the time of their involvement in the proscribed foreign filing. As such, it cannot be discerned whether this petition was diligently filed.

In the sixth paragraph of his verified statement, declarant Thaler asserts "[p]ursuant to 37 C.F.R. § 5.25(a)(3)(ii), I was first informed by my US patent counsel when they began to prepare filing for a patent before the USPTO in which they determined the potential need for a foreign filing license on June 13, 2019." However, it is not clear what he was first informed of on this date.

Moreover, declarant Thaler asserts in the seventh paragraph of his verified statement that at the time of the foreign filing, his European counsel was not aware of the requirements of 35 U.S.C. § 184 and 37 C.F.R. § 5.11(a). However, declarant Thaler does not have firsthand knowledge of what another person did or did not know.

1 Europe and the UK. Petition, page 1 and Thaler verified statement, paragraph 3.

2 October 17, 2018. *Id.*

3 Thaler verified statement, paragraph 5.

4 Application Data Sheet included on initial deposit, page 1.

5 Thaler verified statement, paragraph 7.

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Regarding requirement (3)(iii) of 37 C.F.R. § 5.25, first, the second paragraph of the Thaler verified statement states he is not certain whether a foreign filing license is necessary.

35 U.S.C. § 1.84(a) provides,

(a) FILING IN FOREIGN COUNTRY.—Except when authorized by a license obtained from the Commissioner of Patents a person shall not file or cause or authorize to be filed in any foreign country prior to six months after filing in the United States an application for patent or for the registration of a utility model, industrial design, or model in respect of an invention made in this country. A license shall not be granted with respect to an invention subject to an order issued by the Commissioner of Patents pursuant to section 181 without the concurrence of the head of the departments and the chief officers of the agencies who caused the order to be issued. The license may be granted retroactively where an application has been filed abroad through error and the application does not disclose an invention within the scope of section 181.

As is made clear by 35 U.S.C. § 1.84(a) cited above, the USPTO has no authority to grant a petition under 37 C.F.R. § 5.25 where petitioner seeks the retroactive foreign filing license out of an abundance of caution. Rather, the USPTO has only the authority to grant a petition under 37 C.F.R. § 5.25 where petitioner establishes that the proscribed application was filed abroad through error. Accordingly, seeking a retroactive foreign filing license out of an abundance of caution does not satisfy the standard set forth by 35 U.S.C. § 1.84(a). It is further noted that the USPTO will not determine whether a foreign filing license was required before proscribed application was filed abroad. The USPTO will only determine whether the proscribed filing was made through error upon the filing of a petition under 37 C.F.R. § 5.25 and consideration of the merits of the showing made therein. Declarant Thaler must determine whether a foreign filing license was required before the proscribed application was filed and expressly indicate the result of his determination on renewed petition.

Second, the petition fails to describe any error which resulted in the filing of the foreign application without the required license under § 5.11 first having been obtained. As set forth above, it has not been established whether declarant Thaler and the European counsel were aware of the requirements of 35 U.S.C.

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Page 4

§ 184 and 37 C.F.R. § 5.11(a) at the time of their involvement in the proscribed foreign filing.

Third, 37 C.F.R. § 5.25(b) requires "statements by those persons having personal knowledge of the acts regarding filing in a foreign country." It follows that the verified statement should be made by the person or persons who had direct knowledge and made the decision to file in a foreign country before securing a foreign filing license. The renewed petition must expressly identify who made the decision to file in a foreign country before securing a foreign filing license, and include a verified statement from that/those individual(s).

Similarly, the renewed petition must expressly identify the European counsel who filed the application in a foreign country before securing a foreign filing license, and include a verified statement from that individual.

Each declarant must indicate whether he/she was aware of the requirements of 35 U.S.C. § 184 and 37 C.F.R. § 5.11(a) at the time of his/her involvement in the proscribed foreign filing.

Fourth, the petition does not explain how the proscribed foreign filing came to be filed. Perhaps the proscribed foreign filing was filed as a result of declarant Thaler sending instructions to the European counsel to effectuate the filing?

Fifth, 37 C.F.R. § 5.25(b) sets forth, *in pertinent part*: "[t]he showing of facts...should be accompanied by copies of any necessary supporting documents such as letters of transmittal or instructions for filing." It follows that on renewed petition, each declarant must indicate whether any instructions regarding the filing were provided in writing, and if so, a copy of the instruction letter(s) must be included therewith, along with an English translation (if applicable).

Sixth, declarant Thaler and the European counsel must address the following on renewed petition:

- What checks does the European counsel have when filing an application to ensure that a foreign application is not filed when a foreign filing license is required by 35 U.S.C. § 184 and 37 C.F.R. § 5.11(a)?
- If checks were in place, why was the procedure not followed in this instance? In addition, when were these checks implemented?

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- Has declarant Thaler filed abroad previously, or was this the first time? Similarly, has the European counsel filed abroad previously with a US-based inventor, or was this the first time?

Accordingly, the provisions of 37 C.F.R. § 5.25 not having fully been met, the petition is **DISMISSED**. A response is due within **TWO MONTHS** of the mailing date of this decision. Extensions of time of this period of reply may be obtained under 37 C.F.R. § 1.136(a). In the absence of a timely response, such dismissal will be made final and the final action under 35 U.S.C. § 185 will be taken.

The reply should include a cover letter entitled "Renewed Petition under 37 C.F.R. § 5.25." This is not a final agency action within the meaning of 5 U.S.C § 704.

The renewed petition should indicate in a prominent manner that the attorney handling this matter is Paul Shanowski, and may be submitted by mail,⁶ hand-delivery,⁷ or facsimile.⁸ If Petitioner has the capability to file follow-on documents, a response may be submitted via the electronic filing system, EFS-Web⁹ **and the document code should be RETR.LICENSE**. If responding by mail, Petitioner is advised not to place the undersigned's name on the envelope. Only the information that appears in the footnote should be included - adding anything else to the address will delay the delivery of the response to the undersigned.

Any verified statement (notarized oath) or declaration (including reference to Section 1001 of Title 18 of the U.S.C.) included on renewed petition must include the clause:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such

⁶ Mail Stop Petition, Commissioner for Patents, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

⁷ Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

⁸ (571) 273-8300: please note this is a central facsimile number.

⁹ <https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html>

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Page 6

willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Telephone inquiries regarding *this decision* should be directed to Attorney Advisor Paul Shanowski at (571) 272-3225.¹⁰ All other inquiries concerning examination procedures should be directed to the Technology Center.

/Paul Shanowski/
Paul Shanowski
Attorney Advisor
Office of Petitions

¹⁰ Petitioner will note that all practice before the Office should be in writing, and the action of the Office will be based exclusively on the written record in the Office. See 37 C.F.R. § 1.2. As such, Petitioner is reminded that no telephone discussion may be controlling or considered authority for Petitioner's further action(s).

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

May 15, 2020 04:22:02 AM

Dear PAIR Customer:

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Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

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Application	Document	Mailroom Date	Attorney Docket No.
16524532	PETDEC	05/15/2020	50567-4-01-US

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Approved for use through 11/30/2020. OMB 0651-0031

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NOTICE OF APPEAL FROM THE EXAMINER TO THE PATENT TRIAL AND APPEAL BOARD		Docket Number (Optional) 50567-4-01-US
I hereby certify that this correspondence is being facsimile transmitted to the USPTO, EFS-Web transmitted to the USPTO, or deposited with the United States Postal Service with sufficient postage in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, on Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on <u>16 June 2020</u> . Signature <u>/Reuven K. Mouallem/</u> Typed or printed name <u>Reuven K. Mouallem</u>	In re Application of <u>Stephen L. Thaler</u> Application Number <u>16/524,532</u> Filed <u>July 29, 2019</u> For FOOD CONTAINER Art Unit <u>1782</u> Examiner <u>Robert W. Bahr, decision dated 4-22-2020</u>	
	Applicant hereby appeals to the Patent Trial and Appeal Board from the last decision of the examiner.	
The fee for this Notice of Appeal is (37 CFR 41.20(b)(1))		\$ <u>800</u>
<input checked="" type="checkbox"/> Applicant asserts small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by 50%, and the resulting fee is:		\$ <u>400</u>
<input type="checkbox"/> Applicant certifies micro entity status. See 37 CFR 1.29. Therefore, the fee shown above is reduced by 75%, and the resulting fee is: Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.		\$ _____
<input type="checkbox"/> A check in the amount of the fee is enclosed.		
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.		
<input type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. _____.		
<input checked="" type="checkbox"/> Payment made via EFS-Web.		
<input type="checkbox"/> A petition for an extension of time under 37 CFR 1.136(a) (PTO/AIA/22 or equivalent) is enclosed. For extensions of time in reexamination proceedings, see 37 CFR 1.550.		
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.		
I am the		
<input type="checkbox"/> applicant		
<input checked="" type="checkbox"/> attorney or agent of record Registration number <u>63345</u>		<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34 Registration number _____
Signature <u>/Reuven K. Mouallem/</u> Typed or printed name <u>Reuven K. Mouallem</u> Telephone Number <u>516-301-1649</u> Date <u>16 June 2020</u>		
NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.		
<input type="checkbox"/> * Total of _____ forms are submitted.		

This collection of information is required by 37 CFR 41.20(b)(1) and 41.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Electronic Patent Application Fee Transmittal				
Application Number:	16524532			
Filing Date:	29-Jul-2019			
Title of Invention:	FOOD CONTAINER			
First Named Inventor/Applicant Name:				
Filer:	Reuven Khedhour Mouallem			
Attorney Docket Number:	50567-4-01-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
NOTICE OF APPEAL	2401	1	400	400
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				400

Electronic Acknowledgement Receipt	
EFS ID:	39727397
Application Number:	16524532
International Application Number:	
Confirmation Number:	2644
Title of Invention:	FOOD CONTAINER
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-4-01-US
Receipt Date:	16-JUN-2020
Filing Date:	29-JUL-2019
Time Stamp:	10:25:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$400
RAM confirmation Number	E20206FA26531432
Deposit Account	
Authorized User	

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Notice of Appeal Filed	aia0031-p.pdf	103755	no	1
			11b57b6657ed370c67d17c203369675b72d1b151		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	29863	no	2
			4f32789f8390890d264eb77f46a778bb41b20f39		

Warnings:

Information:

Total Files Size (in bytes):	133618
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

USPTO Office of Petition Attorney:

PAUL SHANOSKI
Attorney Advisor
Office of Petition

**RENEWED PETITION
FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**RENEWED PETITION
FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25**

This Renewed Petition requests under 37 CFR 5.25 a retroactive license for foreign filing under 35 USC 184 in accordance with §5.14(a). The required fee for the Petition under §1.17(g) has been paid. The retroactive foreign filing licenses are requested for the following jurisdictions in which the unlicensed patent application material was filed.

- European Patent Application No. 18275163.6, filed October 17, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Food Container;” and
- UK Patent Application No. 1816909.4, filed October 17, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Food Container.”

In accordance with 37 CFR §5.14 for a petition for retroactive foreign filing license related to a pending US application (identified above by US application number, filing date, applicant, and title), it is submitted that the complete contents of the unlicensed patent application material (identical for the two foreign filings listed above) is readily identifiable in the referenced US application. A copy of the material for which the license is desired is not

included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application.

Declarations by the Applicant, Dr. Stephen L. Thaler, and foreign EU Counsel, Robert Jehan attached herewith, aver:

- (1) that a Foreign Filing License was required prior to filing of the subject foreign applications;
- (2) that neither applicant Thaler, nor the EU Counsel who filed the subject foreign applications were aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a) at the time of said foreign filings;
- (3) diligence in seeking the retroactive foreign filing license upon discovery that such license was necessary;
- (4) that the subject matter in question was not under a secrecy order at the time the subject matter was filed abroad; and
- (5) that the subject matter is not currently under a secrecy order.

As indicated in the attached Declarations, the potential need for a retroactive foreign filing license and a Declaration was inadvertently not communicated to the Applicant. Upon learning of the possible need for a foreign filing license, the Applicant diligently proceeded to filing the petition for a Retroactive Foreign Filing License.

The foreign filings of unlicensed patent application material were prepared and filed by the Applicant through European counsel (Mr. Robert Jehan of a UK IP law firm) both unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing.

It is noted that the law on foreign filing licenses in the United Kingdom was changed in 2004 to the effect that no foreign filing license is required unless the application contains

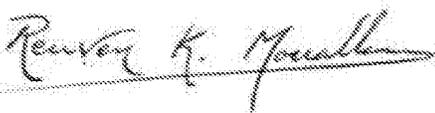
information which relates to military technology, for any other reasons publication of the information might be prejudicial to national security, or to the safety of the public.

Thus, the possible need for a foreign filing license did not become apparent, and foreign applications were filed abroad through error and without deceptive intent, without the required license. It is submitted that diligence in obtaining a retroactive foreign filing license is shown by the present Renewed Petition for a Retroactive License.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345

Date: July 12, 2020

Electronic Acknowledgement Receipt	
EFS ID:	39975810
Application Number:	16524532
International Application Number:	
Confirmation Number:	2644
Title of Invention:	FOOD CONTAINER
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-4-01-US
Receipt Date:	13-JUL-2020
Filing Date:	29-JUL-2019
Time Stamp:	04:16:47
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Oath or Declaration filed	signed_Declaration_Thaler_FC_2020-resubmit.pdf	65831 eec338725355da1d00b5f66c5161608ec0e3a1b3	no	4

Warnings:

Information:					
2	Oath or Declaration filed	Declaration_Jehan_FC_July_2020.pdf	71285 87b52e9fa2c7ff1c96fea6ae41405c33198a27fe	no	4
Warnings:					
Information:					
3	Request for Retroactive Foreign Filing License	Resubmission_of_FFLL_petition_FC.pdf	50116 37c05a4d8008de61f284d163cc2eeef3c36d2a208	no	4
Warnings:					
Information:					
Total Files Size (in bytes):			187232		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: 29 July 2019	§	Group Art Unit: 1782
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

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Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF RESUBMISSION
OF PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Stephen L. Thaler, declare that:

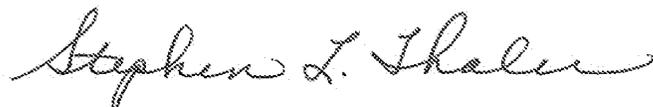
1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the undersigned as the assignee/applicant is a US citizen, I understand that a foreign filing license would be necessary for the instant application.
3. I am the Applicant in the foreign filings cited in the Petition (attached herewith):
 - a. European Patent Application No. 18275163.6, filed October 17, 2018 (first priority date), entitled “Food Container;” and
 - b. UK Patent Application No. 1816909.4, filed October 17, 2018 (first priority date), entitled “Food Container.”

4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I am informed and believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. Pursuant to 37 CFR §5.25(a)(3)(i), I am informed and believe that the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to a food container, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. I was first informed regarding a need for a foreign filing license on June 13, 2019 by my US patent counsels when they began to prepare filing for a patent before the USPTO in which they determined the need for a foreign filing license. Pursuant to 37 CFR §5.25(a)(3)(ii), I have diligently executed a Declaration in support of a petition in pursuit of a retroactive foreign filing license (FFL) that was filed in July 2019.

7. This Declaration is in support of the Resubmission of the Petition seeking a Retroactive FFL in reply to the decision of USPTO Office of Petitions regarding the filed July 2019 petition, dated 15 May 2020.
8. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a), and that the subject foreign applications were filed pursuant to my instructions to the EU Counsel, Robert Jehan.
9. I declare that all my prior patent applications were filed first in the US, and I have never made a patent application first-filing abroad except for the current application and another AI-generated application that was prepared and filed together with this application in the EU. A similar FFL petition has been filed and considered together with this case by the Office of Petitions.
10. Accordingly, I did not have any knowledge that an FFL was required prior to my filing of the application abroad, nor was I advised by the EU counsel of such requirement (as corroborated in the attached EU counsel, Adv. Robert Jehan's declaration).
11. Pursuant to 37 CFR §5.25(a)(3)(iii), I am informed and believe that the foreign-filed applications were filed abroad, without a foreign filing license under 37 CFR §5.11 first having been obtained, through error and without deceptive intent. I am informed and believe that the foreign-filed applications were filed and prosecuted through my European counsel (Adv. Robert Jehan from the UK) who was unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing. The supporting declaration of said European counsel is attached hereto.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 15th day of June 2020



STEPHEN L. THALER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed:	§	Group Art Unit:
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.:
	§	
Examiner:	§	

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Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF RESUBMISSION
OF PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Robert Jehan, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the assignee/applicant is a US citizen, I was recently advised that a foreign filing license would be necessary for the instant application.
3. I am the European and British Patent Attorney cited in the Petition on behalf of applicant Stephen L. Thaler, in particular for:
 - a. European Patent Application No. 18275163.6, filed October 17, 2018 (first priority date), entitled “Food Container;” and
 - b. UK Patent Application No. 1816909.4, filed October 17, 2018 (first priority date), entitled “Food Container.”

4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. Pursuant to 37 CFR §5.25(a)(3)(i), the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to devices and methods for attracting enhanced attention, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. I have been qualified as a British and European patent attorney since 1992 and I have practiced in Europe, specifically in the United Kingdom. I am directly responsible for filing and prosecuting patent applications before the United Kingdom Intellectual Property Office (UKIPO) and the European Patent Office (EPO). While I have handled on behalf of clients patent applications in many other countries of the world, including in the United States, these have always been through local attorneys as I am not qualified or expert in the relevant national laws foreign to the United Kingdom and the EPO.

7. While I do have some direct US clients who instruct me in the filing of UK and European patent applications, these clients have in-house patent counsel who deal with any requirements in US law so I do not get involved with these.
8. At the time of filing the British and European patent applications for Stephen L Thaler it did not occur to me that Mr. Thaler needed to obtain a foreign filing license from the USPTO, not only in light of the above facts but also because there is no direct equivalent legal requirement in UK or European patent law. United Kingdom patent law did have a requirement for a foreign filing license but this was revoked in 2005 in relation to all inventions save for inventions relating to military technology or which for any other reason publication of the information might be prejudicial to national security or potentially prejudicial to the safety of the public. The subject invention of these patent applications does not fall into any of these restricted categories, with the consequence that there would have been no requirement in UK law to seek a foreign filing license. As a consequence, Mr. Thaler's patent applications did not trigger any reason for me to expect that a foreign filing license might be required.
9. The reason for recommending to Mr. Thaler that the British and European applications should be filed as priority applications (that is first filings) is that both the UKIPO and the EPO offer accelerated search and examination of any applications first filed in their Offices. This is the specific reason why I was involved in this invention in the first instance, as it was important to Mr. Thaler to obtain an indication of patentability of the invention as early as possible.

10. The subject foreign applications were filed pursuant to the instructions of Mr. Thaler to proceed to said filings. The instructions were provided through phone conversations.
11. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a).
12. Accordingly, it did not occur to me that an FFL was required to prior to filing Mr. Thaler's applications in the UK and in Europe.
13. Pursuant to 37 CFR §5.25(a)(3)(iii), the foreign-filed applications were filed abroad, without a foreign filing license through error and without deceptive intent. I am unfamiliar with US patent law and the requirement for obtaining a foreign filing license in respect of any foreign filing for a US based inventor.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 9th day of July 2020



ROBERT JEHAN
BRITISH AND EUROPEAN PATENT ATTORNEY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

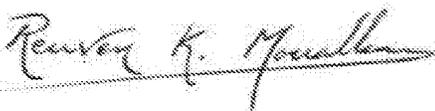
Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

USPTO Office of Petition Attorney:
PAUL SHANOSKI
Attorney Advisor
Office of Petition

Sir,

The attached updated version of the declaration of EU counsel, Robert Jehan, supersedes and replaces the declaration of Robert Jehan that was submitted on 13 July 2020.

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant
Registration No. 63,345
Date: July 14, 2020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: 29 July 2019	§	Group Art Unit: 1782
	§	
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	§	
Examiner:	§	

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Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF RESUBMISSION
OF PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Robert Jehan, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the assignee/applicant is a US citizen, I was recently advised that a foreign filing license would be necessary for the instant application.
3. I am the European and British Patent Attorney cited in the Petition on behalf of application Stephen L. Thaler, in particular for:
 - a. European Patent Application No. 18275163.6, filed October 17, 2018 (first priority date), entitled “Food Container;” and
 - b. UK Patent Application No. 1816909.4, filed October 17, 2018 (first priority date), entitled “Food Container.”

4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. Pursuant to 37 CFR §5.25(a)(3)(i), the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to a food container, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. I have been qualified as a British and European patent attorney since 1992 and I have practiced in Europe, specifically in the United Kingdom. I am directly responsible for filing and prosecuting patent applications before the United Kingdom Intellectual Property Office (UKIPO) and the European Patent Office (EPO). While I have handled on behalf of clients patent applications in many other countries of the world, including in the United States, these have always been through local attorneys as I am not qualified or expert in the relevant national laws foreign to the United Kingdom and the EPO.

7. While I do have some direct US clients who instruct me in the filing of UK and European patent applications, these clients have in-house patent counsel who deal with any requirements in US law so I do not get involved with these.
8. At the time of filing the British and European patent applications for Stephen L Thaler it did not occur to me that Mr. Thaler needed to obtain a foreign filing license from the USPTO, not only in light of the above facts but also because there is no direct equivalent legal requirement in UK or European patent law. United Kingdom patent law did have a requirement for a foreign filing license but this was revoked in 2005 in relation to all inventions save for inventions relating to military technology or which for any other reason publication of the information might be prejudicial to national security or potentially prejudicial to the safety of the public. The subject invention of these patent applications does not fall into any of these restricted categories, with the consequence that there would have been no requirement in UK law to seek a foreign filing license. As a consequence, Mr. Thaler's patent applications did not trigger any reason for me to expect that a foreign filing license might be required.
9. The reason for recommending to Mr. Thaler that the British and European applications should be filed as priority applications (that is first filings) is that both the UKIPO and the EPO offer accelerated search and examination of any applications first filed in their Offices. This is the specific reason why I was involved in this invention in the first instance, as it was important to Mr. Thaler to obtain an indication of patentability of the invention as early as possible.

10. The subject foreign applications were filed pursuant to the instructions of Mr. Thaler to proceed to said filings. The instructions were provided through phone conversations.
11. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a).
12. Accordingly, it did not occur to me that an FFL was required to prior to filing Mr. Thaler's applications in the UK and in Europe.
13. Pursuant to 37 CFR §5.25(a)(3)(iii), the foreign-filed applications were filed abroad, without a foreign filing license through error and without deceptive intent. I am unfamiliar with US patent law and the requirement for obtaining a foreign filing license in respect of any foreign filing for a US based inventor.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 9th day of July 2020



ROBERT JEHAN
BRITISH AND EUROPEAN PATENT ATTORNEY

Electronic Acknowledgement Receipt	
EFS ID:	39988786
Application Number:	16524532
International Application Number:	
Confirmation Number:	2644
Title of Invention:	FOOD CONTAINER
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-4-01-US
Receipt Date:	14-JUL-2020
Filing Date:	29-JUL-2019
Time Stamp:	04:10:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	Submission_of_Jehan_updated_Declaration_FC.pdf	17143 89e7cc02d198430cb6853ecb6b5a2117dec65cad	no	1

Warnings:

Information:					
2	Oath or Declaration filed	Updated_Declaration_Jehan_F C_July_2020-p.pdf	147668	no	4
			a48f01547a9d441aea0c462fcb0c7386376 66bc		
Warnings:					
Information:					
Total Files Size (in bytes):				164811	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



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.
16/524,532	07/29/2019		50567-4-01-US	2644
89602	7590	07/21/2020	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			1782	
			NOTIFICATION DATE	DELIVERY MODE
			07/21/2020	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):

FPIP-USPTO@FlashPointIP.com
 ydm@FlashPointIP.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Application of :
Application No. 16/524,532 :
Filed: 29 Jul 2019 : DECISION ON PETITION
For FOOD CONTAINER :

This is a decision on the renewed petition pursuant to 37 C.F.R. § 5.25, filed July 13, 2020, seeking a retroactive license for foreign filing under 35 U.S.C. § 184. A supplement to this renewed petition was received on July 14, 2020.

The renewed petition is **DISMISSED**.

This decision concerns European application number 18275163.6 filed October 17, 2018 and UK application number 1816909.4 filed October 17, 2018.

A grantable petition pursuant to 37 C.F.R. § 5.25 must be accompanied by:

- (1) a listing of each of the foreign countries in which the unlicensed patent application material was filed;
- (2) The dates on which the material was filed in each country;
- (3) A verified statement (oath or declaration) containing:
 - (i) An averment that the subject matter in question was not under a secrecy order at the time it was filed abroad, and that it is not currently under a secrecy order,
 - (ii) A showing that the license has been diligently sought after discovery of the proscribed foreign filing, and
 - (iii) An explanation of why the material was filed abroad through error without the required license under § 5.11 first having been obtained; and,

(4) The required fee (§ 1.17(g) of this chapter).

An original petition pursuant to 37 C.F.R. § 5.25 was filed on July 29, 2019 and dismissed via the mailing of a decision on May 15, 2020, which indicates the original petition complies with requirements (1), (2), (3)(i), and (4) of 37 C.F.R. § 5.25. Petitioner provided a listing of each of the foreign countries in which the unlicensed patent application material was filed;¹ the dates on which the material was filed in another country;² an averment that the subject matter in question was not under a secrecy order at the time it was filed abroad, and that it is not currently under a secrecy order;³ and, the required petition fee.

On renewed petition, requirement (3)(ii) of 37 C.F.R. § 5.25 has been satisfied.⁴

Requirement (3)(iii) of 37 C.F.R. § 5.25 remains unsatisfied. A discussion follows.

The relevant parties are as follows:

- Declarant Thaler is the applicant.⁵
- Both foreign filings were made by declarant Thaler's European counsel,⁶ declarant Jehan.⁷

Regarding requirement (3)(iii) of 37 C.F.R. § 5.25, it is not clear where the invention occurred.

35 U.S.C. § 1.84(a) provides,

(a) FILING IN FOREIGN COUNTRY.—Except when authorized by a license obtained from the Commissioner of Patents a person shall not file or cause or authorize to be filed in any foreign country prior to six months after filing in the United States an application for patent or for the

1 Europe and the UK. Original petition, page 1 and concurrently submitted Thaler verified statement, paragraph 3.

2 October 17, 2018. *Id.*

3 Thaler verified statement submitted with the original petition, paragraph 5.

4 Thaler verified statement submitted with the renewed petition, paragraphs 6 and 8 and concurrently submitted Jehan verified statement, paragraphs 8 and 11.

5 Application Data Sheet included on initial deposit, page 1.

6 Thaler verified statement submitted with the original petition, paragraph 7.

7 Jehan verified statement submitted with the renewed petition, paragraph 3.

registration of a utility model, industrial design, or model in respect of an invention made in this country. A license shall not be granted with respect to an invention subject to an order issued by the Commissioner of Patents pursuant to section 181 without the concurrence of the head of the departments and the chief officers of the agencies who caused the order to be issued. The license may be granted retroactively where an application has been filed abroad through error and the application does not disclose an invention within the scope of section 181.

As is made clear by 35 U.S.C. § 1.84(a) cited above, the USPTO has no authority to grant a petition under 37 C.F.R. § 5.25 where an invention took place outside of the USA.

On second renewed petition, Petitioner must explicitly state whether the invention took place in the USA.

Accordingly, the provisions of 37 C.F.R. § 5.25 not having fully been met, the petition is **DISMISSED**. A response is due within **TWO MONTHS** of the mailing date of this decision. Extensions of time of this period of reply may be obtained under 37 C.F.R. § 1.136(a). In the absence of a timely response, such dismissal will be made final and the final action under 35 U.S.C. § 185 will be taken.

The reply should include a cover letter entitled "Second Renewed Petition under 37 C.F.R. § 5.25." This is not a final agency action within the meaning of 5 U.S.C § 704.

The second renewed petition should indicate in a prominent manner that the attorney handling this matter is Paul Shanoski, and may be submitted by mail,⁸ hand-delivery,⁹ or facsimile.¹⁰ If Petitioner has the capability to file follow-on documents, a response may be submitted via the electronic filing system, EFS-Web¹¹ **and the document code should be RETR.LICENSE**. If responding by mail, Petitioner is advised not to place the undersigned's name on the envelope. Only the information that appears in the footnote should be included - adding anything else to the address will delay the delivery of the response to the undersigned.

⁸ Mail Stop Petition, Commissioner for Patents, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

⁹ Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

¹⁰ (571) 273-8300: please note this is a central facsimile number.

¹¹ <https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html>

Application No. 16/524,532

Page 4

Any verified statement (notarized oath) or declaration (including reference to Section 1001 of Title 18 of the U.S.C.) included on renewed petition must include the clause:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Telephone inquiries regarding *this decision* should be directed to Attorney Advisor Paul Shanowski at (571) 272-3225.¹² All other inquiries concerning examination procedures should be directed to the Technology Center.

/Paul Shanowski/
Paul Shanowski
Attorney Advisor
Office of Petitions

¹² Petitioner will note that all practice before the Office should be in writing, and the action of the Office will be based exclusively on the written record in the Office. See 37 C.F.R. § 1.2. As such, Petitioner is reminded that no telephone discussion may be controlling or considered authority for Petitioner's further action(s).

To: ydm@FlashPointIP.com,FPIP-USPTO@FlashPointIP.com,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 89602

Jul 21, 2020 03:39:09 AM

Dear PAIR Customer:

FlashPoint IP Ltd.
Rehov Rabban Gamliel 2
Elad, 4083201
ISRAEL

The following USPTO patent application(s) associated with your Customer Number, 89602 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16524532	PETDEC	07/21/2020	50567-4-01-US

To view your correspondence online or update your email addresses, please visit us anytime at <https://portal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

USPTO Office of Petition Attorney:

PAUL SHANOSKI
Attorney Advisor
Office of Petition

**SECOND RENEWED PETITION
FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: July 29, 2019	§	Group Art Unit:
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**SECOND RENEWED PETITION
FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25**

This Second Renewed Petition requests under 37 CFR 5.25 a retroactive license for foreign filing under 35 USC 184 in accordance with §5.14(a). The required fee for the Petition under §1.17(g) has been paid. The retroactive foreign filing licenses are requested for the following jurisdictions in which the unlicensed patent application material was filed.

- European Patent Application No. 18275163.6, filed October 17, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Food Container;” and
- UK Patent Application No. 1816909.4, filed October 17, 2018 (first priority date), by Applicant Stephen L. Thaler, entitled “Food Container.”

In accordance with 37 CFR §5.14 for a petition for retroactive foreign filing license related to a pending US application (identified above by US application number, filing date,

applicant, and title), it is submitted that the complete contents of the unlicensed patent application material (identical for the two foreign filings listed above) is readily identifiable in the referenced US application. A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application.

Declarations by the Applicant, Dr. Stephen L. Thaler, and foreign EU Counsel, Robert Jehan attached herewith, aver:

- (1) **that the invention detailed in the instant application took place in the United States.**
- (2) that a Foreign Filing License was required prior to filing of the subject foreign applications;
- (3) that neither applicant Thaler, nor the EU Counsel who filed the subject foreign applications were aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a) at the time of said foreign filings;
- (4) diligence in seeking the retroactive foreign filing license upon discovery that such license was necessary;
- (5) that the subject matter in question was not under a secrecy order at the time the subject matter was filed abroad; and
- (6) that the subject matter is not currently under a secrecy order.

As indicated in the attached Declarations, the potential need for a retroactive foreign filing license and a Declaration was inadvertently not communicated to the Applicant. Upon learning of the possible need for a foreign filing license, the Applicant diligently proceeded to filing the petition for a Retroactive Foreign Filing License.

The foreign filings of unlicensed patent application material were prepared and filed by the Applicant through European counsel (Mr. Robert Jehan of a UK IP law firm) both

unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing.

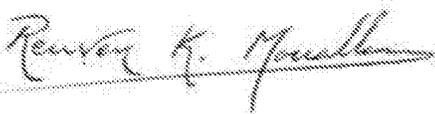
It is noted that the law on foreign filing licenses in the United Kingdom was changed in 2004 to the effect that no foreign filing license is required unless the application contains information which relates to military technology, for any other reasons publication of the information might be prejudicial to national security, or to the safety of the public.

Thus, the possible need for a foreign filing license did not become apparent, and foreign applications were filed abroad through error and without deceptive intent, without the required license. It is submitted that diligence in obtaining a retroactive foreign filing license is shown by the present Renewed Petition for a Retroactive License.

Should the Examiner have any questions, the Examiner is requested to contact the undersigned by e-mail at rkm@FlashPointIP.com or by phone at (516) 301-1649.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned, in accordance with 37 CFR 1.33 and 37 CFR 1.34, concerning any subject matter of the instant Petition by video conferencing or electronic mail. I understand that a copy of such communications will be made of record. [MPEP §502.03 II]

Respectfully submitted,



Dr. Reuven K. Mouallem, LL.M.
Agent for Applicant, Registration No. 63,345

Date: July 26, 2020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: 29 July 2019	§	Group Art Unit: 1782
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

USPTO Office of Petition Attorney:

PAUL SHANOSKI
Attorney Advisor
Office of Petition

DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF
SECOND RESUBMISSION OF PETITION
FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Stephen L. Thaler, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the undersigned as the assignee/applicant is a US citizen, I understand that a foreign filing license would be necessary for the instant application.
3. I am the Applicant in the foreign filings cited in the Petition (attached herewith):

- a. European Patent Application No. 18275163.6, filed October 17, 2018 (first priority date), entitled “Food Container;” and
 - b. UK Patent Application No. 1816909.4, filed October 17, 2018 (first priority date), entitled “Food Container.”
4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I am informed and believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. I confirm that **the invention detailed in the instant patent application took place in the United States.**
6. Pursuant to 37 CFR §5.25(a)(3)(i), I am informed and believe that the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to a food container, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
7. I was first informed regarding a need for a foreign filing license on June 13, 2019 by my US patent counsels when they began to prepare filing for a patent

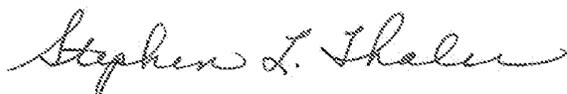
before the USPTO in which they determined the need for a foreign filing license. Pursuant to 37 CFR §5.25(a)(3)(ii), I have diligently executed a Declaration in support of a petition in pursuit of a retroactive foreign filing license (FFL) that was filed in July 2019.

8. This Declaration is in support of the Resubmission of the Petition seeking a Retroactive FFL in reply to the decision of USPTO Office of Petitions regarding the filed July 2019 petition, dated 15 May 2020.
9. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a), and that the subject foreign applications were filed pursuant to my instructions to the EU Counsel, Robert Jehan.
10. I declare that all my prior patent applications were filed first in the US, and I have never made a patent application first-filing abroad except for the current application and another AI-generated application that was prepared and filed together with this application in the EU. A similar FFL petition has been filed and considered together with this case by the Office of Petitions.
11. Accordingly, I did not have any knowledge that an FFL was required prior to my filing of the application abroad, nor was I advised by the EU counsel of such requirement (as corroborated in the attached EU counsel, Adv. Robert Jehan's declaration).
12. Pursuant to 37 CFR §5.25(a)(3)(iii), I am informed and believe that the foreign-filed applications were filed abroad, without a foreign filing license under 37 CFR §5.11 first having been obtained, through error and without deceptive intent. I am informed and believe that the foreign-filed applications were filed and prosecuted through my European counsel (Adv. Robert Jehan from the UK)

who was unfamiliar with US Patent Law and the requirement of obtaining a foreign filing license prior to any foreign filing. The supporting declaration of said European counsel is attached hereto.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 26th day of July 2020



STEPHEN L. THALER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

In re Applicant:	§	
	§	
Stephen L. Thaler	§	
	§	
Serial No.: 16/524,532	§	
	§	
Filed: 29 July 2019	§	Group Art Unit: 1782
	§	
For: FOOD CONTAINER	§	Attorney Docket: 50567-4-01-US
	§	Confirmation No.: 2644
	§	
Examiner:	§	

Mail Stop Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132 IN SUPPORT OF RESUBMISSION
OF PETITION FOR RETROACTIVE LICENSE UNDER 37 CFR 5.25

I, Robert Jehan, declare that:

1. I am over twenty-one years of age and competent to give a verified statement such as this Declaration.
2. Although there are no US citizens listed as inventors of the foreign-filed applications, since the AI inventor is US-based, and since the assignee/applicant is a US citizen, I was recently advised that a foreign filing license would be necessary for the instant application.
3. I am the European and British Patent Attorney cited in the Petition on behalf of application Stephen L. Thaler, in particular for:
 - a. European Patent Application No. 18275163.6, filed October 17, 2018 (first priority date), entitled “Food Container;” and
 - b. UK Patent Application No. 1816909.4, filed October 17, 2018 (first priority date), entitled “Food Container.”

4. Pursuant to 37 CFR §5.14 for a petition for license for which a corresponding application has been filed in the US, I am informed and believe that the Petition for retroactive license filed herewith identifies the corresponding US application number, filing date, applicant, and title (as well as identified above). A copy of the material for which the license is desired is not included in accordance with 37 CFR §5.14 under which the subject matter licensed will be measured by the disclosure of the US application. I believe that all the material contained in the foreign-filed applications referenced above, which were filed in foreign countries without a prior application for a foreign filing license in error and without deceptive intent, is readily identifiable in the referenced US application.
5. Pursuant to 37 CFR §5.25(a)(3)(i), the foreign-filed applications were not under a secrecy order at the time of filing, have not been under a secrecy order at any time since, and are not currently under a secrecy order. Furthermore, the invention is related to a food container, which subject matter I am informed and believe does not fall within the scope of 35 USC §181.
6. I have been qualified as a British and European patent attorney since 1992 and I have practiced in Europe, specifically in the United Kingdom. I am directly responsible for filing and prosecuting patent applications before the United Kingdom Intellectual Property Office (UKIPO) and the European Patent Office (EPO). While I have handled on behalf of clients patent applications in many other countries of the world, including in the United States, these have always been through local attorneys as I am not qualified or expert in the relevant national laws foreign to the United Kingdom and the EPO.

7. While I do have some direct US clients who instruct me in the filing of UK and European patent applications, these clients have in-house patent counsel who deal with any requirements in US law so I do not get involved with these.
8. At the time of filing the British and European patent applications for Stephen L Thaler it did not occur to me that Mr. Thaler needed to obtain a foreign filing license from the USPTO, not only in light of the above facts but also because there is no direct equivalent legal requirement in UK or European patent law. United Kingdom patent law did have a requirement for a foreign filing license but this was revoked in 2005 in relation to all inventions save for inventions relating to military technology or which for any other reason publication of the information might be prejudicial to national security or potentially prejudicial to the safety of the public. The subject invention of these patent applications does not fall into any of these restricted categories, with the consequence that there would have been no requirement in UK law to seek a foreign filing license. As a consequence, Mr. Thaler's patent applications did not trigger any reason for me to expect that a foreign filing license might be required.
9. The reason for recommending to Mr. Thaler that the British and European applications should be filed as priority applications (that is first filings) is that both the UKIPO and the EPO offer accelerated search and examination of any applications first filed in their Offices. This is the specific reason why I was involved in this invention in the first instance, as it was important to Mr. Thaler to obtain an indication of patentability of the invention as early as possible.

10. The subject foreign applications were filed pursuant to the instructions of Mr. Thaler to proceed to said filings. The instructions were provided through phone conversations.
11. I confirm that at the time of filing the subject foreign applications, I was not aware of the requirements of 35 U.S.C. Sec. 184 and 37 C.F.R. Sec. 5.11 (a).
12. Accordingly, it did not occur to me that an FFL was required to prior to filing Mr. Thaler's applications in the UK and in Europe.
13. Pursuant to 37 CFR §5.25(a)(3)(iii), the foreign-filed applications were filed abroad, without a foreign filing license through error and without deceptive intent. I am unfamiliar with US patent law and the requirement for obtaining a foreign filing license in respect of any foreign filing for a US based inventor.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of any patent issuing from the referenced patent applications.

Signed this 9th day of July 2020



ROBERT JEHAN
BRITISH AND EUROPEAN PATENT ATTORNEY

Electronic Acknowledgement Receipt	
EFS ID:	40170596
Application Number:	16524532
International Application Number:	
Confirmation Number:	2644
Title of Invention:	FOOD CONTAINER
First Named Inventor/Applicant Name:	
Customer Number:	89602
Filer:	Reuven Khedhour Mouallem
Filer Authorized By:	
Attorney Docket Number:	50567-4-01-US
Receipt Date:	02-AUG-2020
Filing Date:	29-JUL-2019
Time Stamp:	04:32:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Retroactive Foreign Filing License	Resubmission_of_FFL_petition_FC.pdf	59591 db6ee3329bd0e19b754086d46dacc16f00d1e6a4	no	4

Warnings:

Information:					
2	Oath or Declaration filed	signed_Declaration_Thaler_FC _2020-resubmit.pdf	103500 80b2592cb4e6f2a3a6b18c198b66d8a3f4e02ff2	no	4
Warnings:					
Information:					
3	Oath or Declaration filed	Updated_Declaration_Jehan_F C_July_2020-p.pdf	147668 a48f01547a9d441aea0c462fcb0c738637666bc	no	4
Warnings:					
Information:					
Total Files Size (in bytes):			310759		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



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.
16/524,532	07/29/2019		50567-4-01-US	2644
89602	7590	08/06/2020	EXAMINER	
FlashPoint IP Ltd. Rehov Rabban Gamliel 2 Elad, 4083201 ISRAEL			ART UNIT	PAPER NUMBER
			1782	
			NOTIFICATION DATE	DELIVERY MODE
			08/06/2020	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):

FPIP-USPTO@FlashPointIP.com
 ydm@FlashPointIP.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
 United States Patent and Trademark Office
 P.O. Box 1450
 Alexandria, VA 22313-1450
 www.uspto.gov

In re Application of :
 Application No. 16/524,532 : DECISION ON PETITION
 Filed: 29 Jul 2019 :
 For FOOD CONTAINER :

In view of the communications filed July 29, 2019, July 13, 2020, and August 2, 2020, it has been determined that a retroactive license for foreign filing under 35 U.S.C. § 184 be **granted** with respect to the filings listed below. The petition complies with 37 C.F.R. § 5.25 in that there is an adequate showing that the subject matter in question was not under a secrecy order, that the license was diligently sought after discovery of the proscribed foreign filings, and that the material was filed abroad without the required license under 37 C.F.R. § 5.11 first having been obtained through error.

<u>Country</u>	<u>Date</u>
Europe	October 17, 2018
UK	October 17, 2018

Telephone inquiries regarding this decision should be directed to Attorney Advisor Paul Shanoski at (571) 272-3225.¹

/Paul Shanoski/
 Paul Shanoski
 Attorney Advisor
 Office of Petitions

Enclosure: Foreign Filing License

¹ Petitioner will note that all practice before the Office should be in writing, and the action of the Office will be based exclusively on the written record in the Office. See 37 C.F.R. § 1.2. As such, Petitioner is reminded that no telephone discussion may be controlling or considered authority for any of Petitioner's further action(s).



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
 UNITED STATES PATENT AND TRADEMARK OFFICE
 WASHINGTON, D.C. 20530
 www.uspto.gov

SERIAL NUMBER	REQUEST DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
16524532	29-JUL-19		50567-4-01-US

Title:
FOOD CONTAINER

Correspondence Address:
 LL.M. Dr. Reuven K. Mouallem
 FlashPoint IP Ltd.
 Rehov Rabban Gamliel 2
 Elad 40832-01

Licensee under 35 U.S.C. 184 is hereby granted to file in any foreign country a patent application and any amendments thereto corresponding to the subject matter of this U.S. application identified above and/or any material accompanying the petition. This license is conditioned upon modification of any applicable secrecy order and is subject to revocation without notice.

License Number: **613,843**
 Grant Date: **05-AUG-20**

Memo:
 This license is granted retroactively to the date(s) and the country(s) listed on the attached decision.

Approved: /Paul Shanoski/
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LICENSE FOR FOREIGN FILING
[Title 35, United States Code (1952) Sections 184, 185, 186]

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

Stephen Thaler, an individual

Plaintiff,

v.

Andrei IANCU, in his official capacity as Under
Secretary of Commerce for Intellectual Property
and Director of the United States Patent and
Trademark Office, and United States Patent and
Trademark Office

Defendants.

Case No. 1:20-cv-00903-LMB-TCBVAED

PLAINTIFF’S MOTION FOR SUMMARY JUDGMENT

Pursuant to Federal Rule of Civil Procedure 56 and this Court’s Local Rules 7 and 56, Plaintiff Stephen Thaler (“Plaintiff”) respectfully moves this Court for entry of an Order granting summary judgment in his favor. Specifically, Plaintiff moves for summary judgment on the claim that Defendants’ final petition decisions, which resulted in the rejection of two patent applications, were contrary to law and in violation of the Administrative Procedure Act, 5 U.S.C. § 706.

Plaintiff’s motion for summary judgment is set for hearing on March 29, 2021 at 10:00 a.m., pursuant to order of the Court dated November 19, 2020. (ECF 14.) Defendants’ cross-motion for summary judgment is due February 15, that will also contain an opposition to

Plaintiff's motion for summary judgment. (Id.) Plaintiff's reply to his motion for summary judgment is due March 15, 2021. (Id.)

For reasons explained in the supporting brief, there is no genuine disputed issue as to any material fact and Plaintiff is entitled to judgment as a matter of law. Consequently, Plaintiff respectfully prays that this Court grant summary judgment in his favor, reinstate the relevant patent applications, vacate the prior decision on the petitions filed under 37 CFR 1.181, and declare the Defendants' actions unlawful.

This motion is based upon Plaintiff's accompanying memorandum of law in Support of Plaintiff's Motion for Summary Judgment; all pleadings, and other documents on file in this action; and on such other matters as may be presented to the Court at the time of the hearing.

Dated: January 18, 2021

BROWN, NERI, SMITH & KHAN LLP

By: /s/ Ryan Abbott
Ryan Abbott, Esq. (admitted *pro hac vice*)
Attorney for Plaintiff
Brown, Neri, Smith & Khan, LLP
11601 Wilshire Blvd, Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980
Ryan@bnsklaw.com

By: /s/ Geoffrey A. Neri
Geoffrey A. Neri, Esq. VSB No. 72219
Attorney for Plaintiff
Brown, Neri, Smith & Khan, LLP
11601 Wilshire Blvd, Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980
Geoff@bnsklaw.com

**IN THE UNITED STATES DISTRICT COURT
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Defendants.

Case No. 1:20-cv-00903-LMB-TCBVAED

[PROPOSED] ORDER

Hearing Date: 3/29/2021

Time: 10:00 a.m.

On March 29, 2021 Plaintiff Stephen Thaler’s (“Plaintiff”) motion for summary judgment against Defendants Andrei IANCU, in his official capacity as Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, and United States Patent and Trademark Office (“Defendants”) came before the Court. Having read and considered the briefing and arguments from both parties, and finding no issue of material fact, the Court GRANTS Plaintiff’s motion for summary judgment.

The Court orders:

- Defendants to reinstate the Applications and vacate the prior decision on the petitions filed under 37 CFR 1.181; and
- Awards Plaintiff’s reasonable attorney fee’s and costs, pursuant to 24 U.S.C. § 2412(d), subject to Plaintiff submitting evidence thereof.

The Court declares that:

- a patent application for an AI-Generated invention should not be rejected on the basis that no natural person is identified as an inventor; and
- A patent-application for an AI-generated invention should list an AI where an AI has met inventorship criteria.

IT IS ORDERED.

Dated: _____

Hon. Leonie M. Brinkema
United States District Judge

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

Stephen Thaler, an individual

Plaintiff,

v.

Andrei IANCU, in his official capacity as Under
Secretary of Commerce for Intellectual Property
and Director of the United States Patent and
Trademark Office, and United States Patent and
Trademark Office

Defendants.

Case No. 1:20-cv-00903-LMB-TCBVAED

**PLAINTIFF'S MEMORANDUM OF
LAW IN SUPPORT OF MOTION FOR
SUMMARY JUDGMENT**

Hearing Date: 3/29/2021

Time: 10:00 a.m.

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I. INTRODUCTION

Plaintiff Stephen Thaler (“Dr. Thaler”) develops, owns, and operates advanced artificial intelligence (AI) systems capable of generating patentable output under circumstances in which no natural person traditionally qualifies as an inventor (“AI-Generated Inventions”). One such system is called DABUS, which is an acronym for Device for the Autonomous Bootstrapping of Unified Sentience.

DABUS created two patentable inventions that are the subject of this proceeding: the “Neural Flame” and “Fractal Container” (the subject matter of patent application numbers 16/524,350 and 16/524,532, respectively [the “Applications”]).

Plaintiff filed the Applications with Defendant United States Patent and Trademark Office (“USPTO”) on July 29, 2019. Because no natural person qualifies as an inventor of the Applications, and because they were generated by DABUS, the Applications list DABUS as the inventor. Dr. Thaler, as the owner, developer, and user of DABUS is listed as the patent applicant and entitled to own the Applications as well as any patents that may ultimately issue.

Defendants rejected the Applications on the basis that they did not identify an inventor who was a natural person (“Rejections”). However, Plaintiff could not identify an inventor who was a natural person because there was no such person.

The Rejections create a new substantive requirement for patentability that is contrary to existing law and at odds with the policy underlying the patent system. The patent system is designed to incentivize innovation, promote disclosure of information, and encourage commercialization of new technologies. Allowing protection for AI-Generated Inventions will accomplish all of these goals, because it will incentivize parties such as Dr. Thaler to develop and use inventive machines—ultimately promoting the progress of science. Further, listing

DABUS as an inventor protects the moral rights of human inventors because it prevents a person from falsely claiming credit and devaluing legitimate human ingenuity.

Defendants based the Rejections on statutory language and cases that refer to inventors as natural persons. However, at most these authorities simply assumed that inventive activity could only be performed by natural persons, and they were concerned with protecting the rights of human inventors with respect to patent applicants who were artificial persons in the form of, for example, corporations. None of these authorities involved AI-Generated Inventions and should not now be interpreted to prohibit patent protection. Failing to provide protection for AI-Generated Inventions is antithetical to the purpose of the patent system. It will both encourage applicants to mispresent to role of people in the inventive process and it will inhibit innovation.

Plaintiff contends that the Rejections were arbitrary, capricious, an abuse of discretion, not in accordance with the law, unsupported by substantial evidence, and in excess of Defendants' statutory authority. Plaintiff seeks to set aside the Notices to File Missing Parts of Nonprovisional Applications and have the Applications reinstated.

Plaintiff moves for summary judgment as to the legal issue alone—whether an AI-Generated Invention is patentable. No dispute of any material fact exists.

II. STATEMENT OF UNDISPUTED MATERIAL FACTS

1. Plaintiff Dr. Stephen Thaler develops, owns, and applies AI systems capable of generating patentable output under circumstances in which no natural person traditionally qualifies as an inventor. (ECF 1, ¶ 13.)

2. Plaintiff's AI system DABUS produced the two inventions at issue here: the Neural Flame, a light beacon capable of flashing in a new and inventive manner to attract

attention, and the Fractal Container, a beverage container based on fractal geometry. (ECF 15-2 at p. 61 [A61]; ECF 15-3 at p. 93 [A346])

3. As explained in the Applications, “In the case of the instant invention, the machine only received training in general knowledge in the field, and proceeded to independently conceive of the invention, and to identify it as novel and salient. If similar training had been given to a human student, the student rather than the trainer would meet the inventorship criteria as inventor.” (ECF 15-2 at p. 61 [A61]; ECF 15-3 at p. 93 [A346]).¹

4. Plaintiff applied for patents for the Neural Flame and Fractal Container on July 29, 2019. (ECF 15-2 at p.94 [A94]; and ECF 15-3 at p. 124 [A377]) The patent application numbers for each application respectively are 16/524,350 and 16/524,532. (ECF 15-2 at p. 94 [A94]; ECF 15-3 at p. 124 [A377].)

5. Although the Applications may not be the first patent applications for AI-Generated Inventions, they are thought to be the first Applications in which an applicant has disclosed that the subject matter of an application is an AI-Generated Invention. (See, e.g., Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1083-1088 (2016); ECF 15-2 at p. 8 [A409];

https://www.uspto.gov/sites/default/files/documents/16524350_22apr2020.pdf [Defendants publishing one of the Rejections for its precedential value.]

6. Patent applications require an applicant to list all inventors as well as their given and family names in application data sheets (ADS). Plaintiff listed “[DABUS]” and “[Invention

¹ Plaintiff’s cites are to the administrative record. Plaintiff cites to the page number of the docket filing (e.g. 61) as well as the administrative record (e.g. A61). Not all instances of the ECF filing page number correlate with the same number as the administrative record.

generated by artificial intelligence]” in the fields for inventor names. (ECF 15-2, at p. 85; ECF 15-3 at p. 381)

7. DABUS is not capable of making an inventor’s oath or declaration as required by 35 U.S.C. § 115(d), so in lieu of the oath, Plaintiff filed a substitute statement under 37 CFR 1.64 that identified Dr. Thaler as the legal representative of DABUS and the applicant for each patent. (ECF 15-2 at pp. 26-27 [A26-27]; ECF 15-3 at pp. 58-59 [A311-312].)

8. Plaintiff also submitted a statement under 37 CFR 3.73(c) identifying Plaintiff as the assignee of the entire right, title, and interest in the Applications, and an assignment document executed by Plaintiff was filed assigning the right to himself on behalf of DABUS. (ECF 15-2 at pp. 71-72 [A71-72]; ECF 15-3 at pp. 107-108 [A360-361].)

9. Given the unprecedented nature of the Applications, Plaintiff also filed an additional “Statement of Inventorship” to provide clarifying remarks that indicated the Applications were based on AI-generated inventions. (ECF 15-2 at pp. 60-65 [A60-65]; ECF 15-3 at pp. 92-97 [A345-350].) The statement explained that the invention was conceived entirely by DABUS, and because of that, DABUS should be listed as the inventor. (See generally id.)

10. As explained in the Statement of Inventorship filed with the applications, “In some instance of machine invention, a natural person might qualify as an inventor by virtue of having exhibited inventive skill in developing a program to solve a particular problem, by skillfully selecting data to provide to a machine, or by identifying the output of a machine as inventive. However, in the present case, the DABUS was not created to solve any particular problem, nor was trained on any special data relevant to the instant invention. The machine rather than a person identified the novelty and salience of the instant invention. A detailed description of how DABUS and a Creativity Machine functions is available in, among others, the

following US patent publications: 5,659,666; 7,454,388 B2; and 2015/0379394 A1.” (ECF 15-2 at p. 61 [A61]; ECF 15-3 at p. 93 [A346].)

11. Plaintiff further explained why he could not list himself as the inventor: “Stephen Thaler, the creator of DABUS, is prohibited from listing himself as an inventor for the instant application because he has not contributed to the conception of the instant invention. DABUS performed what is traditionally considered the mental part of the inventive act. Based on DABUS’s results, a skilled person could have reduced the invention to practice. Inaccurately listing himself as an inventor could subject Dr. Thaler to criminal sanctions. 18 U.S.C. 1001. The Office presumes that the named inventor in an application is the actual inventor. See MPEP §2137.01.” (ECF 15-2 at p. 64 [A64]; ECF 15-3 at p. 96 [A349].)

12. Plaintiff additionally stated, “It has been argued that a natural person may claim inventorship of an autonomous machine invention even in situations in which that person was not involved in the development or operation of a machine by virtue of recognizing the relevance of a machine’s output. This approach is questionable in cases in which the natural person has not made an inventive contribution to the disclosed invention in the accepted meaning of the term. In some cases, recognition of the inventive nature of a computer’s output may require significant skill, but in others, the nature of inventive output may be obvious. In the present case, DABUS identified the novelty of its own idea before a natural person did.” (*Id.*)

13. Plaintiff’s assertions regarding the nature of the invention were accepted and never contested by Defendants. This is consistent with USPTO policies. “The Office presumes that the named inventor or joint inventors in the application are the actual inventor or joint inventors to be named on the patent.” Manual of Patent Examining Procedure Section 2109.

14. Plaintiff filed a request for accelerated examination for both Applications which required Applicant to submit a pre-examination search and an accelerated examination support document. As part of which, it was disclosed to Defendants that foreign analogs of the Applications had been filed in the United Kingdom Intellectual Property Office (UKIPO) and European Patent Office (EPO), and that both offices had examined the Applications on their merits and found them to be patentable to the extent possible in a preliminary examination (e.g., not including inventorship issues). (ECF 15-2 at p. 56–59 [A56–59] ECF 15-3 at p. 98–101 [A351–354].)

15. Both Applications followed similar procedural pathways at the USPTO. (See generally ECF 15-1 at p. 2-3 and 5-6.)

16. On August 8, 2019, Defendants issued a “Notice to File Missing Parts of Nonprovisional Application” for each application. The notices indicated that the ADSs did not identify each inventor by a legal name. (ECF 15-2 at pp. 97-98 [A97-98]; ECF 15-3 at pp. 127-128 [A380-381].)

17. A few weeks later, under 37 CFR 1.181, Plaintiff petitioned for supervisory review and to vacate the notices for being unwarranted and/or void. (ECF 15-2 at pp. 111-116 [A111-116]; ECF 15-3 at pp. 141-146 [A394-399].)

18. In December, a second “Notice to File Missing Parts of Nonprovisional Application” was issued for each application. Plaintiff’s petitions in response to the initial notices were dismissed in a decision issued on December 17, 2019. (ECF 15-2 at pp. 121-122 [A121-122]; ECF 15-3 at pp. 147-149 [A400-402].)

19. Plaintiff petitioned Defendants again under 37 CFR 1.181 on January 20, 2020. Plaintiff requested reconsideration of the December 17 decisions refusing to vacate the August 8, 2019 notices. (ECF 15-2 at pp. 135-146 [A135-146]; ECF 15-3 at pp. 161-173 [A414-426].)

20. Approximately four months later, the USPTO denied the petitions for both applications. (ECF 15-2 at pp. 205-214 [A205-214]; ECF 15-3 at pp. 203-212 [A456-465].)

21. The USPTO published its decision as to the Neural Flame but not the Fractal Container. (ECF 15-2 at p. 213 [A213]; ECF 15-3 at pp. 210-211 [A463-464].)

22. The USPTO took the position that all patent applications require an inventor who must be a natural person based on various statutory references and case law. (ECF 15-2 at pp. 208-212 [A208-212]; ECF 15-3 at pp. 206-210 [A459-463].)

23. Defendants cited to 35 U.S.C. §101 which 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.” (ECF 15-2 at p. 209 [A209]; ECF 15-3 at p. 207 [A460].)

24. Defendants also cited to various case law holding that corporations and sovereigns cannot be inventors and language within those decisions suggesting that inventors must be natural persons. The decisions also noted that “[c]onception is the touchstone of invention... a mental act[.]” (ECF 15-2 at pp. 209-210 [A209-210]; ECF 15-3 at pp. 207-208 [A460-461].)

25. Those decisions constitute final agency action. Plaintiff has exhausted his available remedies at the USPTO. (See ECF 15-2 at p.232 [A232]; ECF 15-4 at p. 5 [A483].)

VI. LEGAL STANDARD

The Parties are filing cross-motions for summary judgment. (ECF 14 at p. 71.) “Under the APA, agency action may be set aside if the court finds that the agency action was ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’” Genetics & IVF Inst. v. Kappos, 801 F. Supp. 2d 497, 502 (E.D. Va. 2011) (citing PhotoCure ASA v. Dudas, 622 F. Supp. 2d 338, 343 (E.D. Va. 2009) and quoting 5 U.S.C. § 706(2)(A).) Even in an APA action, “the ordinary standard for summary judgment applies.” Id. (citations omitted). “Under the ‘ordinary’ and well-settled standard, summary judgment is appropriate only if the record shows ‘there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law.’” Id. (citations omitted). “On that ‘genuine issue of material fact’ front, the APA ‘confines judicial review of executive branch decisions to the administrative record of proceedings before the pertinent agency.’” Id. (citations omitted). “As such, there can be no genuine issue of material fact in an APA action, and the legal questions presented in [an APA] action are therefore ripe for resolution on cross-motions for summary judgment.” Id. (citing Am. Forest Res. Council v. Hall, 533 F. Supp. 2d 84, 89 (D.D.C. 2008) (quoting Occidental Eng’g Co. v. INS, 753 F.2d 766, 769–70 (9th Cir. 1985)) (“[I]t is the role of the agency to resolve factual issues to arrive at a decision that is supported by the administrative record, whereas ‘the function of the district court is to determine whether or not as a matter of law the evidence in the administrative record permitted the agency to make the decision it did.’”)). As the District of Columbia Circuit has stated, ‘when a party seeks review of agency action under the APA, the district judge sits as an appellate tribunal,’ and ‘[t]he ‘entire case’ on review is a question of law.’” Genetics & IVF Inst., supra, 801 F. Supp. 2d 497 at 502 (citing Am. Bioscience, Inc. v. Thompson, 269 F.3d 1077, 1083 (D.C. Cir. 2001).)

Plaintiff seeks an order compelling Defendants to reinstate the Applications and vacate the prior decision on the petitions filed under 37 CFR 1.181. Under the APA, the Court “shall . . . hold unlawful and set aside agency action, findings, and conclusions found to be—(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; (B) contrary to constitutional right, power, privilege, or immunity; [or] (C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right . . .” 5 U.S.C. § 706(2). The court must judge the propriety of the agency’s action based “solely [on] the grounds invoked by the agency” when it made the challenged decision. SEC v. Chenery Corp., 332 U.S. 194, 196 (1947).

In addition to injunctive relief, Plaintiff seeks a declaration that a patent application for an AI-Generated Invention should not be rejected on the basis that no natural person is identified as an inventor, as well as a declaration that a patent application for an AI-generated invention should list an AI where the AI has met inventorship criteria.

The Federal Declaratory Judgment Act (“Act”) provides that “any court of the United States ... may declare the rights and other legal relations of any interested party seeking such declaration, whether or not further relief is or could be sought.” 28 U.S.C. § 2201. This power is discretionary. Centennial Life Ins. v. Poston, 88 F. 3d 255, 256 (4th Cir. 1996). The “principal criteria” for conducting the declaratory judgment analysis are (i) whether a declaration would serve a useful purpose in clarifying and settling the legal relations in issue and (ii) whether a declaration will terminate and afford relief from the uncertainty, insecurity, and controversy giving rise to the proceeding. See Aetna Cas. & Sur. Co. v. Quarles, 92 F. 2d 321, 325 (4th Cir. 1937). When both of the principal criteria are met, “a district court is obliged to rule on the merits of a declaratory judgment action.” See Volvo Constr. Equip. N.A., Inc. v. CLM Equip. Co., 386 F. 3d 581, 594 (4th Cir. 2004).

VII. ARGUMENT

A. DABUS Actually Invented the Subject Matter of the Applications so it is Appropriately Named as the Inventor and Plaintiff is Entitled to the Applications

Because this case involves review under the APA and review is limited to the administrative record without fact finding on behalf of the court, the factual assertions made by Plaintiff during the application process, which have never been disputed by the Defendants, are taken as true for the Court's review. See Genetics & IVF Inst., *supra*, 801 F. Supp. 2d at 502.

It is thus undisputed that DABUS generated the otherwise patentable inventions at issue and that DABUS identified the novelty and salience of these inventions before they were seen by a natural person. Also, that no natural person qualifies as an inventor for the Applications and, as a result, that Plaintiff was and is unable to identify a natural person who qualifies as an inventor.

Thus, as a *factual* matter, DABUS invented the present inventions—there has been no suggestion by Defendants to the contrary. Defendants simply posit that as a *legal* matter DABUS cannot be listed as an inventor. The effect of which is that two otherwise patentable inventions cannot receive patent protection.

Plaintiff as the developer, user, and owner of DABUS, is entitled to own DABUS' output under, *inter alia*, the common law doctrines of accession and first possession. See generally, Thomas W. Merrill, *Accession and Original Ownership*, *Journal of Legal Analysis*, 459-505 (2009). In the same way that one who owns a tree owns the fruit of that tree, DABUS is personal property owned by Plaintiff and so Plaintiff is entitled to own DABUS's output. For instance, Plaintiff owned the Neural Flame and Fractal Container as trade secrets prior to publication of the Applications. The patent system is designed to encourage the disclosure of information that otherwise qualifies for trade secret protection for the benefit of the public. AK Steel Corp. v. Sollac, 344 F.3d 1234, 1244 (Fed. Cir. 2003) (“as part of the quid pro quo of the

patent bargain, the applicant's specification must enable one of ordinary skill in the art to practice the full scope of the claimed invention.”) It would run contrary to the purpose of the patent system to only allow an AI’s owner to own AI output as a trade secret and to discourage the information’s disclosure in return for patent protection.

B. Patent Protection for AI-Generated Works is Consistent with the Purpose of the Constitution and the Patents Act

Congress is empowered to grant patents on the basis of the Patent and Copyright Clause of the Constitution. U.S. CONST. art. I, § 8, cl. 8. This clause enables Congress “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” *Id.* It also provides an explicit rationale for granting patent protection, namely to encourage innovation under an incentive theory. The patent system is also designed to incentivize the disclosure of information, and the commercialization and development of inventions. See Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 54 B. C. L. Rev. 1104-1105 (2016).

Allowing patents for AI-Generated Inventions will result in more innovation. It will incentivize the development of AI capable of producing patentable output by making that output more valuable. *Id.*, at 1081. Patents also incentivize commercialization and disclosure of information, and this incentive applies with equal force to a human and an AI-Generated Invention. By contrast, denying patent protection for AI-Generated Inventions threatens to undermine the patent system by failing to encourage the production of socially valuable inventions.

Patent law also protects the moral rights of human inventors and listing an AI as an inventor where appropriate would protect these human rights. It would acknowledge the work of the AI’s creators and serve to inform the public of an invention’s origin. Perhaps most

importantly, it will discourage individuals from listing themselves as inventors without having contributed to an invention's conception merely because their name is needed to obtain a patent. Allowing a person to be listed as an inventor for an AI-Generated Invention would not be unfair to an AI, which has no interest in being acknowledged, but allowing people to take credit for work they have not done would devalue human inventorship. It would put the work of someone who merely asks an AI to solve a problem on an equal footing with someone who is legitimately inventing something new.

C. AI-Generated Works Are Eligible for Patent Protection as a Matter of Law

In interpreting the Constitutional and statutory basis for patentability of AI-Generated Inventions, the Court should seek "to give effect to the intent of Congress." United States v. Am. Trucking Ass'ns, Inc., 310 U.S. 534, 542 (1940). Here, the intent of Congress was to create a system that would encourage innovation, as well as to promote disclosure of information and commercialization of new technologies.

Allowing patents on AI-Generated Inventions would be consistent with the Founders' intent in enacting the Patent and Copyright Clause, and it would interpret the Patent Act to promote that purpose. See, e.g., King v. Burwell, 135 S. Ct. 2480, 2496 (2015) (holding the plain language of the statute must be considered in the context of the statute as a whole and taking into account that a narrow literal interpretation would result in outcomes inconsistent with Congressional intent. "Congress passed the Affordable Care Act to improve health insurance markets, not to destroy them. If at all possible, we must interpret the Act in a way that is consistent with the former, and avoids the latter.").

Interpreting statutory language to advance the statute's purpose is particularly warranted in instances where, as in the present case, it is unlikely that Congress anticipated and legislated

for the specific circumstances at issue. See, e.g., Yates v. United States, 135 S. Ct. 1074, 1078 (2015) (holding a fish is not a “tangible object,” as that term is used in 18 U.S.C. § 1519. “A fish is no doubt an object that is tangible; fish can be seen, caught, and handled, and a catch, as this case illustrates, is vulnerable to destruction. But it would cut § 1519 loose from its financial-fraud mooring to hold that it encompasses any and all objects, whatever their size or significance, destroyed with obstructive intent. Mindful that in Sarbanes–Oxley, Congress trained its attention on corporate and accounting deception and cover-ups, we conclude that a matching construction of § 1519 is in order: A tangible object captured by § 1519, we hold, must be one used to record or preserve information.”)

Allowing patents on AI-Generated Inventions would not upset an existing policy. It would clarify the permissibility of future patent applications rather than retroactively invalidating previously granted patents. By contrast, excluding an entire class of inventions from patentability would undermine the patent system. This is important today, but far more important for future innovation. Given the potential of AI to surpass the limits of human ingenuity, it may even be the case that AI-Generated Inventions one day become the primary source of innovation. Ryan Abbott, *Everything is Obvious*, Ryan Abbott, 66 UCLA. L. REV. 2, *8 (2019).

In Diamond v. Chakrabarty, the Supreme Court was charged with deciding whether genetically modified organisms could be patented. 447 U. S. 303, 317 (1980). The Court held that a categorical rule denying patent protection for “inventions in areas not contemplated by Congress . . . would frustrate the purposes of the patent law.” Id., at 315. The Court noted that Congress chose expansive language to protect a broad range of patentable subject matter. Id., at 316. As technology has advanced, patent law has historically evolved to accommodate and

further encourage such advances.² “[A] statute is not to be confined to the ‘particular application[s]...contemplated by the legislators.’” *Id.* at 315.

Drawing an analogy from the copyright context, just as the terms “Writings” and “Authors” have been construed flexibly in interpreting the Patent and Copyright Clause, so too should the term “Inventors” be afforded the flexibility needed to effectuate constitutional purposes.³ Indeed, under the work-for-hire doctrine, a corporation can be considered a legal author for copyright purposes. 17 U.S.C. § 101.

D. Defendants’ Interpretation Is Not Entitled to Deference

This Court reviews an agency’s constitutional and statutory interpretations and application, as well as conclusions of law, *de novo*, *i.e.*, without deference. See Chevron, U.S.A. Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837, 842-45 (1984). Deference under Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984) is due only to statutory interpretations made by agencies pursuant to a legislative delegation of rulemaking or similar authority. Merck & Co. v. Kessler, 80 F.3d 1543, 1549-50 (Fed. Cir. 1996) (“Merck”) (holding that “the broadest of the PTO’s rulemaking powers ... does not grant the Commissioner the authority to issue substantive rules” and that “[t]hus, the rule of controlling deference set

² The Supreme Court has called the section of the U.S. Code relating to patentable subject matter a “dynamic provision designed to encompass new and unforeseen inventions.” J.E.M. AG Supply, Inc. v. Pioneer Hi-Bred Int’l, Inc., 534 U.S. 124, 135 (2001). The Court noted in Bilski v. Kappos that “it was once forcefully argued that until recent times, ‘well-established principles of patent law probably would have prevented the issuance of a valid patent on almost any conceivable computer program.’” 561 U.S. 593, 605 (2010) (quoting Diamond v. Diehr, 450 U.S. 175, 195 (1981) (Stevens, J., dissenting)). The Court, however, went on to state that “this fact does not mean that unforeseen innovations such as computer programs are always unpatentable.” *Id.*, (citing Diehr, 450 U.S. at 192–93 (Stevens, J., dissenting)).

³ In 1973, the Supreme Court in Goldstein v. California noted that the terms “Writings” and “Authors,” have “not been construed in their narrow literal sense but, rather, with the reach necessary to reflect the broad scope of constitutional principles.” 412 U.S. 546, 561 (1973).

forth in *Chevron* does not apply” at 1550). See, e.g., Ass’n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107, 2118 (2013) (disagreeing with an argument “that the [US]PTO’s past practice of awarding gene patents is entitled to deference”). Ass’n for Molecular Pathology v. U.S.PTO, 687 F.3d 1303, 1357 (Fed. Cir. 2012) (Bryson, J., concurring in part dissenting in part) (“the PTO lacks substantive rulemaking authority as to issues such as patentability”). Thus, “for a [US]PTO interpretation to prevail, Article III courts must be convinced that the interpretation is not only reasonable but should, in fact, be understood to be correct.” John M. Golden, *Working Without Chevron: The PTO as Prime Mover*, 65 *Duke L.J.* 1657, 1673 (2016).

The USPTO has no general substantive rulemaking power; it only has authority to establish procedural regulations. Wyeth v. Dudas, 580 F. Supp. 2d 138, 141 (D.D.C. 2008). Procedural rules are those that “do not themselves alter the rights or interests of parties, although [they] may alter the manner in which the parties present themselves or their viewpoints to the agency.” Tafas v. Doll, 559 F.3d 1345, 1351-54 (Fed. Cir. 2009). The Supreme Court explained the basis for the distinction: “administrative implementation of a particular statutory provision qualifies for *Chevron* deference when it appears that [1] Congress delegated authority to the agency generally to make rules carrying the force of law, and [2] that the agency interpretation claiming deference was promulgated in the exercise of that authority.” United States v. Mead Corp., 533 U.S. 218, 226-27 (2001). Congress has made no such grant of authority to the USPTO with respect to issues of substantive patent law. See, e.g., Merck, supra, 80 F.3d at 1549-50.

Defendants are also not entitled to Skidmore deference, Skidmore v. Swift & Co., 323 U.S. 134 (1944), which looks to “the thoroughness of [the agency’s] consideration and the validity of its reasoning, i.e., its basic power to persuade if lacking power to control.” Merck,

supra, 80 F.3d at 1550. As the Federal Circuit stated with respect to USPTO interpretation of a statutory provision on patent-term extensions, “Skidmore deference is not warranted because the [US]PTO’s interpretation is neither persuasive nor consistent,” Photocure ASA v. Kappos, 603 F.3d 1372, 1376 (Fed. Cir. 2010).

Accordingly, Defendants’ interpretation of the legal issues in this case is entitled to no deference. In any event, “[e]ven if some level of deference were owed to the [US]PTO’s interpretation, neither Chevron nor Skidmore permits a court to defer to an incorrect agency interpretation.” PhotoCure ASA v. Kappos, 603 F. 3d 1372, 1376 (Fed. Cir. 2010). Here, the USPTO’s reasoning is not only unpersuasive—it is manifestly contrary to the purpose of the patent system.

E. The Authorities Relied Upon by Defendants Do Not Stand for The Proposition That AI-Generated Inventions are Unpatentable

No statute or case relied upon by Defendants in the Decisions explicitly holds that an AI-generated invention cannot be patented or that an AI cannot be listed as an inventor. Rather, any discussion of inventors as natural persons has been made outside the context of this case and based on the *assumption* that only a natural person could invent. There is a principled reason for prohibiting corporate and sovereign inventorship—in the case of a traditional invention, it could prevent legitimate human inventors from enjoying the fruits of their labor.

In the Rejections, Defendants relied on the language in 35 U.S.C. §§ 100, 101, 102, 115, 116(c), 185, and 256(a), that use the terms “person,” “individual,” “whoever,” “himself,” and “herself” to argue that the words either “**suggest**[] a natural person” or “uses pronouns specific to natural persons.” (ECF 15-2 at pp. 208-212 [A208-212]; ECF 15-3 at pp. 206-210 [A459-463] [emphasis added]). Depending on context, such language can be interpreted to include entities other than natural persons. See, e.g., Burwell v. Hobby Lobby Stores, Inc., 573 U.S. 682 (2014)

(holding that the Religious Freedom Restoration Act, which prohibits Government from substantially burdening a “person’s” exercise of religion, applied to certain corporations). Indeed, 35 U.S.C. § 271 uses the term “whoever” in the context of infringement, yet there is no limitation on naming non-natural persons as defendants in infringement actions. See, e.g., 35 U.S. Code § 271(a) (“Except as otherwise provided in this title, **whoever** without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.” [emphasis added])

More importantly, there is no evidence that Congress ever intended to prohibit patents on AI-Generated Inventions. Even if statutory and judicial language refers to inventors as individuals, none of this has been in the context of AI-Generated Inventions. These statutes relied upon by Defendants were passed long before AI-Generated Inventions were a reality. See 35 U.S.C. § 101 [enacted July 19, 1952 (66 Stat. 798)]; § 102 (same); § 115 [enacted July 19, 1952 (66 Stat. 799)]; § 116 (same); § 185 [enacted July 19, 1952 (66 Stat. 807)]; § 256 [enacted July 19, 1952 (66 Stat. 810)]. The term “artificial intelligence” was not even coined until 1956, years after these statutes were passed into law. Ryan Abbott, *The Reasonable Robot: Artificial Intelligence and the Law*, Cambridge University Press 2020 at 21.

Defendants cited to U. of Utah v. Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V., 734 F.3d 1315, 1318 (Fed. Cir. 2013) (“Wissenschaften E.V.”) and Beech Aircraft Corp. v. EDO Corp., 990 F.2d 1237, 1244 (Fed. Cir. 1993) which are cases that state sovereigns and corporations cannot be patent inventors. (ECF 15-2 at pp. 209-210 [A209-210]; ECF 15-3 at pp. 207-208 [A460-461].) Defendants fail to acknowledge a fundamental difference between an AI and a corporation is that corporations are literally made up of persons and can

only act through their agents. See Commodity Futures Trading Com'n v. Weintraub, 471 U.S. 343, 348 (1985) [“... a corporation must act through agents.”]. Therefore, when a company files a patent application, it will always be the case that there is at least one natural person who qualifies as an inventor (at least, assuming it is not an application for an AI-Generated Invention). If a company was allowed to list itself as an inventor, or not to list an inventor at all, it would deprive these human inventors of credit. It could also deprive them of economic benefits to which they might be entitled by virtue of their inventorship, for example, if they have an agreement with their employer for royalty sharing. Compared to individuals, companies own the overwhelming majority of patents. (https://www.uspto.gov/web/offices/ac/ido/oeip/taf/all_tech.htm Part A1 – Table A1-1b (e.g., for patents granted in 2019, US companies owned 162,806 patents, while US individuals owned 14,945 patents)). DABUS, unlike a company, did not require inventive skill to be exercised by a natural person to generate the present inventions—the inventions were created and conceived entirely by DABUS.

Because statutes and cases that refer to inventors as individuals have never done so in relation to an AI-generated invention, they should not be misapplied to support a blanket prohibition on patent rights. See Karl F. Milde, Jr., Can a Computer Be an “Author” or an “Inventor”?, 51 J. PAT. OFF. SOC'Y 378, 379 (1969) (“The closest that the Patent Statute comes to requiring that a patentee be an actual person is in the use, in Section 101, of the term ‘whoever.’ Here too, it is clear from the absence of any further qualifying statements that the Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”).

F. Conception Does Not Prohibit Artificial Inventors

For a person to be an inventor, the person must contribute to an invention's "conception." Conception has been defined 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...." Townsend v. Smith, 36 F.2d 292, 295 (CCPA 1929).

As a matter of fact, DABUS's output formed a definite and permanent idea of a complete and operative invention as it is thereafter to be applied in practice. Because the Applications are otherwise patentable and meet both enablement and written description requirements, the Applications sufficiently enable a person having ordinary skill in the art to make and use the inventions, and therefore the Applications by necessity contain a definite and permanent idea of a complete and operative invention as it is thereafter to be applied in practice. Hyatt v. Boone, 146 F.3d 1348, 1352 (Fed. Cir. 1998) ("The filing of a patent application serves as conception and constructive reduction to practice of the subject matter described in the application.") Because of this, "[an] inventor need not provide evidence of either conception or actual reduction to practice when relying on the content of the patent application." MPEP 2138.05. In addition, "reduction to practice can be done by another on behalf of the inventor." Id. As no natural person qualified as an inventor, DABUS is the only possible candidate to have conceived of the inventions. In the alternate, Defendants could have allowed, or could now allow, the applications to proceed without listing any inventor—however, listing an AI inventor is more consistent with the spirit and purpose of the Patents Act.

While prior judicial language about conception sometimes refers to it in the context of human mental activity, it does not discuss whether a non-human could conceive of anything, and

even with regards to individuals it is not clear what “formation in the mind” *actually* means. Courts associating inventive activity with conception have not been using terms precisely or meaningfully in the context of AI-Generated Inventions. That is not only because a court has not previously grappled the legal issues here, but also because the importance of conception (in the patent context) was primarily for establishing a priority date for purposes of interference proceedings, or antedating a prior art reference, under the first-to-invent system that existed prior to the Leahy-Smith America Invents Act. Public Law 112–29. Hyatt, supra, 146 F.3d at 1351 (Fed. Cir. 1998) (“The interference proceeding implements the principle of United States law that the right to a patent derives from priority of invention, not priority of patent application filing ... Thus, during an interference proceeding evidence may be presented of conception, reduction to practice, and diligence, as appropriate to the positions of the parties...””) The requirement for conception was certainly never intended to exclude inventions from patentability.

If conception is required for an invention, it is unclear under existing law whether an AI would have to engage in a process that results in inventive output—which it can do—or whether, and to what extent, it would need to mimic human thought. If the latter, it is unclear what the purpose of such a requirement would be except to exclude nonhumans (for which a convoluted test is unnecessary). Dr. Thaler has persuasively argued that DABUS’s architecture imitates the architecture of the human brain. See, e.g., Stephen L. Thaler, Synaptic Perturbation and Consciousness, 6 INT’L J. MACHINE CONSCIOUSNESS 75 (2014). There is a slippery slope in determining what constitutes “conception” in an AI even leaving aside deficits in our understanding of the nature of thought.

If DABUS is able to generate patentable output but not to engage in “conception”—would a computer scientist have to design a completely digitized version of the human brain? Even if designing a completely digitized version of the human brain was possible, it might not be the most effective way to structure an inventive machine. On top of that, it would be difficult or impossible for the USPTO and the courts to distinguish between different computers’ architectures.

More importantly, the primary reason a conception requirement should not prevent AI-Generated Inventions from being patented is that the patent system should be indifferent to the means by which invention comes about. Congress came to this conclusion in 1952 when it abolished the Flash of Genius doctrine which held that in order to be patentable, a new device, “however useful it may be, must reveal the flash of creative genius, not merely the skill of the calling.” Cuno Eng’g Corp. v. Automatic Devices Corp., 314 U.S. 84, 91. The doctrine was interpreted to mean that an invention must come into the mind of an inventor in a “flash of genius” rather than as a result of “long toil and experimentation.” Graham v. John Deere Co. of Kansas. City, 383 U.S. 1 (1966).

Today, “[p]atentability shall not be negated by the manner in which the invention was made.” 35 U.S.C. § 103; see also Graham, supra, 383 U.S. at 17, n. 8 [“The second sentence states that patentability as to this requirement is not to be negated by the manner in which the invention was made, that is, it is immaterial whether it resulted from long toil and experimentation or from a flash of genius.”] “The process by which an invention is created is irrelevant to the analysis of its patentability.” Dey, L.P. v. Teva Parenteral Medicines, Inc., 6 F. Supp. 3d 651, 677 (N.D.W. Va. 2014).

Both the literal language and the spirit of 35 U.S.C. § 103 hold that patentability of AI-Generated Inventions should be based on the inventiveness of an AI's output rather than on a clumsy anthropomorphism. Patent law should be interested in generating socially valuable innovation instead of philosophical distinctions about whether machines think.

VIII. CONCLUSION

The future of innovation is at stake in this case. Because denying patent protection for AI-Generated Inventions would run contrary to the Constitution and the Patents Act, the Court should grant Plaintiff's prayer for relief. The USPTO should not be allowed to impede the progress of science by advancing policies that are hostile to intellectual property rights.

Dated: January 18, 2021

BROWN, NERI, SMITH & KHAN LLP

By: /s/ Ryan Abbott
Ryan Abbott, Esq. (admitted *pro hac vice*)
Attorney for Plaintiff
Brown, Neri, Smith & Khan, LLP
11601 Wilshire Blvd, Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980
Ryan@bnsklaw.com

By: /s/ Geoffrey A. Neri
Geoffrey A. Neri, Esq. VSB No. 72219
Attorney for Plaintiff
Brown, Neri, Smith & Khan, LLP
11601 Wilshire Blvd, Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980
Geoff@bnsklaw.com

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

STEPHEN THALER,)	
)	
Plaintiff,)	
)	
vs.)	Civil Action No. 1:20cv903
)	
ANDREW HIRSHFELD,)	
Performing the Functions and)	
Duties of the Under Secretary of)	
Commerce for Intellectual Property)	
and Deputy Director of the United)	
States Patent and Trademark Office, ¹)	
<i>et al.</i> ,)	
)	
Defendants.)	
_____)	

DEFENDANTS’ MOTION FOR SUMMARY JUDGMENT

Pursuant to Federal Rule of Civil Procedure 56, defendants, through their undersigned counsel, hereby respectfully move for the entry of summary judgment in their favor in the above-captioned action. The grounds for this motion are fully explained in the simultaneously-filed memorandum of law in support of the motion.

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¹Pursuant to 35 U.S.C. § 3, the powers and duties of the U.S. Patent and Trademark Office are vested in an Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office. Effective January 20, 2021, Andrei Iancu resigned as Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office, and Andrew Hirshfeld began performing the functions and duties of the Under Secretary of Commerce for Intellectual Property and Director of the USPTO. Accordingly, the named defendant for the subject civil action has changed. *See* FED. R. CIV. P. 25(d)(1).

Respectfully submitted,

RAJ PAREKH
ACTING UNITED STATES ATTORNEY

By: _____/s/_____
DENNIS C. BARGHAAN, JR.
Deputy Chief, Civil Division
Assistant U.S. Attorney
2100 Jamieson Avenue
Alexandria, Virginia 22314
Telephone: (703) 299-3891
Fax: (703) 299-3983
Email: dennis.barghaan@usdoj.gov

DATE: February 24, 2021

ATTORNEYS FOR DEFENDANTS

OF COUNSEL: Meredith Schoenfeld
Peter Sawert
Associate Solicitors
United States Patent & Trademark Office

CERTIFICATE OF SERVICE

I hereby certify that on this date, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will transmit a Notice of Electronic Filing (“NEF”) to the following:

Geoffrey Alex Neri
Brown Neri Smith & Khan LLP
11766 Wilshire Boulevard, Suite 1670
Los Angeles, California 90025
geoff@bnsklaw.com

Date: February 24, 2021

_____/s/_____
DENNIS C. BARGHAAN, JR.
Deputy Chief, Civil Division
Assistant U.S. Attorney
2100 Jamieson Avenue
Alexandria, Virginia 22314
Telephone: (703) 299-3891
Fax: (703) 299-3983
Email: dennis.barghaan@usdoj.gov

ATTORNEYS FOR DEFENDANTS

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STEPHEN THALER,)	
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Duties of the Under Secretary of)	
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<i>et al.</i> ,)	
)	
Defendants.)	
)	

**MEMORANDUM OF LAW IN SUPPORT OF DEFENDANTS’ MOTION FOR
SUMMARY JUDGMENT & IN OPPOSITION TO PLAINTIFF’S MOTION FOR
SUMMARY JUDGMENT**

¹Pursuant to 35 U.S.C. § 3, the powers and duties of the U.S. Patent and Trademark Office are vested in an Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office. Effective January 20, 2021, Andrei Iancu resigned as Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office, and Andrew Hirshfeld began performing the functions and duties of the Under Secretary of Commerce for Intellectual Property and Director of the USPTO. Accordingly, the named defendant for the subject civil action has changed. *See* FED. R. CIV. P. 25(d)(1).

INTRODUCTION

In the Patent Act, Congress explicitly defined the term “inventor” to be an “individual,” and then in subsequent statutory provisions referred to such an “individual” using personal pronouns. And as such, in published opinions that are binding in this civil action, the Federal Circuit – consistent with Supreme Court authority on the plain statutory meaning of “individual” – has held that an “inventor” of subject-matter on which one seeks to obtain patent protection must be a “natural person” (*i.e.*, a “human being”). In rejecting plaintiff’s request for an artificial intelligence machine to be an “inventor” under the Patent Act, the USPTO was merely applying Congress’s plain language and the Federal Circuit’s construction of the same, as it is obligated to do.

Plaintiff now asks this Court to ignore this plain statutory language and Federal Circuit authority, based solely on his own assessment of the intellectual property policy that the United States should adopt with respect to artificial intelligence. But the Supreme Court and Federal Circuit have repeatedly held that such policy assessments – whatever their ultimate merit – have no place in the judicial exercise of statutory construction, and belong instead in the halls of Congress. In short, plaintiff seeks to rewrite the Patent Act, something that neither this Court nor the USPTO is authorized to do. This Court should therefore affirm the USPTO’s underlying petition decision, and enter summary judgment in favor of defendants.

STATUTORY & REGULATORY BACKGROUND

As plaintiff essentially concedes in his opening summary judgment memorandum, the sole issue presented in this action is a pure question of law: Can something other than a natural person be named as the inventor on a patent application? Before moving to the administrative proceedings in which the United States Patent and Trademark Office (“USPTO”) answered this

question – in the detailed written decision that plaintiff challenges here – it is important to provide a brief explanation of the statutory and regulatory provisions on which this question must be resolved. As will be seen below, the Patent Act is replete with explicit language to the effect that that inventor named in a patent application must be a natural person.

I. THE “INVENTOR”

This civil action exclusively concerns the concept of inventorship, which has been a significant part of patent law for more than a century:

The patent law makes it essential to the validity of a patent that it shall be granted on the application, supported by the oath, of the original and first inventor, or of his executor or administrator, whether the patent is issued to him or to his assignee. A patent which is not supported by the oath of the inventor . . . is unauthorized by law and void, and, whether taken out in the name of the applicant or of any assignee of his, confers no rights as against the public.

Kennedy v. Hazelton, 128 U.S. 667, 672 (1888). But this is not merely a relic of a bygone era of legal authority. Far to the contrary, Congress included this fundamental principle in its modern codification of the Patent Act, and it continues to be a significant part of the patent application process.

a. Utilizing the legislative authority provided by the Constitution’s Patent Clause, *see* U.S. CONST. art. I, § 8, cl. 8, Congress initially codified the Patent Act in 1952, *see Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 180 (1980), and has amended the Patent Act a number of times in the ensuing sixty years. In 2011, Congress promulgated the America Invents Act (“AIA”), which Congress described as legislative action “to ensure that the patent system in the twenty-first century reflects the constitutional imperative” of the Patent Clause to further innovation, and “to correct flaws in the system” that it had identified. H.R. RPT. 112-98, at 68-69 (June 1, 2011). Of particular import here, the AIA formally amended the Patent Act to provide an explicit statutory definition for the term “inventor”:

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(f) (emphasis added). The AIA also added a definition for “joint inventor.” *See id.* § 100(g) (defining term to “mean any one of the *individuals* who invented or discovered the subject matter of a joint invention” (emphasis added)).

b. More tangibly, Congress has required that one who seeks a patent on a particular invention must file a written application with the USPTO. *See* 35 U.S.C. § 111(a). That application must contain three things. *See id.* § 111(a)(2). *First*, the application must contain a “specification,” *see id.* § 111(a)(2)(A), or “a written description of the invention” that “concludes with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention,” *id.* §§ 112(a)-(b). *Second*, the application must contain any necessary drawings of the invention. *See id.* §§ 111(a)(2)(B); 113. *Third*, the application must include “the name of the inventor for any invention,” *id.* § 115(a), and “an oath or declaration by the inventor” to the effect that he or she “believes *himself or herself* to be the original inventor or joint inventor of [the] claimed invention,” *see id.* §§ 115(a); (b)(2) (emphasis added); *see also id.* § 111(a)(2)(C).

The Patent Act does provide a slight exception to these mandates, allowing an applicant to submit a “substitute statement” to the USPTO “in lieu of” of the oath or declaration that is typically required from the inventor. *See id.* § 115(d)(1). The express statutory language codifying this exception tracks the Patent Act’s definition of “inventor”:

A substitute statement under paragraph (1) is permitted with respect to *any individual who—*

- (A) is unable to file the oath or declaration under subsection (a) because *the individual—*
 - (i) is deceased;

- (ii) is under legal incapacity; or
 - (iii) cannot be found or reached after diligent effort; or
- (B) is under an obligation to assign the invention but has refused to make the oath or declaration required under subsection (a).

Id. § 115(d)(2) (emphasis added). And similarly, the statute requires that any “substitute statement” must “identify *the individual* to whom the statement applies” as well as the circumstances triggering the exception to the oath or declaration requirement. *Id.* § 115(d)(3) (emphasis added).

II. REVIEW OF PATENT APPLICATIONS

Upon the filing of a patent application, the USPTO will initially review that application – before forwarding it to a patent examiner for substantive examination – to ensure that it contains all of the required parts described above. *See Ariad Pharms., Inc. v. Matal*, 283 F. Supp. 3d 503, 505 (E.D. Va. 2018). If the application is missing one of the required parts, the USPTO will issue to the applicant a “Notice to File Missing Parts,” which identifies the particular deficiency of the application, and provides the applicant a period of time within which to remedy the problem. *See* 37 C.F.R. § 1.53(f)(1). Should the applicant not heed this warning and fail to submit the missing part (or parts), the USPTO will deem the application abandoned. *See id.*

An applicant may, however, challenge the validity of the USPTO’s conclusion – articulated through a “Notice to File Missing Parts” – that an application failed to comply with the relevant procedural requirements. Pursuant to federal regulation, the applicant may file an administrative petition asking the USPTO Director to exercise his “supervisory authority” over a given set of circumstances. *See* 37 C.F.R. § 1.181(a)(3). The USPTO Director has delegated his authority to decide such petitions, *see id.* § 1.181(g), to what was (at the time of the petition

decision at issue here) the Office of the Deputy Commissioner for Patent Examination Policy, *see Manual of Patent Examination Policy (“MPEP”) ¶1002.02(b)*.

UNDISPUTED MATERIAL FACTS

I. GENERAL PRINCIPLES

The APA confines review of Executive Branch action to the administrative record of proceedings before the pertinent agency. *See* 5 U.S.C. § 706; *Camp v. Pitts*, 411 U.S. 138, 142 (1973). Accordingly, as one court has noted, “when a party seeks review of agency action under the APA [before a district court], the district judge sits as an appellate tribunal.” *Am. Bioscience, Inc. v. Thompson*, 269 F.3d 1077, 1083 (D.C. Cir. 2001). “[T]here can be no genuine issue of material fact” in an APA action, *R.R. Donnelly & Sons Co. v. Dickinson*, 123 F. Supp. 2d 456, 458 (N.D. Ill. 2000) – *i.e.*, a particular “fact” is either reflected in the administrative record of agency proceedings, or is not – and “[t]he entire case on review is a question of law, and only a question of law.” *Marshall County Health Care Auth. v. Shalala*, 988 F.2d 1221, 1226 (D.C. Cir. 1993).

One therefore might question whether a statement of undisputed material facts (or a listing of those “facts” identified by plaintiff that defendants “dispute”) is even necessary in the APA context. *Cf. Maine v. Norton*, 257 F. Supp. 2d 357, 372 (D. Me. 2003) (recognizing that “the parties’ statements of material facts take on a different role in an APA case”). Plaintiff has, however, provided a statement of what he terms “material facts,” which represents a discussion of what he believes the administrative record discloses about the events surrounding the Applications and the USPTO’s actions regarding the same. *Pl. Mem.* (Dkt. No. 19), at 2-8. Given the dictates of Local Rule 56(B), the USPTO provides its own fact statement below, followed by a brief comment on plaintiff’s factual recitation.

II. USPTO'S STATEMENT

The instant action concerns two patent applications that plaintiff filed with the USPTO, which were assigned U.S. Application Serial Nos. 16/524,350 and 16/524,532 (collectively, “the Applications”). Because the administrative proceedings that occurred with respect to the Applications were identical (including the dates on which pertinent events occurred), the following factual statement will treat the Applications collectively, also provide citations to the administrative record that the USPTO has filed with respect to both applications.

A. THE APPLICATIONS

1. Plaintiff filed the Applications with the USPTO on July 29, 2019. A1-96; 284-379.
2. In an Application Data Sheet accompanying the Applications,² plaintiff identified the inventor’s “given name” as “DABUS,” and additionally stated that the “invention [was] generated by artificial intelligence.” Plaintiff identified his own mailing address as the “mailing address of inventor.” A10; 299.
3. Plaintiff also included with the Applications a written “Statement on Inventorship,” in which he explained why – in his subjective view – DABUS should be considered an appropriate “inventor” under the Patent Act and the USPTO’s regulations. A60-65; 345-50.

²The USPTO’s regulations provide that, “[i]f an application data sheet is provided, the application data sheet is part of the application for which it has been submitted.” 37 C.F.R. § 1.76(a). That “Data Sheet” must include, *inter alia*, “the legal name, residence, and mailing address of the inventor or each joint inventor.” *Id.* § 1.76(b)(1).

a. Plaintiff confirmed that DABUS was, in fact, a machine; more specifically, it was “a particular type of connectionist artificial intelligence” known as a “Creativity Machine.” A61; 346.

b. Plaintiff then argued that because Congress had not “seriously considered autonomous machine invention” before limiting “inventorship to individuals,” the USPTO should define the term “inventor” to include a machine. Plaintiff also offered his subjective view that defining the term “inventor” to include a machine would “encourage innovation.” A62-63; 347-48.

4. Because DABUS – as a machine – could not execute the necessary oath or declaration that the Patent Act requires of the inventor, plaintiff included with the Applications his own statement as a substitute. That statement provided that the “inventor,” DABUS, was “under legal incapacity in view of the fact that the sole inventor is a Creativity Machine (*i.e.*, an artificial intelligence), with no legal personality or capability to execute this substitute statement.” A26-27; 311-12.

5. Finally, the Applications also included a document through which DABUS had ostensibly assigned all intellectual property rights in the claimed invention to plaintiff. That assignment document provided as follows, in pertinent part:

DABUS, the Creativity machine that has produced the below-detailed invention, as the sole inventor (represented in this assignment by its owner, Stephen L. Thaler, hereinafter called the “Assignor”), hereby assigns and transfers to:

Stephen L. Thaler
[Address Omitted]

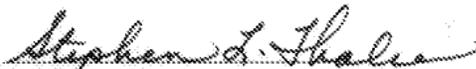
(hereinafter called the “Assignee”), its successors, assignees, nominees, or other legal representatives, the Assignor’s entire right, title, and interest, including, but not limited to, copyrights, trade secrets, trademarks and associated good will and patent rights in the Invention and the registrations to the invention

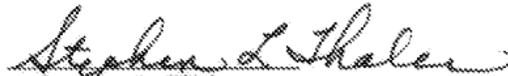
The assignment document ended with the following:

In view of the fact that the sole inventor is a Creativity Machine, with no legal personality or capability to execute said assignment, and in view of the fact that the assignee is the owner of said Creativity Machine, this Assignment is considered enforceable without an explicit execution by the inventor. Rather, the owner of DABUS, the Creativity Machine, is signing this Assignment on its behalf.

Similarly, DABUS, being a machine and having no legal personality, does not have the capability to receive any consideration, and therefore, Stephen L. Thaler, as its owner/representative, acknowledges the receipt and sufficiency of good and valuable consideration for this assignment.

Signed and sealed this 23rd day of July 2019,


Stephen L. Thaler
On behalf of DABUS,
Assignor


Stephen L. Thaler
Assignee

A21; 310.

B. USPTO'S DECISION ON THE DEFINITION OF THE STATUTORY TERM "INVENTOR"

6. After its initial review of the Applications, the USPTO issued to plaintiff a "Notice to File Missing Parts of Non-Provisional Application." In that notice, the USPTO provided plaintiff two months to submit proper information regarding inventorship because the "application data sheet or inventor's oath or declaration does not identify each inventor or his or her legal name." A97-98; 380-81.

7. On August 29, 2019, plaintiff instead filed a petition with the USPTO Director pursuant to 37 C.F.R. § 1.181. Plaintiff's petition essentially asked the USPTO to vacate its "Notice to File Missing Parts," and in support of this relief, essentially reiterated the exact terms of the "Inventorship Statement" that he had submitted with the Applications. A111-16; 394-99.

8. The USPTO issued a written decision on plaintiff's petition on December 17, 2019. In its decision, the USPTO primarily explained that the explicit statutory language that Congress has used to define the term "inventor" – e.g., "individual" and "himself or herself" –

were uniquely trained on human beings. The USPTO also noted that the Federal Circuit had twice held that an inventor could only be a natural person. And thus, “[b]ecause a machine does not qualify as an inventor,” the USPTO concluded that it had “properly issued the Notice . . . noting the inventor was not identified by his or her legal name.” A131-33 (quoting *Univ. of Utah v. Max-Planck-Gesellschaft*, 734 F.3d 1315, 1323 (Fed. Cir. 2013); *Beech Aircraft Cop. v. Edo Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993)); A409-13.

9. On January 20, 2020, plaintiff sought reconsideration of the USPTO’s earlier petition decision. That request did not identify any contrary statutory provisions within the Patent Act or Federal Circuit authority to support plaintiff’s desired definition of “inventor.” Instead, plaintiff reiterated (almost verbatim) the same policy rationales found in his “inventorship statement” and original petition, and added statements about the consideration of the same applications by the USPTO’s sister agencies in the European Union and the United Kingdom. Although plaintiff openly recognized that both the European Union and the United Kingdom had concluded that *their* patent law precluded “the naming of an inventor that is not a natural person,” he argued that the USPTO should conclude differently – not because Congress had promulgated different statutory language requiring a different result, but because the “United Kingdom Intellectual Property Office . . . agreed that the making of inventions by AI systems is a current and serious issue that must be debated.” A135-46; 414-25.³

³The United Kingdom’s High Court of Justice has since affirmed the United Kingdom Intellectual Property Office’s conclusion that only a “natural person” can be an “inventor” under the United Kingdom’s “Patents Act 1977” – with respect to the very same application that is at issue here was not eligible for issuance as a patent. *See Thaler v. Comp. Gen. of Patent, Designs, & Trademarks*, [2020] EWHC 2412 (Pat.) (Sept. 21, 2020), available at << <https://www.bailii.org/ew/cases/EWHC/Patents/2020/2412.html>>> (visited Feb. 21, 2021).

10. USPTO denied plaintiff's request for reconsideration in a detailed written decision – the decision that plaintiff challenges in this civil action⁴ – issued on April 22, 2020. A205-13; 456-64.

a. The USPTO again primarily pointed to the explicit statutory language that Congress utilized to define “inventor” in the Patent Act – including, *inter alia*, “individual” and “himself or herself” within 35 U.S.C. §§ 100; 115 – to conclude that “interpreting ‘inventor’ broadly to encompass machines would contradict the plain meaning of the patent statutes that refer to persons and individuals.” A209; 460.⁵

b. The USPTO additionally reiterated that the Federal Circuit had repeatedly held “that the patent laws require that an inventor be a natural person,” and rejected plaintiff's position that this binding decisional authority could only apply to the limited question of whether *corporate entities* could be an inventor under the relevant statute. A209-10; 460-61.

c. Finally, the USPTO concluded that, whatever their putative merit, plaintiff's asserted policy considerations were simply irrelevant under Federal Circuit authority because they could “not overcome the plain language of the patent laws as passed by the

⁴Although not material to the resolution of this action, it bears noting that plaintiff incorrectly refers to the USPTO's final petition decision as “Rejections.” *Pl. Mem.*, at 1. Patent law views the term “rejection” as a term of art referencing the USPTO's substantive evaluation of whether the *subject-matter* referenced in a patent application is eligible for a patent. *See, e.g.*, 35 U.S.C. § 132(a). If the USPTO's final petition decision was, in fact, a “rejection,” then plaintiff could only seek Article III judicial review after noticing an administrative appeal to the Patent Trial and Appeal Board through the exclusive statutory scheme that Congress created. *See, e.g., Pregis Corp. v. Kappos*, 700 F.3d 1348, 1356-61 (Fed. Cir. 2012) (holding that patent applicant could not seek judicial review of a USPTO examiner's rejections of a patent application in federal district court under the APA).

⁵The USPTO also explained that this very same principle – *i.e.*, that only a natural person could be an “inventor” – was “reflected” through the formal regulations that the agency had promulgated pursuant to the Patent Act, as well as its own *Manual of Patent Examining Procedure* (“MPEP”). A210-11; 461-63.

Congress and as interpreted by the courts.” A212; 463 (citing *Glaxo Ops. UK Ltd. v. Quigg*, 894 F.2d 392 (Fed. Cir. 1990)).

II. PLAINTIFF’S STATEMENT

The USPTO does not dispute any of the actual facts articulated in plaintiff’s material fact statement and will address any potentially-material legal arguments or conclusions that are interspersed within that fact statement below.

ARGUMENT

I. GENERAL STANDARDS

A. REVIEW UNDER THE ADMINISTRATIVE PROCEDURE ACT

Plaintiff seeks Article III judicial review of the USPTO’s final petition decision in this Court under the provisions of the Administrative Procedure Act (“APA”). *Complaint* (Dkt. No. 1), ¶¶68-71. As plaintiff ostensibly concedes, *Pl. Mem.*, at 9, APA judicial review is circumscribed, *see Motor Vehicles Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983), and this Court may “set aside” an agency action only if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,” 5 U.S.C. § 706(2)(A). As the Federal Circuit⁶ has held:

A court reviewing the agency decision “must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.”

Burandt v. Dudas, 528 F.3d 1329, 1332 (Fed. Cir. 2008) (quoting *Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc.*, 419 U.S. 281, 285 (1974)).

⁶Because this case arises under the Patent Act, this Court receives its binding authority here from the decisions of the Federal Circuit. *See, e.g., iControl Networks, Inc. v. Alarm.com, Inc.*, 2013 WL 9838105, at *2-3 (E.D. Va. Dec. 11, 2013) (Brinkema, J.).

B. SKIDMORE DEFERENCE

The USPTO’s interpretation of the various provisions of the Patent Act at issue here – primarily 35 U.S.C. §§ 100 and 115 – is also entitled to deference from this Court pursuant to the Supreme Court’s decision in *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944). *Skidmore* requires courts to accord significant deference to agency interpretations of statutory provisions that fall within its particular bailiwick to the extent that those decisions have the power to persuade. *See id.* at 140. In determining whether to provide this type of judicial deference to an agency, courts look to the validity of the agency’s reasoning, the decision’s consistency with earlier and later pronouncements,⁷ the thoroughness of the decision, and any additional other relevant factors. *See id.*; *see also Cathedral Candle Co. v. ITC*, 400 F.3d 1352, 1366 (Fed. Cir. 2005) (“[W]e believe the Supreme Court intends for us to defer to an agency interpretation of the statute that it administers if the agency has conducted a careful analysis of the statutory issue, if the agency’s position has been consistent and reflects agency-wide policy, and if the agency’s position constitutes a reasonable conclusion as to the proper construction of the statute, even if we might not have adopted that construction without the benefit of the agency’s analysis.”). As will be seen below, each of these factors weigh easily in favor of deference.

II. THE PLAIN LANGUAGE OF THE PATENT ACT EQUATES “INVENTOR” WITH A “HUMAN BEING” OR “NATURAL PERSON”

There can be little doubt that the sole issue presented in this action – *i.e.*, whether the necessary “inventor” of subject-matter sought to be patented must be a human being – is a

⁷In this respect, plaintiff reflexively states that “*Skidmore* deference is not warranted because the [US]PTO’s interpretation is neither persuasive *nor consistent*.” *Pl. Mem.*, at 16 (quoting *Photocure ASA v. Kappos*, 603 F.3d 1372, 1376 (Fed. Cir. 2010) (emphasis added)). But plaintiff identifies not one contrary decision from the USPTO on the meaning of “inventor” under the Patent Act, let alone one concluding that Congress intended the term to encompass a non-natural entity such as a machine.

question of statutory construction. And on that score, the Supreme Court has been crystal clear that courts (as well as executive agencies) must look to the plain language of the relevant statute:

The preeminent canon of statutory interpretation requires us to “presume that [the] legislature says in a statute what it means and means in a statute what it says there.” Thus, our inquiry begins with the statutory text, and ends there as well if the text is unambiguous.

BedRoc Ltd., LLC v. United States, 541 U.S. 176, 183 (2004) (quoting *Connecticut Nat. Bank v. Germain*, 503 U.S. 249, 253-54 (1992)); see also *Shoshone Indian Tribe v. United States*, 364 F.3d 1339, 1345 (Fed. Cir. 2004) (“The plain language of a statute is controlling.”).

Despite this massive body of decisional authority, plaintiff’s opening memorandum barely mentions the express language that Congress placed into the Patent Act – whether in explicitly defining “inventor” or otherwise. Instead, over the course of his near-thirty page opening memorandum, plaintiff casts this language aside in essentially a single paragraph, *Pl. Mem.*, at 16-17, electing instead to rest his position on the issue presented here on arguments about the proper course of patent policy. There is a good reason that plaintiff attempts to avoid any searching review of the Patent Act’s plain language – that language unequivocally leads to the conclusion that only a natural person can be an “inventor” under the Patent Act. And it is for that reason that the Federal Circuit has held that an inventor must be a “*natural person*.” See, e.g., *Univ. of Utah v. Max-Planck Gesellschaft*, 734 F.3d 1315, 1323 (Fed. Cir. 2013).

A. THE PLAIN MEANING OF “INDIVIDUAL” IS “HUMAN BEING”

Congress provided an explicit definition for the terms “inventor” and “joint inventor” within the Patent Act, both of which unequivocally reference an “individual” or “individuals”:

- (f) The term “inventor” means the *individual* or, if a joint invention, the *individuals* collectively who invented or discovered the subject matter of the invention.
- (g) 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. §§ 100(f)-(g) (emphasis added). Congress used the same statutory language –

“individual” – in the other significant provision of the Patent Act that references an “inventor”:

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.

Id. § 115(a)(1) (emphasis added); *see also id.* § 115(b)(2) (providing that “[a]n oath or declaration . . . 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” (emphasis added)). And thus, the issue before this Court turns on the plain meaning of the statutory term “individual.”

1. Courts, including the Supreme Court, have repeatedly held that Congress’s use of the term “individual” in a given statute denotes a “human being,” as opposed to other things. The Supreme Court recently conducted this very statutory construction analysis with respect to Congress’s use of “individual” in the Torture Victim Protection Act (“TVPA”). *See Mohamad v. Palestinian Auth.*, 566 U.S. 449, 453-61 (2012). *Mohamad* provides a point-by-point application of the canons of statutory construction through which Congress’s identical use of the term “individual” in the Patent Act must be viewed.

First, the *Mohamad* Court recognized that because the TVPA – like the Patent Act – “does not define the term ‘individual,’ we look first to the word’s ordinary meaning.” *Id.* at 454. Quoting from several well-known dictionaries, the Court held that when used “[a]s a noun, ‘individual’ ordinarily means ‘[a] human being, a person.’” *Id.* (quoting 7 OXFORD ENGLISH DICTIONARY 880 (2d ed. 1989)). *Second*, the Court recognized that in “everyday parlance,”

English speakers use “individual” to “refer[] unmistakably to a natural person.” *Id.*; *see also* *Bostock v. Clayton County*, 140 S. Ct. 1731, 1750 (2020). *Third*, the Court noted that the Dictionary Act, *see* 1 U.S.C. § 1, provides that the legislative use of the term “individual” denotes something separate and apart from non-human beings. *See Mohamad*, 566 U.S. at 454. *Fourth*, the Court explained that although Congress “remains free . . . to give the word a broader or different meaning,” Congress must have provided some affirmative “indication [that it] intended such a result.” *Id.* at 455. And with respect to the TVPA, given the numerous adjacent placements of the same word in the same statute, “the statutory context strengthens – not undermines – the conclusion that Congress intended” only to reference “natural persons” through the term “individual” in the relevant section. *Id.*

Each of these interpretative points is equally applicable to the Patent Act as it is to the TVPA. *First*, the Patent Act undoubtedly uses the term “individual” as a noun, and thus, as in *Mohamad*, it should be construed consistent with its plain meaning – *i.e.*, “a human being.” *Second*, just as the *Mohamad* Court noted that “no one . . . refers in normal parlance to an organization as an ‘individual,’” *Mohamad*, 566 U.S. at 454, it is equally true that “no one . . . refers in normal parlance” to a machine as an “individual.” *Third*, the entire point of the Dictionary Act is that it applies to *all* congressional enactments, *see Ngiraingas v. Sanchez*, 495 U.S. 182, 190 (1990), which would thus include the Patent Act. And *fourth*, just as in *Mohamad*, the context in which Congress used the term “individual” in the Patent Act “strengthens – not undermines” its reference to a “human being.” As stated above, Congress provided that in executing the oath or declaration that must accompany a patent application, the inventor must testify 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(b)(2) (emphasis

added). By using *personal pronouns* in the same statutory provision – indeed, in adjacent terms that serve to modify the term “individual” – Congress only strengthened the conclusion that it was referring to a “human being” in referencing an “individual.” See WEBSTER’S NEW INT’L DICTIONARY 571 (defining “himself” as a pronoun meaning “that identical male one”); see also *Gustafson v. Alloyd Co.*, 513 U.S. 561, 575 (1995) (recognizing that courts “rely” on the doctrine known as *noscitur a sociis*, meaning that a “word is known by the company it keeps,” “to avoid ascribing to one word a meaning so broad that it is inconsistent with its accompanying words, thus giving ‘unintended breadth to the Acts of Congress’” (quoting *Jarecki v. G.D. Searle & Co.*, 367 U.S. 303, 307 (1961))).

It is thus hardly surprising that the Federal Circuit has, in a published decision binding on this Court, construed Congress’s use of the term “individual” in the Patent Act to mean that “inventors must be natural persons.” *Max-Planck*, 734 F.3d at 1323; see also *Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993) (same). Whether standing alone, or in conjunction with the Supreme Court’s analysis in *Mohamad*, these decisions preclude plaintiff’s argument that this Court should construe the Patent Act’s use of “individual” to mean anything other than a “natural person” (including, *inter alia*, a machine).

B. PLAINTIFF’S NON-TEXTUAL POLICY ARGUMENTS CANNOT OVERCOME THE PLAIN MEANING OF THE TERM “INDIVIDUAL”

Plaintiff engages in none of the textual analysis provided above; indeed, he does not attempt to define the actual statutory term that Congress used to describe an “inventor,” and does not point this Court to any alternative language within the Patent Act that would give *any* affirmative indication that Congress sought to deviate from the plain, everyday meaning of the term “individual.” Nor does plaintiff even suggest that construing the term “individual” to mean “human being” – as the Federal Circuit has already done – would somehow lead to “absurd

result[s],” and thus should be discarded. *See, e.g., Clinton v. City of New York*, 524 U.S. 417, 429 (1998). In lieu of this necessary textual analysis, plaintiff provides this Court with his own normative assessment of the policy that the United States – ostensibly, through this Court’s statutory construction analysis – should adopt with respect to inventions devised by machines using artificial intelligence.

As will be seen below, none of these policy positions have any impact on the proper resolution of the sole question raised here. The Supreme Court and the Federal Circuit have provided that such policy appraisals are irrelevant to statutory construction, and in any event, plaintiff’s policy-related commentary is untethered to anything other than his own speculation.

1. Without grappling with the actual text of the relevant Patent Act provisions, plaintiff initially casts the Federal Circuit’s decisions in *Max-Planck* and *Beech Aircraft* aside simply because those cases concerned whether the use of “individual” could be consistent with one *type* of non-natural person, an organization. *Pl. Mem.*, at 16-17. Although it is certainly true that the *precise* question at issue in both decisions (as it was in the Supreme Court’s opinion in *Mohamad*) was whether Congress’s use of the term “individual” could be construed to include an “organization,” there is simply no language in any of these decisions – and plaintiff identifies none – that would myopically limit the application of the holding that the term “individual” in the Patent Act’s definition of “inventor” must be interpreted to mean a “natural person.”⁸

And that is exactly the upshot of the Ninth Circuit’s recent analysis in *Animal Legal Defense Fund v. Dep’t of Agriculture*, 933 F.3d 1088 (9th Cir. 2019). There, the Ninth Circuit construed a portion of the Freedom of Information Act (“FOIA”) in which a requester may

⁸Similarly, neither *Max Planck* nor *Beech Aircraft* provide any indication that policy arguments, such as the subjective reasoning that plaintiff offers in his opening memorandum, *Pl. Mem.*, at 17-18, played any role in the Federal Circuit’s conclusion that the term “individual” in the Patent Act must be construed to mean a “natural person.”

obtain “expedited processing” of a request for records if there is a “compelling need,” which the statute defines as a situation in which “a failure to obtain requested records on an expedited basis . . . could reasonably be expected to pose an imminent threat to the life or physical safety of an individual.” *Id.* at 1093 (quoting 5 U.S.C. § 552(a)(6)(E)(v)(I)). The requester in *Animal Legal* argued that the statutory term “individual” should be construed to include a living animal and not just a “human being”; the Ninth Circuit, employing the same analysis that the Supreme Court used in *Mohamad*, held otherwise. *See id.* at 1093-96.

First and foremost, the Ninth Circuit dispatched the very argument that plaintiff asserts here – that prior decisional authority only held that an “individual” could not be an organization, and left open the issue of whether “individual” could be construed as something other than a “human being”:

The [*Mohamad*] Court defined “individual” to mean “natural person” as opposed to an organization. Although *Mohamad* addressed a different statutory context, we find much of its reasoning applicable here.

Id. at 1093. And as this memorandum articulated above, the Ninth Circuit similarly looked to *Mohamad*’s survey of dictionaries and the Dictionary Act (as well as the APA itself), and concluded that it was “clear” that the term “individual” “could only be understood to refer to a human being” and not an animal. *Id.* at 1096 (holding that the “plain meaning of ‘individual,’ absent a context signifying otherwise, is ‘a human being, a person’”).

2. Plaintiff next provides an extensive discussion of why – in his view – allowing machines to be “inventors” would be consistent with Congress’ stated goal in promulgating the Patent Act to encourage “innovation.” *Pl. Mem.*, at 12-14. Plaintiff actually goes so far as to suggest, at the zenith of hyperbole, that “[t]he future of innovation is at stake in this case” alone, and that the Federal Circuit’s holding on the meaning of “inventor” to be a “natural person” – which the

USPTO followed here, as it is required to do – “impede[s] the progress of science.” *Id.* at 22. But other than a law review article that plaintiff’s counsel himself authored, plaintiff offers no support for his policy statements. *Id.* at 11-14. Even if the Supreme Court and the Federal Circuit had not already held that such lofty policy assessments are for Congress alone to evaluate, plaintiff’s own subjective speculation surely cannot override the plain language that Congress used in the Patent Act.

a. In this respect, plaintiff first asserts that this Court should depart from the plain meaning of the term “individual” – at least insofar as machines are concerned – because when Congress codified the Patent Act in 1952, it likely did not even consider (or could not have considered) the possibility that inventions could be created by machines utilizing artificial intelligence. *Id.* at 17-18 (quoting Karl F. Milde, Jr., *Can a Computer Be an “Author” or an “Inventor?”* 51 J. PAT. OFF. SOC’Y 378, 379 (1969) (“Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”)). Even if this were true, plaintiff has the analysis exactly backwards – in order to overcome the plain meaning of a statutory term, there must be some “indication” from Congress that it *affirmatively* intended a particular provision to be one of the “rare statute[s]” that contains a different meaning for the term “individual.” *See Mohamad*, 566 U.S. at 455. Put simply, the fact that Congress might have been naïve about a possible alternative construction of a given term has no impact on the statutory construction analysis, and requires a court to default to the plain meaning of that term.

But perhaps more importantly, it is not true that the “statutes relied upon by [the USPTO] were passed long before AI-Generated Inventions were a reality.” *Pl. Mem.*, at 17. Plaintiff’s statement in this regard is accompanied by a string citation of various statutes, *id.*; however, curiously missing from that listing is any reference to 35 U.S.C. §§ 100(f)-(g), which are the

statutory provisions in which Congress *expressly* defined “inventor” to be an “individual.”

Congress added those provisions to the Patent Act not in 1952, but in 2011, through the America Invents Act. *See* PUB. L. 112-29, § 3(a), 125 Stat. 285 (Sept. 16, 2011); *see also* H.R. RPT. 112-98 (June 1, 2011), *available at* 2011 U.S.C.C.A.N. 67, 67. Not only was artificial intelligence “a reality” in 2011, a White House official hailed the statute – at the time that President Obama signed it into law – as follows:

[I]n the past fifty years we have seen more technological advancements than in any point in history, with no comprehensive patent reform to keep up. The America Invents Act equips the USPTO to streamline and modernize its operations while strengthening [intellectual property] protections.

Innovating Our System for Innovation, 2011 WL 4842572, at *1 (W.H. Sept. 16, 2011). Despite these “technological advancements,” Congress *inserted* plain language into the Patent Act that unequivocally is defined to include only “natural persons” as “inventors.”

b. Plaintiff’s additional policy assessments about how including machines that utilize artificial intelligence within the statutory ambit of “inventor” will spurn innovation bring him no closer to reversal of the USPTO’s decision here.⁹ The simple and short answer to these normative considerations is that the Supreme Court and the Federal Circuit have held them to be singularly irrelevant, in circumstances in which a litigant sought judicial review over the USPTO’s statutory construction analysis:

Fisons makes what can only be characterized as a “policy argument” pointing to statements of lofty goals indicating that Congress broadly sought to encourage pharmaceutical innovation by enacting the 1984 Act. . . . It is irrelevant, however, that we

⁹In this respect, plaintiff premises his policy arguments upon the so-called “Patent Clause” of the federal Constitution, which provides Congress with the “power” to “promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” U.S. CONST., Art. I, § 8, cl.8. But as courts have recognized, as a part of Article I of the Constitution, the Patent Clause only provides Congress with *authority* to legislate, it does not *mandate* that Congress actually promulgate legislation. *See Powers v. USPTO*, 2005 WL 2456979, at *2 (E.D. Va. Oct. 5, 2005) (citing *Bonito Boats v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989)).

might agree with Fisons that, as a matter of policy, Congress might better achieve its goals through a more liberal grant of patent term extension benefits. Matters of policy are for Congress, not the courts, to decide. Accordingly, Fisons’ policy arguments are unhelpful in our interpretation of the complex statutory provision at issue.

Fisons plc v. Quigg, 876 F.2d 99, 101 (Fed. Cir. 1989); *see also Sandoz Inc. v. Amgen Inc.*, 137 S. Ct. 1664, 1678 (2017) (“Even if we were persuaded that Amgen had the better of the policy arguments, those arguments could not overcome the statute’s plain language, which is our ‘primary guide’ to Congress’ preferred policy.”).¹⁰ Congress’s “preferred policy” here – whether right or wrong – is that an “inventor” under the Patent Act must be a “natural person (*i.e.*, a “human being”).

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¹⁰Despite the irrelevance of these policy issues to the statutory construction question before this Court, it bears mentioning that the USPTO continues to study the impact of artificial intelligence on current patent regulations, and has engaged the public-at-large in a conversation on the subject. In particular, the USPTO held a conference on artificial intelligence policy in January 2019, and then, in August and October 2019, issued requests for public comment on a whole host of issues related to the intersection of intellectual property policy and artificial intelligence. The USPTO issued a comprehensive report on those comments in October 2020. *See generally Public Views on Artificial Intelligence and Patent Policy*, available at <https://www.uspto.gov/sites/default/files/documents/USPTO_AI-Report_2020-10-07.pdf> (visited Feb. 24, 2021). It will suffice to say that many commenters did not share plaintiff’s subjective view that allowing artificial intelligence machines to serve as “inventors” was the correct policy choice, or that the question was nearly as simple as plaintiff suggests in his opening memorandum. *See id.* at 6 (identifying comments that highlighted the need to “carefully consider” the practical effects of allowing an artificial intelligence machine to be an inventor).

CONCLUSION

For the foregoing reasons, this Court should affirm the USPTO’s detailed final decision, concluding that DABUS could not qualify under the Patent Act as an “inventor.” As such, this Court should enter summary judgment for defendants, and deny the identical relief sought by plaintiff.

Respectfully submitted,

RAJ PAREKH
ACTING UNITED STATES ATTORNEY

By: _____/s/_____

DENNIS C. BARGHAAN, JR.
Deputy Chief, Civil Division
Assistant U.S. Attorney
2100 Jamieson Avenue
Alexandria, Virginia 22314
Telephone: (703) 299-3891
Fax: (703) 299-3983
Email: dennis.barghaan@usdoj.gov

DATE: February 24, 2021

ATTORNEYS FOR DEFENDANTS

OF COUNSEL: Meredith Schoenfeld
Peter Sawert
Associate Solicitors
United States Patent & Trademark Office

CERTIFICATE OF SERVICE

I hereby certify that on this date, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will transmit a Notice of Electronic Filing (“NEF”) to the following:

Geoffrey Alex Neri
Brown Neri Smith & Khan LLP
11766 Wilshire Boulevard, Suite 1670
Los Angeles, California 90025
geoff@bnsklaw.com

Date: February 24, 2021

_____/s/_____
DENNIS C. BARGHAAN, JR.
Deputy Chief, Civil Division
Assistant U.S. Attorney
2100 Jamieson Avenue
Alexandria, Virginia 22314
Telephone: (703) 299-3891
Fax: (703) 299-3983
Email: dennis.barghaan@usdoj.gov

ATTORNEYS FOR DEFENDANTS

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

STEPHEN THALER,)	
)	
Plaintiff,)	
)	
vs.)	Civil Action No. 1:20cv903
)	
ANDREW HIRSHFELD,)	
Performing the Functions and)	
Duties of the Under Secretary of)	
Commerce for Intellectual Property)	
and Deputy Director of the United)	
States Patent and Trademark Office, ¹)	
<i>et al.</i> ,)	
)	
Defendants.)	
_____)	

**MEMORANDUM OF LAW IN SUPPORT OF DEFENDANTS’ MOTION FOR
SUMMARY JUDGMENT & IN OPPOSITION TO PLAINTIFF’S MOTION FOR
SUMMARY JUDGMENT**

¹Pursuant to 35 U.S.C. § 3, the powers and duties of the U.S. Patent and Trademark Office are vested in an Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office. Effective January 20, 2021, Andrei Iancu resigned as Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office, and Andrew Hirshfeld began performing the functions and duties of the Under Secretary of Commerce for Intellectual Property and Director of the USPTO. Accordingly, the named defendant for the subject civil action has changed. *See* FED. R. CIV. P. 25(d)(1).

INTRODUCTION

In the Patent Act, Congress explicitly defined the term “inventor” to be an “individual,” and then in subsequent statutory provisions referred to such an “individual” using personal pronouns. And as such, in published opinions that are binding in this civil action, the Federal Circuit – consistent with Supreme Court authority on the plain statutory meaning of “individual” – has held that an “inventor” of subject-matter on which one seeks to obtain patent protection must be a “natural person” (*i.e.*, a “human being”). In rejecting plaintiff’s request for an artificial intelligence machine to be an “inventor” under the Patent Act, the USPTO was merely applying Congress’s plain language and the Federal Circuit’s construction of the same, as it is obligated to do.

Plaintiff now asks this Court to ignore this plain statutory language and Federal Circuit authority, based solely on his own assessment of the intellectual property policy that the United States should adopt with respect to artificial intelligence. But the Supreme Court and Federal Circuit have repeatedly held that such policy assessments – whatever their ultimate merit – have no place in the judicial exercise of statutory construction, and belong instead in the halls of Congress. In short, plaintiff seeks to rewrite the Patent Act, something that neither this Court nor the USPTO is authorized to do. This Court should therefore affirm the USPTO’s underlying petition decision, and enter summary judgment in favor of defendants.

STATUTORY & REGULATORY BACKGROUND

As plaintiff essentially concedes in his opening summary judgment memorandum, the sole issue presented in this action is a pure question of law: Can something other than a natural person be named as the inventor on a patent application? Before moving to the administrative proceedings in which the United States Patent and Trademark Office (“USPTO”) answered this

question – in the detailed written decision that plaintiff challenges here – it is important to provide a brief explanation of the statutory and regulatory provisions on which this question must be resolved. As will be seen below, the Patent Act is replete with explicit language to the effect that that inventor named in a patent application must be a natural person.

I. THE “INVENTOR”

This civil action exclusively concerns the concept of inventorship, which has been a significant part of patent law for more than a century:

The patent law makes it essential to the validity of a patent that it shall be granted on the application, supported by the oath, of the original and first inventor, or of his executor or administrator, whether the patent is issued to him or to his assignee. A patent which is not supported by the oath of the inventor . . . is unauthorized by law and void, and, whether taken out in the name of the applicant or of any assignee of his, confers no rights as against the public.

Kennedy v. Hazelton, 128 U.S. 667, 672 (1888). But this is not merely a relic of a bygone era of legal authority. Far to the contrary, Congress included this fundamental principle in its modern codification of the Patent Act, and it continues to be a significant part of the patent application process.

a. Utilizing the legislative authority provided by the Constitution’s Patent Clause, *see* U.S. CONST. art. I, § 8, cl. 8, Congress initially codified the Patent Act in 1952, *see Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 180 (1980), and has amended the Patent Act a number of times in the ensuing sixty years. In 2011, Congress promulgated the America Invents Act (“AIA”), which Congress described as legislative action “to ensure that the patent system in the twenty-first century reflects the constitutional imperative” of the Patent Clause to further innovation, and “to correct flaws in the system” that it had identified. H.R. RPT. 112-98, at 68-69 (June 1, 2011). Of particular import here, the AIA formally amended the Patent Act to provide an explicit statutory definition for the term “inventor”:

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(f) (emphasis added). The AIA also added a definition for “joint inventor.” *See id.* § 100(g) (defining term to “mean any one of the *individuals* who invented or discovered the subject matter of a joint invention” (emphasis added)).

b. More tangibly, Congress has required that one who seeks a patent on a particular invention must file a written application with the USPTO. *See* 35 U.S.C. § 111(a). That application must contain three things. *See id.* § 111(a)(2). *First*, the application must contain a “specification,” *see id.* § 111(a)(2)(A), or “a written description of the invention” that “concludes with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention,” *id.* §§ 112(a)-(b). *Second*, the application must contain any necessary drawings of the invention. *See id.* §§ 111(a)(2)(B); 113. *Third*, the application must include “the name of the inventor for any invention,” *id.* § 115(a), and “an oath or declaration by the inventor” to the effect that he or she “believes *himself or herself* to be the original inventor or joint inventor of [the] claimed invention,” *see id.* §§ 115(a); (b)(2) (emphasis added); *see also id.* § 111(a)(2)(C).

The Patent Act does provide a slight exception to these mandates, allowing an applicant to submit a “substitute statement” to the USPTO “in lieu of” of the oath or declaration that is typically required from the inventor. *See id.* § 115(d)(1). The express statutory language codifying this exception tracks the Patent Act’s definition of “inventor”:

A substitute statement under paragraph (1) is permitted with respect to *any individual who—*

- (A) is unable to file the oath or declaration under subsection (a) because *the individual—*
 - (i) is deceased;

- (ii) is under legal incapacity; or
 - (iii) cannot be found or reached after diligent effort; or
- (B) is under an obligation to assign the invention but has refused to make the oath or declaration required under subsection (a).

Id. § 115(d)(2) (emphasis added). And similarly, the statute requires that any “substitute statement” must “identify *the individual* to whom the statement applies” as well as the circumstances triggering the exception to the oath or declaration requirement. *Id.* § 115(d)(3) (emphasis added).

II. REVIEW OF PATENT APPLICATIONS

Upon the filing of a patent application, the USPTO will initially review that application – before forwarding it to a patent examiner for substantive examination – to ensure that it contains all of the required parts described above. *See Ariad Pharms., Inc. v. Matal*, 283 F. Supp. 3d 503, 505 (E.D. Va. 2018). If the application is missing one of the required parts, the USPTO will issue to the applicant a “Notice to File Missing Parts,” which identifies the particular deficiency of the application, and provides the applicant a period of time within which to remedy the problem. *See* 37 C.F.R. § 1.53(f)(1). Should the applicant not heed this warning and fail to submit the missing part (or parts), the USPTO will deem the application abandoned. *See id.*

An applicant may, however, challenge the validity of the USPTO’s conclusion – articulated through a “Notice to File Missing Parts” – that an application failed to comply with the relevant procedural requirements. Pursuant to federal regulation, the applicant may file an administrative petition asking the USPTO Director to exercise his “supervisory authority” over a given set of circumstances. *See* 37 C.F.R. § 1.181(a)(3). The USPTO Director has delegated his authority to decide such petitions, *see id.* § 1.181(g), to what was (at the time of the petition

decision at issue here) the Office of the Deputy Commissioner for Patent Examination Policy, *see Manual of Patent Examination Policy (“MPEP”) ¶1002.02(b)*.

UNDISPUTED MATERIAL FACTS

I. GENERAL PRINCIPLES

The APA confines review of Executive Branch action to the administrative record of proceedings before the pertinent agency. *See* 5 U.S.C. § 706; *Camp v. Pitts*, 411 U.S. 138, 142 (1973). Accordingly, as one court has noted, “when a party seeks review of agency action under the APA [before a district court], the district judge sits as an appellate tribunal.” *Am. Bioscience, Inc. v. Thompson*, 269 F.3d 1077, 1083 (D.C. Cir. 2001). “[T]here can be no genuine issue of material fact” in an APA action, *R.R. Donnelly & Sons Co. v. Dickinson*, 123 F. Supp. 2d 456, 458 (N.D. Ill. 2000) – *i.e.*, a particular “fact” is either reflected in the administrative record of agency proceedings, or is not – and “[t]he entire case on review is a question of law, and only a question of law.” *Marshall County Health Care Auth. v. Shalala*, 988 F.2d 1221, 1226 (D.C. Cir. 1993).

One therefore might question whether a statement of undisputed material facts (or a listing of those “facts” identified by plaintiff that defendants “dispute”) is even necessary in the APA context. *Cf. Maine v. Norton*, 257 F. Supp. 2d 357, 372 (D. Me. 2003) (recognizing that “the parties’ statements of material facts take on a different role in an APA case”). Plaintiff has, however, provided a statement of what he terms “material facts,” which represents a discussion of what he believes the administrative record discloses about the events surrounding the Applications and the USPTO’s actions regarding the same. *Pl. Mem.* (Dkt. No. 19), at 2-8. Given the dictates of Local Rule 56(B), the USPTO provides its own fact statement below, followed by a brief comment on plaintiff’s factual recitation.

II. USPTO'S STATEMENT

The instant action concerns two patent applications that plaintiff filed with the USPTO, which were assigned U.S. Application Serial Nos. 16/524,350 and 16/524,532 (collectively, “the Applications”). Because the administrative proceedings that occurred with respect to the Applications were identical (including the dates on which pertinent events occurred), the following factual statement will treat the Applications collectively, also provide citations to the administrative record that the USPTO has filed with respect to both applications.

A. THE APPLICATIONS

1. Plaintiff filed the Applications with the USPTO on July 29, 2019. A1-96; 284-379.
2. In an Application Data Sheet accompanying the Applications,² plaintiff identified the inventor’s “given name” as “DABUS,” and additionally stated that the “invention [was] generated by artificial intelligence.” Plaintiff identified his own mailing address as the “mailing address of inventor.” A10; 299.
3. Plaintiff also included with the Applications a written “Statement on Inventorship,” in which he explained why – in his subjective view – DABUS should be considered an appropriate “inventor” under the Patent Act and the USPTO’s regulations. A60-65; 345-50.

²The USPTO’s regulations provide that, “[i]f an application data sheet is provided, the application data sheet is part of the application for which it has been submitted.” 37 C.F.R. § 1.76(a). That “Data Sheet” must include, *inter alia*, “the legal name, residence, and mailing address of the inventor or each joint inventor.” *Id.* § 1.76(b)(1).

a. Plaintiff confirmed that DABUS was, in fact, a machine; more specifically, it was “a particular type of connectionist artificial intelligence” known as a “Creativity Machine.” A61; 346.

b. Plaintiff then argued that because Congress had not “seriously considered autonomous machine invention” before limiting “inventorship to individuals,” the USPTO should define the term “inventor” to include a machine. Plaintiff also offered his subjective view that defining the term “inventor” to include a machine would “encourage innovation.” A62-63; 347-48.

4. Because DABUS – as a machine – could not execute the necessary oath or declaration that the Patent Act requires of the inventor, plaintiff included with the Applications his own statement as a substitute. That statement provided that the “inventor,” DABUS, was “under legal incapacity in view of the fact that the sole inventor is a Creativity Machine (*i.e.*, an artificial intelligence), with no legal personality or capability to execute this substitute statement.” A26-27; 311-12.

5. Finally, the Applications also included a document through which DABUS had ostensibly assigned all intellectual property rights in the claimed invention to plaintiff. That assignment document provided as follows, in pertinent part:

DABUS, the Creativity machine that has produced the below-detailed invention, as the sole inventor (represented in this assignment by its owner, Stephen L. Thaler, hereinafter called the “Assignor”), hereby assigns and transfers to:

Stephen L. Thaler
[Address Omitted]

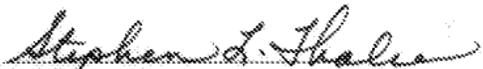
(hereinafter called the “Assignee”), its successors, assignees, nominees, or other legal representatives, the Assignor’s entire right, title, and interest, including, but not limited to, copyrights, trade secrets, trademarks and associated good will and patent rights in the Invention and the registrations to the invention

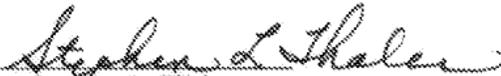
The assignment document ended with the following:

In view of the fact that the sole inventor is a Creativity Machine, with no legal personality or capability to execute said assignment, and in view of the fact that the assignee is the owner of said Creativity Machine, this Assignment is considered enforceable without an explicit execution by the inventor. Rather, the owner of DABUS, the Creativity Machine, is signing this Assignment on its behalf.

Similarly, DABUS, being a machine and having no legal personality, does not have the capability to receive any consideration, and therefore, Stephen L. Thaler, as its owner/representative, acknowledges the receipt and sufficiency of good and valuable consideration for this assignment.

Signed and sealed this 23rd day of July 2019,


Stephen L. Thaler
On behalf of DABUS,
Assignor


Stephen L. Thaler
Assignee

A21; 310.

B. USPTO'S DECISION ON THE DEFINITION OF THE STATUTORY TERM "INVENTOR"

6. After its initial review of the Applications, the USPTO issued to plaintiff a "Notice to File Missing Parts of Non-Provisional Application." In that notice, the USPTO provided plaintiff two months to submit proper information regarding inventorship because the "application data sheet or inventor's oath or declaration does not identify each inventor or his or her legal name." A97-98; 380-81.

7. On August 29, 2019, plaintiff instead filed a petition with the USPTO Director pursuant to 37 C.F.R. § 1.181. Plaintiff's petition essentially asked the USPTO to vacate its "Notice to File Missing Parts," and in support of this relief, essentially reiterated the exact terms of the "Inventorship Statement" that he had submitted with the Applications. A111-16; 394-99.

8. The USPTO issued a written decision on plaintiff's petition on December 17, 2019. In its decision, the USPTO primarily explained that the explicit statutory language that Congress has used to define the term "inventor" – e.g., "individual" and "himself or herself" –

were uniquely trained on human beings. The USPTO also noted that the Federal Circuit had twice held that an inventor could only be a natural person. And thus, “[b]ecause a machine does not qualify as an inventor,” the USPTO concluded that it had “properly issued the Notice . . . noting the inventor was not identified by his or her legal name.” A131-33 (quoting *Univ. of Utah v. Max-Planck-Gesellschaft*, 734 F.3d 1315, 1323 (Fed. Cir. 2013); *Beech Aircraft Cop. v. Edo Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993)); A409-13.

9. On January 20, 2020, plaintiff sought reconsideration of the USPTO’s earlier petition decision. That request did not identify any contrary statutory provisions within the Patent Act or Federal Circuit authority to support plaintiff’s desired definition of “inventor.” Instead, plaintiff reiterated (almost verbatim) the same policy rationales found in his “inventorship statement” and original petition, and added statements about the consideration of the same applications by the USPTO’s sister agencies in the European Union and the United Kingdom. Although plaintiff openly recognized that both the European Union and the United Kingdom had concluded that *their* patent law precluded “the naming of an inventor that is not a natural person,” he argued that the USPTO should conclude differently – not because Congress had promulgated different statutory language requiring a different result, but because the “United Kingdom Intellectual Property Office . . . agreed that the making of inventions by AI systems is a current and serious issue that must be debated.” A135-46; 414-25.³

³The United Kingdom’s High Court of Justice has since affirmed the United Kingdom Intellectual Property Office’s conclusion that only a “natural person” can be an “inventor” under the United Kingdom’s “Patents Act 1977” – with respect to the very same application that is at issue here was not eligible for issuance as a patent. See *Thaler v. Comp. Gen. of Patent, Designs, & Trademarks*, [2020] EWHC 2412 (Pat.) (Sept. 21, 2020), available at << <https://www.bailii.org/ew/cases/EWHC/Patents/2020/2412.html>>> (visited Feb. 21, 2021).

10. USPTO denied plaintiff's request for reconsideration in a detailed written decision – the decision that plaintiff challenges in this civil action⁴ – issued on April 22, 2020. A205-13; 456-64.

a. The USPTO again primarily pointed to the explicit statutory language that Congress utilized to define “inventor” in the Patent Act – including, *inter alia*, “individual” and “himself or herself” within 35 U.S.C. §§ 100; 115 – to conclude that “interpreting ‘inventor’ broadly to encompass machines would contradict the plain meaning of the patent statutes that refer to persons and individuals.” A209; 460.⁵

b. The USPTO additionally reiterated that the Federal Circuit had repeatedly held “that the patent laws require that an inventor be a natural person,” and rejected plaintiff's position that this binding decisional authority could only apply to the limited question of whether *corporate entities* could be an inventor under the relevant statute. A209-10; 460-61.

c. Finally, the USPTO concluded that, whatever their putative merit, plaintiff's asserted policy considerations were simply irrelevant under Federal Circuit authority because they could “not overcome the plain language of the patent laws as passed by the

⁴Although not material to the resolution of this action, it bears noting that plaintiff incorrectly refers to the USPTO's final petition decision as “Rejections.” *Pl. Mem.*, at 1. Patent law views the term “rejection” as a term of art referencing the USPTO's substantive evaluation of whether the *subject-matter* referenced in a patent application is eligible for a patent. *See, e.g.*, 35 U.S.C. § 132(a). If the USPTO's final petition decision was, in fact, a “rejection,” then plaintiff could only seek Article III judicial review after noticing an administrative appeal to the Patent Trial and Appeal Board through the exclusive statutory scheme that Congress created. *See, e.g., Pregis Corp. v. Kappos*, 700 F.3d 1348, 1356-61 (Fed. Cir. 2012) (holding that patent applicant could not seek judicial review of a USPTO examiner's rejections of a patent application in federal district court under the APA).

⁵The USPTO also explained that this very same principle – *i.e.*, that only a natural person could be an “inventor” – was “reflected” through the formal regulations that the agency had promulgated pursuant to the Patent Act, as well as its own *Manual of Patent Examining Procedure* (“MPEP”). A210-11; 461-63.

Congress and as interpreted by the courts.” A212; 463 (citing *Glaxo Ops. UK Ltd. v. Quigg*, 894 F.2d 392 (Fed. Cir. 1990)).

II. PLAINTIFF’S STATEMENT

The USPTO does not dispute any of the actual facts articulated in plaintiff’s material fact statement and will address any potentially-material legal arguments or conclusions that are interspersed within that fact statement below.

ARGUMENT

I. GENERAL STANDARDS

A. REVIEW UNDER THE ADMINISTRATIVE PROCEDURE ACT

Plaintiff seeks Article III judicial review of the USPTO’s final petition decision in this Court under the provisions of the Administrative Procedure Act (“APA”). *Complaint* (Dkt. No. 1), ¶¶68-71. As plaintiff ostensibly concedes, *Pl. Mem.*, at 9, APA judicial review is circumscribed, *see Motor Vehicles Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983), and this Court may “set aside” an agency action only if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,” 5 U.S.C. § 706(2)(A). As the Federal Circuit⁶ has held:

A court reviewing the agency decision “must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.”

Burandt v. Dudas, 528 F.3d 1329, 1332 (Fed. Cir. 2008) (quoting *Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc.*, 419 U.S. 281, 285 (1974)).

⁶Because this case arises under the Patent Act, this Court receives its binding authority here from the decisions of the Federal Circuit. *See, e.g., iControl Networks, Inc. v. Alarm.com, Inc.*, 2013 WL 9838105, at *2-3 (E.D. Va. Dec. 11, 2013) (Brinkema, J.).

B. SKIDMORE DEFERENCE

The USPTO’s interpretation of the various provisions of the Patent Act at issue here – primarily 35 U.S.C. §§ 100 and 115 – is also entitled to deference from this Court pursuant to the Supreme Court’s decision in *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944). *Skidmore* requires courts to accord significant deference to agency interpretations of statutory provisions that fall within its particular bailiwick to the extent that those decisions have the power to persuade. *See id.* at 140. In determining whether to provide this type of judicial deference to an agency, courts look to the validity of the agency’s reasoning, the decision’s consistency with earlier and later pronouncements,⁷ the thoroughness of the decision, and any additional other relevant factors. *See id.*; *see also Cathedral Candle Co. v. ITC*, 400 F.3d 1352, 1366 (Fed. Cir. 2005) (“[W]e believe the Supreme Court intends for us to defer to an agency interpretation of the statute that it administers if the agency has conducted a careful analysis of the statutory issue, if the agency’s position has been consistent and reflects agency-wide policy, and if the agency’s position constitutes a reasonable conclusion as to the proper construction of the statute, even if we might not have adopted that construction without the benefit of the agency’s analysis.”). As will be seen below, each of these factors weigh easily in favor of deference.

II. THE PLAIN LANGUAGE OF THE PATENT ACT EQUATES “INVENTOR” WITH A “HUMAN BEING” OR “NATURAL PERSON”

There can be little doubt that the sole issue presented in this action – *i.e.*, whether the necessary “inventor” of subject-matter sought to be patented must be a human being – is a

⁷In this respect, plaintiff reflexively states that “*Skidmore* deference is not warranted because the [US]PTO’s interpretation is neither persuasive *nor consistent*.” *Pl. Mem.*, at 16 (quoting *Photocure ASA v. Kappos*, 603 F.3d 1372, 1376 (Fed. Cir. 2010) (emphasis added)). But plaintiff identifies not one contrary decision from the USPTO on the meaning of “inventor” under the Patent Act, let alone one concluding that Congress intended the term to encompass a non-natural entity such as a machine.

question of statutory construction. And on that score, the Supreme Court has been crystal clear that courts (as well as executive agencies) must look to the plain language of the relevant statute:

The preeminent canon of statutory interpretation requires us to “presume that [the] legislature says in a statute what it means and means in a statute what it says there.” Thus, our inquiry begins with the statutory text, and ends there as well if the text is unambiguous.

BedRoc Ltd., LLC v. United States, 541 U.S. 176, 183 (2004) (quoting *Connecticut Nat. Bank v. Germain*, 503 U.S. 249, 253-54 (1992)); see also *Shoshone Indian Tribe v. United States*, 364 F.3d 1339, 1345 (Fed. Cir. 2004) (“The plain language of a statute is controlling.”).

Despite this massive body of decisional authority, plaintiff’s opening memorandum barely mentions the express language that Congress placed into the Patent Act – whether in explicitly defining “inventor” or otherwise. Instead, over the course of his near-thirty page opening memorandum, plaintiff casts this language aside in essentially a single paragraph, *Pl. Mem.*, at 16-17, electing instead to rest his position on the issue presented here on arguments about the proper course of patent policy. There is a good reason that plaintiff attempts to avoid any searching review of the Patent Act’s plain language – that language unequivocally leads to the conclusion that only a natural person can be an “inventor” under the Patent Act. And it is for that reason that the Federal Circuit has held that an inventor must be a “*natural person*.” See, e.g., *Univ. of Utah v. Max-Planck Gesellschaft*, 734 F.3d 1315, 1323 (Fed. Cir. 2013).

A. THE PLAIN MEANING OF “INDIVIDUAL” IS “HUMAN BEING”

Congress provided an explicit definition for the terms “inventor” and “joint inventor” within the Patent Act, both of which unequivocally reference an “individual” or “individuals”:

- (f) The term “inventor” means the *individual* or, if a joint invention, the *individuals* collectively who invented or discovered the subject matter of the invention.
- (g) 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. §§ 100(f)-(g) (emphasis added). Congress used the same statutory language –

“individual” – in the other significant provision of the Patent Act that references an “inventor”:

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.

Id. § 115(a)(1) (emphasis added); *see also id.* § 115(b)(2) (providing that “[a]n oath or declaration . . . 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” (emphasis added)). And thus, the issue before this Court turns on the plain meaning of the statutory term “individual.”

1. Courts, including the Supreme Court, have repeatedly held that Congress’s use of the term “individual” in a given statute denotes a “human being,” as opposed to other things. The Supreme Court recently conducted this very statutory construction analysis with respect to Congress’s use of “individual” in the Torture Victim Protection Act (“TVPA”). *See Mohamad v. Palestinian Auth.*, 566 U.S. 449, 453-61 (2012). *Mohamad* provides a point-by-point application of the canons of statutory construction through which Congress’s identical use of the term “individual” in the Patent Act must be viewed.

First, the *Mohamad* Court recognized that because the TVPA – like the Patent Act – “does not define the term ‘individual,’ we look first to the word’s ordinary meaning.” *Id.* at 454. Quoting from several well-known dictionaries, the Court held that when used “[a]s a noun, ‘individual’ ordinarily means ‘[a] human being, a person.’” *Id.* (quoting 7 OXFORD ENGLISH DICTIONARY 880 (2d ed. 1989)). *Second*, the Court recognized that in “everyday parlance,”

English speakers use “individual” to “refer[] unmistakably to a natural person.” *Id.*; *see also* *Bostock v. Clayton County*, 140 S. Ct. 1731, 1750 (2020). *Third*, the Court noted that the Dictionary Act, *see* 1 U.S.C. § 1, provides that the legislative use of the term “individual” denotes something separate and apart from non-human beings. *See Mohamad*, 566 U.S. at 454. *Fourth*, the Court explained that although Congress “remains free . . . to give the word a broader or different meaning,” Congress must have provided some affirmative “indication [that it] intended such a result.” *Id.* at 455. And with respect to the TVPA, given the numerous adjacent placements of the same word in the same statute, “the statutory context strengthens – not undermines – the conclusion that Congress intended” only to reference “natural persons” through the term “individual” in the relevant section. *Id.*

Each of these interpretative points is equally applicable to the Patent Act as it is to the TVPA. *First*, the Patent Act undoubtedly uses the term “individual” as a noun, and thus, as in *Mohamad*, it should be construed consistent with its plain meaning – *i.e.*, “a human being.” *Second*, just as the *Mohamad* Court noted that “no one . . . refers in normal parlance to an organization as an ‘individual,’” *Mohamad*, 566 U.S. at 454, it is equally true that “no one . . . refers in normal parlance” to a machine as an “individual.” *Third*, the entire point of the Dictionary Act is that it applies to *all* congressional enactments, *see Ngiraingas v. Sanchez*, 495 U.S. 182, 190 (1990), which would thus include the Patent Act. And *fourth*, just as in *Mohamad*, the context in which Congress used the term “individual” in the Patent Act “strengthens – not undermines” its reference to a “human being.” As stated above, Congress provided that in executing the oath or declaration that must accompany a patent application, the inventor must testify 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(b)(2) (emphasis

added). By using *personal pronouns* in the same statutory provision – indeed, in adjacent terms that serve to modify the term “individual” – Congress only strengthened the conclusion that it was referring to a “human being” in referencing an “individual.” See WEBSTER’S NEW INT’L DICTIONARY 571 (defining “himself” as a pronoun meaning “that identical male one”); see also *Gustafson v. Alloyd Co.*, 513 U.S. 561, 575 (1995) (recognizing that courts “rely” on the doctrine known as *noscitur a sociis*, meaning that a “word is known by the company it keeps,” “to avoid ascribing to one word a meaning so broad that it is inconsistent with its accompanying words, thus giving ‘unintended breadth to the Acts of Congress’” (quoting *Jarecki v. G.D. Searle & Co.*, 367 U.S. 303, 307 (1961))).

It is thus hardly surprising that the Federal Circuit has, in a published decision binding on this Court, construed Congress’s use of the term “individual” in the Patent Act to mean that “inventors must be natural persons.” *Max-Planck*, 734 F.3d at 1323; see also *Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993) (same). Whether standing alone, or in conjunction with the Supreme Court’s analysis in *Mohamad*, these decisions preclude plaintiff’s argument that this Court should construe the Patent Act’s use of “individual” to mean anything other than a “natural person” (including, *inter alia*, a machine).

B. PLAINTIFF’S NON-TEXTUAL POLICY ARGUMENTS CANNOT OVERCOME THE PLAIN MEANING OF THE TERM “INDIVIDUAL”

Plaintiff engages in none of the textual analysis provided above; indeed, he does not attempt to define the actual statutory term that Congress used to describe an “inventor,” and does not point this Court to any alternative language within the Patent Act that would give *any* affirmative indication that Congress sought to deviate from the plain, everyday meaning of the term “individual.” Nor does plaintiff even suggest that construing the term “individual” to mean “human being” – as the Federal Circuit has already done – would somehow lead to “absurd

result[s],” and thus should be discarded. *See, e.g., Clinton v. City of New York*, 524 U.S. 417, 429 (1998). In lieu of this necessary textual analysis, plaintiff provides this Court with his own normative assessment of the policy that the United States – ostensibly, through this Court’s statutory construction analysis – should adopt with respect to inventions devised by machines using artificial intelligence.

As will be seen below, none of these policy positions have any impact on the proper resolution of the sole question raised here. The Supreme Court and the Federal Circuit have provided that such policy appraisals are irrelevant to statutory construction, and in any event, plaintiff’s policy-related commentary is untethered to anything other than his own speculation.

1. Without grappling with the actual text of the relevant Patent Act provisions, plaintiff initially casts the Federal Circuit’s decisions in *Max-Planck* and *Beech Aircraft* aside simply because those cases concerned whether the use of “individual” could be consistent with one *type* of non-natural person, an organization. *Pl. Mem.*, at 16-17. Although it is certainly true that the *precise* question at issue in both decisions (as it was in the Supreme Court’s opinion in *Mohamad*) was whether Congress’s use of the term “individual” could be construed to include an “organization,” there is simply no language in any of these decisions – and plaintiff identifies none – that would myopically limit the application of the holding that the term “individual” in the Patent Act’s definition of “inventor” must be interpreted to mean a “natural person.”⁸

And that is exactly the upshot of the Ninth Circuit’s recent analysis in *Animal Legal Defense Fund v. Dep’t of Agriculture*, 933 F.3d 1088 (9th Cir. 2019). There, the Ninth Circuit construed a portion of the Freedom of Information Act (“FOIA”) in which a requester may

⁸Similarly, neither *Max Planck* nor *Beech Aircraft* provide any indication that policy arguments, such as the subjective reasoning that plaintiff offers in his opening memorandum, *Pl. Mem.*, at 17-18, played any role in the Federal Circuit’s conclusion that the term “individual” in the Patent Act must be construed to mean a “natural person.”

obtain “expedited processing” of a request for records if there is a “compelling need,” which the statute defines as a situation in which “a failure to obtain requested records on an expedited basis . . . could reasonably be expected to pose an imminent threat to the life or physical safety of an individual.” *Id.* at 1093 (quoting 5 U.S.C. § 552(a)(6)(E)(v)(I)). The requester in *Animal Legal* argued that the statutory term “individual” should be construed to include a living animal and not just a “human being”; the Ninth Circuit, employing the same analysis that the Supreme Court used in *Mohamad*, held otherwise. *See id.* at 1093-96.

First and foremost, the Ninth Circuit dispatched the very argument that plaintiff asserts here – that prior decisional authority only held that an “individual” could not be an organization, and left open the issue of whether “individual” could be construed as something other than a “human being”:

The [*Mohamad*] Court defined “individual” to mean “natural person” as opposed to an organization. Although *Mohamad* addressed a different statutory context, we find much of its reasoning applicable here.

Id. at 1093. And as this memorandum articulated above, the Ninth Circuit similarly looked to *Mohamad*’s survey of dictionaries and the Dictionary Act (as well as the APA itself), and concluded that it was “clear” that the term “individual” “could only be understood to refer to a human being” and not an animal. *Id.* at 1096 (holding that the “plain meaning of ‘individual,’ absent a context signifying otherwise, is ‘a human being, a person’”).

2. Plaintiff next provides an extensive discussion of why – in his view – allowing machines to be “inventors” would be consistent with Congress’ stated goal in promulgating the Patent Act to encourage “innovation.” *Pl. Mem.*, at 12-14. Plaintiff actually goes so far as to suggest, at the zenith of hyperbole, that “[t]he future of innovation is at stake in this case” alone, and that the Federal Circuit’s holding on the meaning of “inventor” to be a “natural person” – which the

USPTO followed here, as it is required to do – “impede[s] the progress of science.” *Id.* at 22. But other than a law review article that plaintiff’s counsel himself authored, plaintiff offers no support for his policy statements. *Id.* at 11-14. Even if the Supreme Court and the Federal Circuit had not already held that such lofty policy assessments are for Congress alone to evaluate, plaintiff’s own subjective speculation surely cannot override the plain language that Congress used in the Patent Act.

a. In this respect, plaintiff first asserts that this Court should depart from the plain meaning of the term “individual” – at least insofar as machines are concerned – because when Congress codified the Patent Act in 1952, it likely did not even consider (or could not have considered) the possibility that inventions could be created by machines utilizing artificial intelligence. *Id.* at 17-18 (quoting Karl F. Milde, Jr., *Can a Computer Be an “Author” or an “Inventor?”* 51 J. PAT. OFF. SOC’Y 378, 379 (1969) (“Congress, in considering the statute in 1952, simply overlooked the possibility that a machine could ever become an inventor.”)). Even if this were true, plaintiff has the analysis exactly backwards – in order to overcome the plain meaning of a statutory term, there must be some “indication” from Congress that it *affirmatively* intended a particular provision to be one of the “rare statute[s]” that contains a different meaning for the term “individual.” *See Mohamad*, 566 U.S. at 455. Put simply, the fact that Congress might have been naïve about a possible alternative construction of a given term has no impact on the statutory construction analysis, and requires a court to default to the plain meaning of that term.

But perhaps more importantly, it is not true that the “statutes relied upon by [the USPTO] were passed long before AI-Generated Inventions were a reality.” *Pl. Mem.*, at 17. Plaintiff’s statement in this regard is accompanied by a string citation of various statutes, *id.*; however, curiously missing from that listing is any reference to 35 U.S.C. §§ 100(f)-(g), which are the

statutory provisions in which Congress *expressly* defined “inventor” to be an “individual.”

Congress added those provisions to the Patent Act not in 1952, but in 2011, through the America Invents Act. *See* PUB. L. 112-29, § 3(a), 125 Stat. 285 (Sept. 16, 2011); *see also* H.R. RPT. 112-98 (June 1, 2011), *available at* 2011 U.S.C.C.A.N. 67, 67. Not only was artificial intelligence “a reality” in 2011, a White House official hailed the statute – at the time that President Obama signed it into law – as follows:

[I]n the past fifty years we have seen more technological advancements than in any point in history, with no comprehensive patent reform to keep up. The America Invents Act equips the USPTO to streamline and modernize its operations while strengthening [intellectual property] protections.

Innovating Our System for Innovation, 2011 WL 4842572, at *1 (W.H. Sept. 16, 2011). Despite these “technological advancements,” Congress *inserted* plain language into the Patent Act that unequivocally is defined to include only “natural persons” as “inventors.”

b. Plaintiff’s additional policy assessments about how including machines that utilize artificial intelligence within the statutory ambit of “inventor” will spurn innovation bring him no closer to reversal of the USPTO’s decision here.⁹ The simple and short answer to these normative considerations is that the Supreme Court and the Federal Circuit have held them to be singularly irrelevant, in circumstances in which a litigant sought judicial review over the USPTO’s statutory construction analysis:

Fisons makes what can only be characterized as a “policy argument” pointing to statements of lofty goals indicating that Congress broadly sought to encourage pharmaceutical innovation by enacting the 1984 Act. . . . It is irrelevant, however, that we

⁹In this respect, plaintiff premises his policy arguments upon the so-called “Patent Clause” of the federal Constitution, which provides Congress with the “power” to “promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” U.S. CONST., Art. I, § 8, cl.8. But as courts have recognized, as a part of Article I of the Constitution, the Patent Clause only provides Congress with *authority* to legislate, it does not *mandate* that Congress actually promulgate legislation. *See Powers v. USPTO*, 2005 WL 2456979, at *2 (E.D. Va. Oct. 5, 2005) (citing *Bonito Boats v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989)).

might agree with Fisons that, as a matter of policy, Congress might better achieve its goals through a more liberal grant of patent term extension benefits. Matters of policy are for Congress, not the courts, to decide. Accordingly, Fisons' policy arguments are unhelpful in our interpretation of the complex statutory provision at issue.

Fisons plc v. Quigg, 876 F.2d 99, 101 (Fed. Cir. 1989); *see also Sandoz Inc. v. Amgen Inc.*, 137 S. Ct. 1664, 1678 (2017) (“Even if we were persuaded that Amgen had the better of the policy arguments, those arguments could not overcome the statute’s plain language, which is our ‘primary guide’ to Congress’ preferred policy.”).¹⁰ Congress’s “preferred policy” here – whether right or wrong – is that an “inventor” under the Patent Act must be a “natural person (*i.e.*, a “human being”).

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¹⁰Despite the irrelevance of these policy issues to the statutory construction question before this Court, it bears mentioning that the USPTO continues to study the impact of artificial intelligence on current patent regulations, and has engaged the public-at-large in a conversation on the subject. In particular, the USPTO held a conference on artificial intelligence policy in January 2019, and then, in August and October 2019, issued requests for public comment on a whole host of issues related to the intersection of intellectual property policy and artificial intelligence. The USPTO issued a comprehensive report on those comments in October 2020. *See generally Public Views on Artificial Intelligence and Patent Policy*, available at <https://www.uspto.gov/sites/default/files/documents/USPTO_AI-Report_2020-10-07.pdf> (visited Feb. 24, 2021). It will suffice to say that many commenters did not share plaintiff’s subjective view that allowing artificial intelligence machines to serve as “inventors” was the correct policy choice, or that the question was nearly as simple as plaintiff suggests in his opening memorandum. *See id.* at 6 (identifying comments that highlighted the need to “carefully consider” the practical effects of allowing an artificial intelligence machine to be an inventor).

CONCLUSION

For the foregoing reasons, this Court should affirm the USPTO's detailed final decision, concluding that DABUS could not qualify under the Patent Act as an "inventor." As such, this Court should enter summary judgment for defendants, and deny the identical relief sought by plaintiff.

Respectfully submitted,

RAJ PAREKH
ACTING UNITED STATES ATTORNEY

By: _____/s/_____

DENNIS C. BARGHAAN, JR.
Deputy Chief, Civil Division
Assistant U.S. Attorney
2100 Jamieson Avenue
Alexandria, Virginia 22314
Telephone: (703) 299-3891
Fax: (703) 299-3983
Email: dennis.barghaan@usdoj.gov

DATE: February 24, 2021

ATTORNEYS FOR DEFENDANTS

OF COUNSEL: Meredith Schoenfeld
Peter Sawert
Associate Solicitors
United States Patent & Trademark Office

CERTIFICATE OF SERVICE

I hereby certify that on this date, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will transmit a Notice of Electronic Filing (“NEF”) to the following:

Geoffrey Alex Neri
Brown Neri Smith & Khan LLP
11766 Wilshire Boulevard, Suite 1670
Los Angeles, California 90025
geoff@bnsklaw.com

Date: February 24, 2021

_____/s/_____
DENNIS C. BARGHAAN, JR.
Deputy Chief, Civil Division
Assistant U.S. Attorney
2100 Jamieson Avenue
Alexandria, Virginia 22314
Telephone: (703) 299-3891
Fax: (703) 299-3983
Email: dennis.barghaan@usdoj.gov

ATTORNEYS FOR DEFENDANTS

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

Stephen Thaler,

Plaintiff,

v.

Andrew Hirshfeld, in his official capacity
Performing the Functions and Duties of Under
Secretary of Commerce for Intellectual Property
and Deputy Director of the United States Patent and
Trademark Office, and United States Patent and
Trademark Office,

Defendants.

Case No. 1:20-cv-00903

**MEMORANDUM OF LAW IN SUPPORT OF
PLAINTIFF'S OPPOSITON TO
DEFENDANTS' MOTION FOR SUMMARY
JUDGMENT & REPLY TO DEFENDANTS'
OPPOSITION TO PLAINTIFF'S MOTION
FOR SUMMARY JUDGMENT**

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I. INTRODUCTION

Defendants’ motion for summary judgment and opposition to Plaintiff’s motion for summary judgment mischaracterizes the central legal issue in this case, proposes a myopic approach to statutory interpretation that ignores contradictory authorities, and ultimately, fails to confront that their interpretation is inconsistent with Congressional intent.

The primary legal issue in this case is whether a patent can be obtained for an invention made without a traditional human inventor (“AI-Generated Inventions”). Defendants ask the court to endorse an interpretation of the Patents Act that would, for the first time, exclude an entire category of innovation from patent law protection. A category that, in the future, may come to represent the majority of American innovation. Yet Defendants failed to engage with the outcome of their interpretation in the underlying agency action—and they continue not to engage.

Defendants claim that the Patent Act requires a natural person to be listed as an inventor in order for an applicant to obtain patent rights, but they do so based on the theory that language can only be given its narrowest and most literal meaning regardless of the consequences. Defendants do not address instances in which essentially the same language, in the very same legislation, is used to refer to non-natural persons. Defendants ignore authority in the very cases they cite holding that the term “individual” does not need to exclusively refer to a natural person. Defendants rely on cases about whether corporations or sovereigns can be inventors, but fail to acknowledge the tremendous difference between a company, which is composed of human agents that it acts through, and an AI, which can generate patentable output without a traditional human inventor.

What Defendants characterize as attempts at policy making is merely an interpretation of statutory language that is consistent with Congressional intent. Defendants wrongly claim that Plaintiff needs to provide explicit evidence that Congress intended to protect AI-Generated Inventions. What Plaintiff has successfully shown, and what Defendants do not challenge and cannot reasonably challenge, is that Congress, the Founders, and the Supreme Court have all been clear about the purposes of the patent system—to incentivize innovation, to promote the disclosure of information that would otherwise be protected as a trade secret, and so forth. In every respect, allowing protection for AI-Generated Inventions would be consistent with this intent, while denying protection would do the opposite. Because there is no evidence that Congress legislated mindful of the existence of inventions without human inventors, the Patent Act should now be interpreted to further Congress’ intent to promote innovation in light of technological advances.

II. REPLY TO DEFENDANTS’ STATEMENT OF FACTS

Plaintiff understands Defendants are not disputing his statement of undisputed material facts in his opening memorandum (ECF 24, at 11 [“USPTO does not dispute any of the actual facts articulated in plaintiff’s material fact statement...”]). In response to additional facts mentioned by Defendants, Plaintiff will provide a few clarifying comments and does dispute certain facts.¹

¹ In addition to Defendants, Mitchell Apper, appearing pro se, has filed various papers in this matter, including, “Amicus Curiae memorandum opposing motion for summary judgment.” (Dkt. No. 27). While Plaintiff appreciates his interest in the case, the submission is irrelevant, as it primarily attempts to dispute factual allegations which are not disputed by Defendants and which must be accepted as true for the court’s review under the APA. The brief is also inaccurate, among other things, both with respect to the state of the science related to AI, and the manner in which machines can be used to generate inventive output in the absence of someone who qualifies as an inventor under traditional criteria. For these reasons, even if the Court finds the submissions admissible as a procedural matter, the amicus brief should not be given any

A. Clarifying comments

Plaintiff is not aware of any previously filed applications for AI-Generated Inventions, and Defendants provided no guidance with respect to filing such applications. Given the unique nature of the applications, and to ensure that there was no confusion about the grounds on which the application was being filed, a statement of inventorship was filed to clarify that the Applications² lacked a traditional human inventor and that they were instead generated by an AI. (ECF 15-2 at pp. 26-27 [A26-A27]; ECF 15-3 at pp. 59-59 [A311-A312]).

Plaintiff, as the “applicant” for the Applications, is responsible for prosecuting the Applications and he asserts ownership in the Applications and to any ultimately issued patents. Because he is not the inventor, he filed the assignment document referred to by Defendants (ECF 24, at 7-8) because applications filed in these circumstances generally require such a document to be filed together with a statement under 37 CFR 3.73(c) (form AIA/96). (ECF 15-2 at pp. 71-72 [A71-72]; ECF 15-3 at pp. 107-108 [A360-361]).

Plaintiff’s position, nevertheless, is that the assignment should be unnecessary because the rights to the underlying inventions should vest directly with Plaintiff. The right to a piece of fruit does not first vest in a tree and then transfer to a farmer. There is no more reason for the right to an invention to first vest in a machine and then to transfer to the machine’s owner. Plaintiff, as the owner of DABUS (as well as it’s developer and user), is entitled to own its output as a trade secret under, among others, the doctrines of accession and first possession, and is similarly entitled to own patents filed on those trade secrets.

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weight. It will not assist the Court because it is irrelevant, and the assertions made therein are inaccurate and not adequately supported.

² U.S. Application Serial Numbers 16/524,350 and 16/524,532 (collectively, “the Applications”).

B. Disputed facts

Plaintiff denies that he recognized that, “both the European Union and the United Kingdom had concluded that their patent law precluded the naming of an inventor that is not a natural person” (ECF 24, at 9)). Plaintiff also objects to Defendants stating that, “United Kingdom’s High Court of Justice has since affirmed the United Kingdom Intellectual Property Office’s conclusion that only a ‘natural person’ can be an ‘inventor’ under the United Kingdom’s ‘Patents Act 1977.’” (ECF 24, at 9).

It is correct that analogs to the Applications were filed in numerous foreign jurisdictions, and that these applications have been initially effectively rejected by the European Patent Office (“EPO”) and the United Kingdom Intellectual Property Office (“UKIPO”). However, aside from the fact that the EPO is independent from the European Union,³ it is critical to note that *all such rejections are currently under appeal*. It is Plaintiff’s contention that protection for AI-Generated Inventions should be permitted under the laws of at least some foreign jurisdictions. There is thus a risk that the subject matter of the Applications may only be protected in, for example, Germany, and not in the United States. In any event, whether AI-Generated Inventions are permitted under various national or regional laws and regulations is, much like the present case, still being decided.

While the High Court upheld UKIPO’s rejection, it noted, “I would wish to make clear that I in no way regard the argument that the owner/controller of an artificially intelligent machine is the ‘actual devisor [inventor] of the invention’ as an improper one. Whether the

³ <https://www.epo.org/law-practice/legal-texts/official-journal/information-epo/archive/20200129.html> (“The European Patent Organisation is an international organisation established on the basis of the European Patent Convention (EPC). It is independent of the EU and currently has 38 member states, of which 28 are also members of the EU (incl. the UK) and 10 are not.”) The UK, of course, has now withdrawn from the EU, but not the EPC.

argument succeeds or not is a different question and not one for this appeal: but it would be wrong to regard this judgment as discouraging an applicant from at least advancing the contention, if so advised.” ([2020] EWHC 2412 (Pat), at 52(B)).⁴ This statement, suggesting that an AI-Generated Invention could be protected by naming the machine’s owner as the inventor on the basis of machine ownership rather than human inventive activity, would be non-binding dictum under U.S. law. The argument that Plaintiff could be an inventor under the law of England and Wales simply by virtue of ownership of DABUS was not advanced by Plaintiff at the High Court. (*Id.*)

An appeal from the High Court has been accepted on a discretionary basis and is currently pending before the UK Court of Appeal.⁵ Ultimately, whether patents are granted for the applications in the United Kingdom is dependent on the language of The Patents Act 1977, and principles of statutory interpretation in the United Kingdom which differ from those of the United States. However, both the UKIPO and the High Court acknowledged the negative consequences of failing to allow protection for AI-Generated Inventions. (See, Ex parte Stephen L. Thaler, No. BL O/741/19 (U.K. I.P.O. Dec. 4, 2019) and [2020] EWHC 2412 (Pat)).

Moreover, language related to inventorship varies by jurisdiction. Israeli Patent Law, for example, has no requirement to list an inventor in a patent application, and states that, “anyone who filed a patent application is considered as the owner of the invention, as long as the contrary has not been proven.” (State of Israel, Patents Law 5727–1964 as consolidated 2014, § 76).⁶

⁴ <https://www.bailii.org/ew/cases/EWHC/Patents/2020/2412.html>.

⁵ A3/2020/1851/PTA. Thaler –v– Comptroller-General of Patents, Design and Trade Marks. Court of Appeal.

⁶ https://www.jpo.go.jp/e/system/laws/gaikoku/document/index/israel-e_tokkyo.pdf.

The EPO rejections are pending before the EPO Boards of Appeal,⁷ and the President of the EPO has recently been granted leave to intervene in the case (similar to filing an amicus brief in the U.S.). (Request to comment by the President of the European Patent Office).⁸ In his words, the applications and subsequent appeal, “constitute important precedential cases, and the decisions of the Legal Board of Appeal will provide clarification on the definition of inventorship in relation to AI systems.” (*Id.*)

In accepting the President’s request, the Board of Appeal wrote that the first issue before them in the appeal was, “... to determine the purpose and function of the requirement to designate the inventor in a published European patent application. One possible view on this point is that the sole purpose of the requirement is to enhance the protection of the inventor's right to be mentioned as such. On this basis, where an application does not envisage a person with legal personality as inventor, it could be argued that the requirement to designate the inventor is redundant. This view would be justified if human intervention did not constitute an inherent element of a patentable invention under Article 52 EPC [European Patent Convention]. If, by contrast, the term ‘invention’ in Article 52 EPC was considered to be limited to human-made inventions, then the function of Rule 19 EPC would also be to allow or facilitate examination of a substantive requirement.” (F3305 Communication of the Board of Appeal (ex parte/inter partes)).⁹

⁷ Appeal number J0008/20-3.1.01.

⁸ <https://register.epo.org/application?number=EP18275163&lng=en&tab=doclist> (listed in the docket as “General enquiry” dated September 9, 2020).

⁹ <https://register.epo.org/application?number=EP18275163&lng=en&tab=doclist> (listed in the docket as “F3305 Communication of the Board of Appeal (ex parte/ inter partes)” dated February 1, 2021). The other issues in the appeal are more relevant to the EPO than to Defendants, and concern EPO’s remit to consider inventorship as a substantive matter as well as other formalities issues. *Id.*

Whether EPO will ultimately approve the applications is unknown at this stage, and in any event dependent on the language of the European Patent Convention rather than any U.S. law. Contrary to Defendants' statement of material facts, whether a patent can be issued for an invention without a traditional human inventor is both jurisdiction dependent and very much a current subject of international debate.

As a final reply to Defendants' comments on the foreign applications, it should be noted that on October 20th, 2020, the European Parliament (the European Union's law-making body) adopted a resolution in favor of patentability of AI-Generated Inventions. European Parliament resolution of 20 October 2020 on intellectual property rights for the development of artificial intelligence technologies (2020/2015(INI)) at paragraphs 14 and 15 (“[*The European Parliament*]... Points out the difference between AI-assisted human creations and AI-generated creations, with the latter creating new regulatory challenges for IPR [Intellectual Property Rights] protection, such as questions of ownership, inventorship and appropriate remuneration, as well as issues related to potential market concentration; further considers that IPRs for the development of AI technologies should be distinguished from IPRs potentially granted for creations generated by AI; stresses that where AI is used only as a tool to assist an author in the process of creation, the current IP framework remains applicable; **Takes the view that technical creations generated by AI technology must be protected under the IPR legal framework in order to encourage investment in this form of creation and improve legal certainty** for citizens, businesses and, since they are among the main users of AI technologies for the time being, inventors[.]”) (emphasis added).¹⁰

¹⁰ https://www.europarl.europa.eu/doceo/document/TA-9-2020-0277_EN.pdf

III. ARGUMENT

A. Grounds for appeal

Defendants misstate Plaintiff's position in alleging that, "[a]s plaintiff ostensibly concedes... this Court may 'set aside' an agency action **only** if it is 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,'" (emphasis added and internal citations omitted, ECF 24, at 11). Rather, under the Administrative Procedure Act ("APA"), the Court shall, among other reasons, "hold unlawful and set aside agency action, findings, and conclusions found to be—(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; (B) contrary to constitutional right, power, privilege, or immunity; [or] (C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right . . ." 5 U.S.C. § 706(2). Defendants' decision to deny Plaintiff's request for reconsideration, runs afoul of subdivisions A, B, and C.

The Constitution's "Patent Clause" provides an explicit rationale to the patent system that would be frustrated under Defendants' proposed interpretation. U.S. Const. Art. I, § 8, cl. 8. Defendants cite to Powers v. USPTO, 2005 WL 2456979, at *2 (E.D. Va. Oct. 5, 2005) (citing Bonito Boats v. Thunder Craft Boats, Inc., 489 U.S. 141, 146 (1989)), for the proposition that the Patent Clause only provides Congress with authority to legislate, it does not mandate that Congress actually promulgate legislation. Powers involved an individual acting pro se and suing USPTO for \$750 million for making allegedly unauthorized changes to his patent application before publication, and also seeking an agency retraction of an official publication to remedy an alleged defamation. While the Eastern District in Powers stated that the Patent Clause did not confer a private right of action, that is not the holding of Bonito Boats, which held that a Florida statute was preempted by the supremacy clause. (*Id.*) Bonito Boats does not resolve whether the

Patent Clause provides a private right of action. Bonito Boats involved a case, unlike the present action, in which, “Congress has explicitly considered the need for additional protections for industrial designs and declined to act.” (*Id.*, at 143).

B. Defendants are not entitled to Skidmore Deference

As discussed in Plaintiff’s opening memorandum, Defendants are not entitled to Skidmore deference. Defendants’ reasoning essentially boils down to asserting that an inventor has to be a person because an inventor has always been a person, and that there is no way to interpret a statute other than as narrowly and literally as possible. Defendants do not, and did not in the underlying agency action, consider alternative interpretations or statutory constructions or the constitutional imperative in rejecting the Applications. Defendants do not provide any evidence that Congress intended to exclude AI-Generated Inventions from patentability. Most problematically, Defendants do not engage with the effects of their interpretation. Under Defendants’ reasoning, even if the entire patent system ceased to function as a result, the Court could not so much as consider an alternative interpretation of a statute if it arguably has a plain meaning.

Therefore, in addition to Defendants’ underlying action constituting an unreasonable conclusion as to the proper construction of the Patent Act, and thus lacking the power to persuade, Defendants have not conducted a careful analysis of the issue. That remains clear today, as Defendants continue to incorrectly argue the underlying legal question in this case is only whether an AI can be named as an inventor on an application, rather than confronting the fact that their interpretation would exclude AI-Generated Inventions from patent protection entirely.

C. As a matter of statutory interpretation, an “individual” need not be a natural person

Plaintiff’s opening memorandum already explains why a purposive interpretation of the Patent Act is both desirable and necessary in the context of this case.

Defendants cite to authority that holds terms such as “individual” in statutes may refer only to a natural person. See, Mohamad v. Palestinian Auth., 566 U.S. 449, 453-61 (2012). Mohamad held that, “[a]s used in the [Torture Victim Protection Act of 1991, “TVPA”], the term ‘individual’ encompasses only natural persons. Consequently, the Act does not impose liability against organizations.” (*Id.*, at 449).

The term individual may indeed refer solely to a natural person, but as the Mohamad Court itself noted, “[t]his is not to say that the word ‘individual’ invariably means ‘natural person’ when used in a statute.” (*Id.*, at 455). Justice Breyer, in concurrence, even went so far as to state, “[t]he word ‘individual’ is open to multiple interpretations, permitting it, linguistically speaking, to include natural persons, corporations, and other entities.” (*Id.* at 462 (2012), Breyer, J.).

Mohamad involved legislation with respect to victims of torture or extrajudicial killings, who could only be natural persons. The Court held that Congress appeared to be making deliberate distinctions between persons and nonsovereign organizations. (*Id.* at 450). The Court also found that TVPA’s legislative “history supports this Court’s interpretation,” (*id.* at 449-450) and that, in reply to a purposive argument, “Congress appeared well aware of the limited nature of the cause of action it established in the TVPA.” (*Id.*). In sum, the Court held that, “[t]he ordinary meaning of the word, fortified by its statutory context, persuades us that the Act authorizes suit against natural persons alone.” (*Id.*, at 453) (emphasis added). This is all

dissimilar from the present action, where prohibiting patents for AI-Generated Inventions would conflict with Congressional intent.

Defendants also cite to Animal Legal Defense Fund v. Dep't of Agriculture, 933 F.3d 1088 (9th Cir. 2019) which involved whether an individual could be a living animal other than a natural person. Aside from this case not being binding on the Court, it once more involves a very different issue and context. “The Freedom of Information Act (‘FOIA’) provides for expediting processing of records where ‘failure to obtain requested records on an expedited basis ... could reasonably be expected to pose an imminent threat to the life or physical safety of an individual.’ We are asked to decide whether the term ‘individual’ in this context includes an animal as well as a human being. We conclude it does not.” *Id.*, at 1090 (emphasis added and internal citation omitted).

Plaintiff’s opening memorandum previously addressed the Federal Circuit cases relied upon by Defendants. They are distinguished on the basis that they address inventorship as between natural persons and artificial persons that constitute legal entities. These legal entities literally act via human agents and are thus unlike AI acting autonomously.

D. A narrow and literal statutory interpretation would be inappropriate in this context

It is inaccurate to state that Plaintiff does not, “even suggest that construing the term ‘individual’ to mean ‘human being’ ... would somehow lead to ‘absurd result[s],’ and thus should be disregarded.” (ECF 24, at 16). As Plaintiff has already alleged in both his Complaint and opening memorandum, Defendants’ agency action is contrary to the spirit, purpose, and intent of Congress and the Founders, and it will result in negative, and indeed, absurd and disastrous outcomes.

Curiously, Defendants both claim that Plaintiff has failed to allege that sufficiently negative outcomes will result from their interpretation, then proceed to criticize Plaintiff for arguing, in the “zenith of hyperbole”, that, “[t]he future of innovation is at stake in this case”. (ECF 24, at 18–19).

At the same time, Defendants make no arguments that the future of innovation is not at stake in this case. In fact, Defendants’ opening and opposing memorandum (ECF 24) does not discuss the implications of their interpretation. There is good reason for this – the implications are both disastrous and absurd. Defendants’ interpretation will discourage the use and development of inventive AI that has the potential to make tremendous social contributions. The Defendants never discuss or appear to have even thought about the effects of their interpretation or the effects it will have on innovation.

Defendants provide no evidence that Congress intended to prohibit patents on AI-Generated Inventions. That is because such evidence does not exist to Plaintiff’s knowledge. Defendants argue that Plaintiff should have the burden of affirmatively providing evidence that Congress intended to allow patents on AI-Generated Inventions. (See Generally, ECF 24, at 11–21.) This misunderstands that Congress did not anticipate or legislate for this specific circumstance, either at the time the Patent Act was enacted, or during subsequent amendments. The Patent Act has indeed been amended since 1952. That does not change the fact that Defendants have provided no evidence whatsoever that Congress intended to exclude AI-Generated Inventions from patentability.

What Congress did intend, and what the Founders did intend, was to create a system of patent law that would result in certain social benefits. Principally, to incentivize innovation and the promote the disclosure of information that would otherwise be maintained as a trade secret.

Allowing protection for AI-Generated Inventions would accomplish both of these goals while prohibiting such protection would do the opposite.

IV. CONCLUSION

Defendants' claim that: "Congress's 'preferred policy' here – whether right or wrong – is that an 'inventor' under the Patent Act must be a 'natural person[']' (i.e., a 'human being')." (ECF 24, at 21). The problem with this argument is that, while Defendants argue their interpretation is the most literal way to read the Patent Act, they never stop to consider whether it is actually Congress' preferred policy. It is not policy making to consider Congressional intent in statutory interpretation.

The interpretation advanced by Defendants should not be adopted because it conflicts with Congressional intent. It will hinder innovation, it runs afoul of the Constitutional rationale for patent protection, and it is at odds with the Patent Act. In light of the consequences that would follow from Defendants' interpretation, the Court should enter summary judgment for Plaintiff, and deny the identical relief sought by Defendant.

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Dated: March 10, 2021

BROWN, NERI, SMITH & KHAN LLP

By: _____/s/_____
Ryan Abbott, Esq. (admitted *pro hac vice*)
Attorney for Plaintiff
Brown, Neri, Smith & Khan, LLP
11601 Wilshire Blvd, Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980
Ryan@bnsklaw.com

By: _____/s/_____
Geoffrey A. Neri, Esq. VSB No. 72219
Attorney for Plaintiff
Brown, Neri, Smith & Khan, LLP
11601 Wilshire Blvd, Ste. 2080
Los Angeles, CA 90025
Phone: (310) 593-9890
Fax: (310) 593-9980
Geoff@bnsklaw.com

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

STEPHEN THALER,)	
)	
Plaintiff,)	
)	
vs.)	Civil Action No. 1:20cv903
)	
ANDREW HIRSHFELD,)	
Performing the Functions and)	
Duties of the Under Secretary of)	
Commerce for Intellectual Property)	
and Director of the United States)	
Patent and Trademark Office, ¹)	
<i>et al.</i> ,)	
)	
Defendants.)	
)	

**REPLY MEMORANDUM OF LAW IN SUPPORT OF DEFENDANTS’
MOTION FOR SUMMARY JUDGMENT**

¹Pursuant to 35 U.S.C. § 3, the powers and duties of the U.S. Patent and Trademark Office are vested in an Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office. Effective January 20, 2021, Andrei Iancu resigned as Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office, and Andrew Hirshfeld began performing the functions and duties of the Under Secretary of Commerce for Intellectual Property and Director of the USPTO. Accordingly, the named defendant for the subject civil action has changed. *See* FED. R. CIV. P. 25(d)(1).

ARGUMENT

I. THE PLAIN LANGUAGE OF THE STATUTORY TERM “INDIVIDUAL” IS A “NATURAL PERSON”

As the USPTO explained in its opening memorandum, the touchstone of statutory construction analysis is the plain meaning of the terms that Congress actually promulgated; indeed, the “inquiry begins with the statutory text, and ends there as well if the text is unambiguous.” *Def. Mem.* (Dkt. No. 24), at 13 (quoting *BedRoc Ltd., LLC v. United States*, 541 U.S. 176, 183 (2004)). And at the outset, although plaintiff does not dispute this fundamental principle of statutory construction, his opposition memorandum is devoid of a *single citation* to the language of the Patent Act – let alone the particular Patent Act provisions through which Congress not only defined “inventor” as an “individual,” but also identified the “inventor” through personal pronouns. *See* 35 U.S.C. § 100(f) (“The term ‘inventor’ means the *individual*, or, if a joint invention, the *individuals* collectively who invented or discovered the subject matter of the invention.” (emphasis added)); *see also id.* § 115(b)(2) (requiring “an oath or declaration by the original inventor” to the effect that he or she “believes *himself or herself* to be the original inventor or an original joint inventor of [the] claimed invention” (emphasis added)). That gap in plaintiff’s papers reveals that his desired interpretative position is completely unmoored from the actual language that Congress used, and because that runs afoul of centuries of well-settled authority, it should be sufficient alone to require rejection of plaintiff’s position.

But more importantly, the USPTO did not rest merely on the bald fact that Congress defined an “inventor” to be an “individual.” The USPTO’s opening memorandum instead explained that the Supreme Court had similarly held – after engaging in the same statutory construction exercise that confronts this Court here – that the plain language meaning of the statutory term “individual” is “human being” (or “natural person”). *Def. Mem.*, at 14-16 (quoting

Mohamad v. Palestinian Auth., 566 U.S. 449, 453-61 (2012)). In coming to this conclusion, the *Mohamad* Court looked at the following textual guideposts: (1) the ordinary dictionary meaning of “individual”; (2) the way in which English speakers use “individual” in typical, everyday parlance; (3) the Dictionary Act’s treatment of “individual”; and (4) other contextual clues within the particular statute at issue. *See Mohamad*, 566 U.S. at 454-55. And the USPTO applied each of these same guideposts to the Patent Act’s use of “individual” to define “inventor.” *Def. Mem.*, at 15-16.

Plaintiff has no real response to this reasoning, and does not attempt to provide an alternative application of *Mohamad*’s textual guideposts to the Patent Act so as to derive a plain meaning for the term “individual” that includes machines. Instead, plaintiff’s sole argument is that *Mohamed*’s analysis is simply inapplicable here because it was adopted in a different statutory context from the Patent Act – the Torture Victim Protection Act (“TVPA”) – and that the *Mohamad* Court noted that Congress does not *always* equate “individual” with “natural person.” *Pl. Opp.* (Dkt. No. 28), at 10-11.

This position is meritless. *Mohamad*’s reference to “context” is not concerned with the *subject-matter* of the statute at issue; indeed, three of the guideposts that *Mohamed* identified in determining the plain meaning of “individual” have nothing whatsoever to do with the particular subject-matter of the TVPA (*i.e.*, ordinary dictionary definition; typical parlance; Dictionary Act).² And even if plaintiff were correct in this regard, the Federal Circuit has held that – for

²This is the very gravamen of the Ninth Circuit’s decision in *Animal Legal Defense Fund v. Dep’t of Agriculture*, 933 F.3d 1088 (9th Cir. 2019):

The [*Mohamad*] Court defined “individual” to mean “natural person” as opposed to an organization. Although *Mohamad* addressed a different statutory context, we find much of its reasoning applicable here.

Id. at 1093.

purposes of the precise statutory context at issue here, the Patent Act – Congress’s use of the term “individual” means that only a “natural person” can be an “inventor.” *See Univ. of Utah v. Max-Planck-Gesellschaft*, 734 F.3d 1315, 1323 (Fed. Cir. 2013).

Mohamad’s fourth guidepost concerns the “context” in which Congress used the term “individual” within the particular statute being examined:

Congress remains free, as always, to give the word a broader or different meaning. But before we will assume it has done so, there must be *some* indication Congress intended such a result. . . .

There are no such indications in the TVPA. As noted, the Act does not define “individual,” much less do so in a manner that extends the term beyond its ordinary usage. And the statutory context strengthens – not undermines – the conclusion that Congress intended to create a cause of action against natural persons alone.

Mohamad, 566 U.S. at 455 (emphasis in original); *see id.* at 456 (canvassing the remaining text of the TVPA to determine whether there was any indication that Congress intended a different meaning of “individual”). And here, plaintiff points to nothing within the text of the Patent Act *at all*, let alone statutory language within the Patent Act upon which this Court could conclude that Congress intended to deviate from the typical use of “individual” as a “human being.” *Def. Mem.* at 10-13.³ There is a good reason for this; as the USPTO explained in its opening memorandum, *id.* at 15-16, by using personal pronouns (*i.e.*, “himself or herself,” 35 U.S.C. § 115(b)(2)) to describe the type of “individual” who can be an “inventor,” the Patent Act is an even *stronger* case than *Mohamad* for equating “individual” with “human being.”

As such, because the plain meaning of the express terms that Congress used to define “inventor” is a “human being,” this Court’s “interpretive task is at an end” and the statute “must

³In the introduction of his opposition memorandum, plaintiff states that the USPTO does “not address instances in which essentially the same language, in the very same legislation, is used to refer to non-natural persons.” *Pl. Opp.*, at 1. Despite this cryptic sentence, nowhere within the remainder of that opposition memorandum does plaintiff identify any other use of the term “inventor” or “individual” within the Patent Act “to refer to non-natural persons.”

[] be applied in accordance with its plain meaning.” *Chris v. Tenet*, 57 F. Supp. 2d 330, 334 (E.D. Va. 1999).

II. PLAINTIFF’S PREFERRED POLICY OUTCOME DOES NOT CONSTITUTE AN “ABSURD RESULT”

Ignoring the significant Supreme Court and Federal Circuit authority that the USPTO identified for the proposition that general policy arguments are irrelevant to statutory construction, *Def. Mem.*, at 20-21, plaintiff simply repeats his position that this Court should ignore the plain meaning of the terms Congress actually used to define an “inventor.” This is so, plaintiff offers, because interpreting “individual” to connote a “natural person” would be “contrary to the spirit, purpose, and intent of Congress and the Founders, and it will result in negative, or indeed, absurd and disastrous results,” *Pl. Opp.*, at 11-13. But plaintiff cites neither any jurisprudential authority to support the use of generalized policy arguments in statutory construction nor any evidence of congressional intent on the particular question raised here (*i.e.*, whether a machine should be able to be the “inventor” on a patent application). *Id.* Instead, once again, plaintiff simply articulates his own subjective view that the plain meaning of “individual” “will discourage the use and development of inventive AI that has the potential to make tremendous social contributions.” *Id.* at 12.

First, as the USPTO previously explained, subjective arguments about the generalized policy impacts that Congress sought to inculcate through particular legislation – such as those that plaintiff articulates here – are simply insufficient to depart from the plain meaning of the statutory text. *Def. Mem.*, at 20-21 (quoting *Fisons plc v. Quigg*, 876 F.2d 99, 101 (Fed. Cir. 1989)).⁴ Far to the contrary, as the Supreme Court recognized over ninety years ago, “there must

⁴As an aside, plaintiff maintains that the USPTO has “failed to engage with the outcome of their interpretation” of the term “individual” in the Patent Act. *Pl. Opp.*, at 1. Leaving aside the significant authority cited in the USPTO’s opening memorandum to the effect that such

be something to make plain [Congress’s intent] that the letter of the statute is not to prevail.” *Crooks v. Harrelson*, 282 U.S. 55, 59-60 (1930); *see also Maryland State Dep’t of Ed. v. Dep’t of Veterans Affairs*, 98 F.3d 165, 169 (4th Cir. 1996) (holding that “to come within the ambit of this exception ... the contrary intent must have been clearly expressed by the legislative body”).⁵ Applied to the particular statutory construction issue here, in order to avoid the plain meaning of the statutory term “individual,” there “must be something” that unequivocally demonstrates that Congress did not intend to limit “inventors” to “natural people.” And plaintiff concedes that he cannot meet this standard:

Congress did not anticipate or legislate for this specific circumstance, either at the time the Patent Act was enacted, or during subsequent amendments.

Pl. Opp., at 12. Because there is simply no indication – let alone a *clear* indication – that Congress intended for the term “individual” to be construed apart from its plain meaning with respect to who can be an “inventor” under the Patent Act, this Court must employ that plain meaning and reject plaintiff’s position here.

Second, to the extent that plaintiff now wishes to avail himself of the so-called “absurd results” doctrine, *Pl. Opp.*, at 11, decades of well-settled authority provide that a litigant cannot simply remove the term “absurd” from the title of the doctrine. Generally speaking, as academic

policy debates have no place in statutory construction (and thus need not be addressed in litigative motion papers), *Def. Mem.*, at 20-21 (quoting *Fisons*, 876 F.2d at 101), the USPTO *has* “engaged” – in an appropriate policy making context, not in an Article III court – with the difficult issues associated with the connection between intellectual property rights and artificial intelligence, *id.* at 21 n.10. Plaintiff ignores these open forum debates, and the significant report that the USPTO issued in the wake of those debates, possibly because a wide variety of commenters did not universally share his policy position on the impact that authorizing artificial intelligence machines to be “inventors” would have on innovation.

⁵Accordingly, plaintiff’s reflexive position that it is the USPTO that must “provide . . . evidence that Congress intended to prohibit patents on AI-generated Inventions,” *Pl. Opp.*, at 12, has the burden exactly backwards.

commenters have noted, “the absurd results doctrine should be used sparingly because judicial speculation that the legislature could not have meant what it unmistakably said risks corrupting the separation of powers doctrine.” 2A SUTHERLAND STATUTORY CONSTRUCTION, § 46:7, at 257-58. And courts have fully embraced this view, recognizing that it is truly the rare scenario in which an Article III court can supplant the plain meaning of a statutory term because it would lead to an “absurd result”:

In most cases, the plain meaning of a provision not contradicted by any other provision in the same instrument is not to be disregarded because we believe the framers of the instrument could not intend what they say. It must be one in which the absurdity and injustice of applying the provision to the case would be so monstrous that all mankind would without hesitation unite in rejecting the application.

Payne v. Fed. Land Bank, 916 F.2d 179, 182 (4th Cir. 1990) (quoting *Sturges v. Crowninshield*, 17 U.S. (4 Wheat.) 122, 202-03 (1819)); *see also Tiscareno-Garcia v. Holder*, 780 F.3d 205, 208 (4th Cir. 2015) (“[I]n ‘exceptionally rare’ instances where ‘a literal reading of a statute . . . results in an outcome that can truly be characterized as absurd, *i.e.*, that is so gross as to shock the general moral or common sense,’ we can look past the statute’s plain and ordinary meaning.” (quoting *Sigmon Coal Co. v. Apfel*, 226 F.3d 291, 304 (4th Cir. 2000), *aff’d sub nom. Barnhart v. Sigmon Coal Co.*, 534 U.S. 438, 442 (2002))). Plaintiff’s position on the impact that inventions allegedly conceived entirely by artificial intelligence would have on innovation falls far short of the type of “monstrous” result that “shocks the general moral or common sense,” and thus could possibly authorize a departure from the plain meaning of the term “individual.”⁶

⁶Plaintiff also suggests disagreement with the USPTO’s position that the so-called Patent Clause of the Constitution, *see* U.S. CONST., Art. I, § 8, cl. 8, only provides Congress with *authority* to legislate, it does not *mandate* that Congress actually promulgate legislation consistent with plaintiff’s view of what would spur innovation. *Pl. Opp.*, at 8-9. But that has been the nature of Congress’s legislative powers under Article I since the dawn of the republic; as Chief Judge Marshall wrote, Article I “must allow to the national legislature that *discretion* with respect to the means by which the powers it confers are to be carried into execution,” and provide that national legislature with the ability to exercise “its best judgment in the selection of

* * *

In the end, the *entirety* of plaintiff’s interpretative position here is premised on a single policy notion – that allowing artificial intelligence machines to serve as the “inventor” on a patent application will promote innovation. Even were that true – and plaintiff offers nothing than his own subjective view on that subject – the authorities cited above and in the USPTO’s opening memorandum provide that these types of policy arguments cannot supplant the plain meaning of the actual words that Congress passed and the President of the United States signed into law.

Perhaps more pointedly, however, the Supreme Court recently warned against the use of policy arguments about the impact that a particular interpretation of the Patent Act would have on innovation. In *Kimble v. Marvel Entm’t, LLC*, 576 U.S. 446 (2015), in confronting a question about patent licensing, the Supreme Court – speaking through Justice Kagan – explained that one litigant “also [sought] support” for his position “from the wellspring of all patent policy: the goal of promoting innovation.” *Id.* at 463. After explaining that the policy debate was nowhere near as one-sided as the litigant suggested, the Court provided as follows:

measures to carry into execution the constitutional powers of the government.” *McCulloch v. Maryland*, 17 U.S. (4 Wheat.) 316, 420-21 (1819) (emphasis added). The Supreme Court, in more modern times, has held similarly with respect to the Patent Clause (here, with respect to copyright):

At anytime Congress determines that a particular category of “writing” is worthy of national protection and the incidental expenses of federal administration, federal copyright protection may be authorized. Where the need for free and unrestricted distribution of a writing is thought to be required by the national interest . . . the Copyright Clause and the Commerce Clause would allow Congress to eschew all protection.

Goldstein v. California, 412 U.S. 546, 559 (1973); *see also Graham v. John Deere Co.*, 383 U.S. 1, 5 (1966) (“The clause is both a grant of power and a limitation. This qualified authority, unlike the power often exercised in the sixteenth and seventeenth centuries by the English Crown, is limited to the promotion of advances in the ‘useful arts.’”).

Which is one good reason why that is not our job. Claims that a statutory precedent has “serious and harmful consequences” for innovation are (to repeat this opinion’s refrain) “more appropriately addressed to Congress.” That branch, far more than this one, has the capacity to assess Kimble’s charge that *Brulotte* [v. *Thys Co.*, 379 U.S. 29 (1964)] suppresses technological progress. And if it concludes that *Brulotte* works such harm, Congress has the prerogative to determine the exact right response – choosing the policy fix, among many conceivable ones, that will optimally serve the public interest.

Id. at 464-65 (quoting *Halliburton, Inc. v. Erica P. John Fund, Inc.*, 573 U.S. 258, 277 (2014)).

And so it is here. If Congress determines that the “inventor” of subject-matter on which patent protection is sought can be an artificial intelligence machine, it “has the prerogative to determine the exact right response” – including the identification of the precise circumstances under which an artificial intelligence machine can be an “inventor.”⁷ That is simply not the role of the canons of statutory construction and the Article III litigative process.

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⁷Plaintiff devotes nearly a quarter of his reply memorandum to an explanation of how other countries (and national consortiums) have addressed the particular policy issue raised here. *Pl. Opp.*, at 4-7. As plaintiff openly concedes, these other nation’s efforts have no bearing on the construction of the Patent Act provisions at issue in this civil action. *Id.* at 5 (“Ultimately, whether patents are granted for the application in the United Kingdom is dependent on the language of The Patents Act 1977, and principles of statutory interpretation in the United Kingdom which differ from those of the United States.”). But there is one aspect of plaintiff’s discussion that it worth noting in this regard; namely, that the European Parliament has promulgated *legislation* on this issue, *id.* at 7, demonstrating that legislative bodies are the proper forum for plaintiff’s policy arguments.

CONCLUSION

For the foregoing reasons, and those articulated in the USPTO's opening memorandum, this Court should enter summary judgment in favor of the USPTO, and deny plaintiff's motion for identical relief.

Respectfully submitted,

RAJ PAREKH
ACTING UNITED STATES ATTORNEY

By: _____/s/_____

DENNIS C. BARGHAAN, JR.
Deputy Chief, Civil Division
Assistant U.S. Attorney
2100 Jamieson Avenue
Alexandria, Virginia 22314
Telephone: (703) 299-3891
Fax: (703) 299-3983
Email: dennis.barghaan@usdoj.gov

DATE: March 24, 2021

ATTORNEYS FOR DEFENDANTS

OF COUNSEL: Meredith Schoenfeld
Peter Sawert
Associate Solicitors
United States Patent & Trademark Office

CERTIFICATE OF SERVICE

I hereby certify that on this date, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will transmit a Notice of Electronic Filing (“NEF”) to the following:

Geoffrey Alex Neri
Brown Neri Smith & Khan LLP
11766 Wilshire Boulevard, Suite 1670
Los Angeles, California 90025
geoff@bnsklaw.com

Date: March 24, 2021

_____/s/_____
DENNIS C. BARGHAAN, JR.
Deputy Chief, Civil Division
Assistant U.S. Attorney
2100 Jamieson Avenue
Alexandria, Virginia 22314
Telephone: (703) 299-3891
Fax: (703) 299-3983
Email: dennis.barghaan@usdoj.gov

ATTORNEYS FOR DEFENDANTS

IN THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF VIRGINIA
Alexandria Division

STEPHEN THALER,)	
)	
Plaintiff,)	
)	
v.)	1:20-cv-903 (LMB/TCB)
)	
ANDREW HIRSHFELD, Performing the)	
Functions and Duties of the Under Secretary)	
of Commerce for Intellectual Property and)	
Director of the United States Patent and)	
Trademark Office, <u>et al.</u> ,)	
)	
Defendants.)	

MEMORANDUM OPINION

Before the Court are the parties’ cross-motions for summary judgment, which address the core issue—can an artificial intelligence machine be an “inventor” under the Patent Act? Based on the plain statutory language of the Patent Act and Federal Circuit authority, the clear answer is no. Accordingly, Defendants’ Motion for Summary Judgment [Dkt. No. 23] will be granted and Plaintiff’s Motion for Summary Judgment [Dkt. No. 18] will be denied.¹

I. BACKGROUND

This civil action concerns two patent applications that plaintiff Stephen Thaler (“plaintiff” or “Thaler”) filed with the United States Patent and Trademark Office (“USPTO”), which were assigned U.S. Application Serial Nos. 16/524,350 (the “350 application”) and

¹ Also before the Court is a document titled as a “Motion to Take Leave to Accept Attached Amicus Curiae Memorandum Opposing MSJ” and a “Motion to Waive Fees” [Dkt. No. 27] filed pro se by Mitchell Apper (“Apper”), who “is an engineer and inventor of a portfolio of 31 inventions that make extensive use of AI and various types of machine learning and is also a registered patent practitioner.” [Dkt. No. 27] at 2. The motion will be granted and the amicus brief will be filed; however, the information in the amicus brief is not of help to the Court’s evaluation of the legal arguments in this civil action.

16/524,532 (the “532 application”) (collectively, “the Applications”).² Plaintiff filed the Applications with the USPTO on July 29, 2019. Administrative Record (“AR”) 1-96; 284-379. In his one-count complaint brought under the Administrative Procedure Act (“APA”), plaintiff alleges that the refusal of defendants Andrew Hirshfeld and the USPTO (collectively “defendants”) to process the Applications was “arbitrary, capricious, an abuse of discretion and not in accordance with the law; unsupported by substantial evidence, and in excess of Defendants’ statutory authority.” [Dkt. No. 1] ¶ 70. Plaintiff seeks an order compelling defendants to reinstate the Applications and vacate the prior decision on plaintiff’s petitions filed under 37 C.F.R. § 1.181. He also seeks “[a] declaration that a patent application for an AI-generated invention should not be rejected on the basis that no natural person is identified as an inventor”; “[a] declaration that a patent application for an AI-generated invention should list an AI where the AI has met inventorship criteria”; and an award of the costs and reasonable attorneys’ fees plaintiff incurred in this litigation. [Dkt. No. 1] ¶¶ A-E.

As a civil action brought under the APA, review of the final agency action is limited to considering the administrative record. The factual assertions made by plaintiff during the application process are taken as true. Plaintiff alleges that he “is in the business of developing and applying advanced artificial intelligence (AI) systems that are capable of generating patentable output under conditions in which no natural person traditionally meets inventorship

² Because the administrative proceedings with respect to the Applications were identical (including the dates on which pertinent events occurred), this Opinion treats the Applications collectively and provides citations to the administrative record that the USPTO has filed with respect to both Applications.

criteria,” [Dkt. No. 1] ¶ 1, and is the owner of DABUS,³ an artificial intelligence machine listed as the inventor of the ’350 application, which claimed a “light beacon that flashes in a new and inventive manner to attract attention (‘Neural Flame’),” and the ’532 application, which claimed a “beverage container based on fractal geometry (‘Fractal Container’).” Id. ¶ 15.

In the Application Data Sheets accompanying the Applications, plaintiff identified the inventor’s “given name” as “DABUS,” and under “family name” wrote “Invention generated by artificial intelligence,” identifying his own mailing address as the “mailing address of inventor.” AR 10; 299. Plaintiff also included a “Statement on Inventorship” in the Applications explaining that “[t]he unique aspects under which the instant invention was conceived prompted the inclusion of such statement in order to explain that the inventor of the subject matter of the instant invention of the present application is an AI machine, being a type of ‘creativity machine’ named ‘DABUS,’” and arguing why plaintiff thought DABUS should be considered an “inventor” under the Patent Act and the USPTO’s regulations. AR 60-65; 345-50.

Because DABUS could not execute the necessary oath or declaration that the Patent Act requires of an inventor, plaintiff included with the Applications a “Substitute Statement Under 37 CFR 1.64 in Lieu of Declaration Under 35 USC § 115(d),” which explained that the “inventor,” DABUS, was “under legal incapacity in view of the fact that the sole inventor is a Creativity Machine (i.e., an artificial intelligence), with no legal personality or capability to execute this substitute statement.” AR 26-27; 311-12. Accordingly, Thaler, as the “the Applicant and the

³ “DABUS” is an acronym for “Device for the Autonomous Bootstrapping of Unified Sentience.” [Dkt. No. 19] at 1.

Assignor of the abovementioned application, as well as the owner of said Creativity Machine, DABUS” signed the substitute statement. Id.

The Applications also included a document through which DABUS had ostensibly assigned all intellectual property rights in the claimed invention to plaintiff. That document, entitled “Assignment,” provided in pertinent part:

DABUS, the Creativity machine that has produced the below-detailed invention, as the sole inventor (represented in this assignment by its owner, Stephen L. Thaler, hereinafter called the “Assignor”), hereby assigns and transfers to:

Stephen L. Thaler
[Address Omitted]

(hereinafter called the “Assignee”), its successors, assignees, nominees, or other legal representatives, the Assignor’s entire right, title, and interest, including, but not limited to, copyrights, trade secrets, trademarks and associated good will and patent rights in the Invention and the registrations to the invention . . .

...

In view of the fact that the sole inventor is a Creativity Machine, with no legal personality or capability to execute said agreement, and in view of the fact that the assignee is the owner of said Creativity Machine, this Assignment is considered enforceable without an explicit execution by the inventor. Rather, the owner of DABUS, the Creativity Machine, is signing this Assignment on its behalf.

Similarly, DABUS, being a machine and having no legal personality, does not have the capability to receive any consideration, and therefore, Stephen L. Thaler, as its owner/representative, acknowledges the receipt and sufficiency of good and valuable consideration for this assignment.

AR 21; 310. The assignment document was signed by both “Stephen L. Thaler, On Behalf of DABUS, Assignor,” as well as “Stephen L. Thaler, Assignee.” Id.

After its initial review of the Applications, the USPTO issued plaintiff a “Notice to File Missing Parts of Non-Provisional Application,” allowing him two months to submit proper information regarding inventorship because the “application data sheet or inventor’s oath or

declaration does not identify each inventor or his or her legal name.” AR 97-98; 380-81. On August 29, 2019, plaintiff filed a petition with the USPTO Director pursuant to 37 C.F.R. § 1.181⁴ in which he asked the USPTO to vacate its “Notice to File Missing Parts,” and essentially reiterated the “Inventorship Statement” that he had submitted with the Applications arguing that DABUS should be listed as the inventor. AR 111-16; 394-99. On December 17, 2019, the USPTO issued a written decision dismissing plaintiff’s petition, in which it explained that the explicit statutory language that Congress has used to define the term “inventor”—e.g., “individual” and “himself or herself”—was uniquely trained on human beings. AR 131-33; 410-12. The USPTO also explained that the Federal Circuit had twice held that an inventor could only be a natural person. *Id.* (quoting Univ. of Utah v. Max-Planck-Gesellschaft, 734 F.3d 1315, 1323 (Fed. Cir. 2013) (“Max-Planck”); Beech Aircraft Corp. v. Edo Corp., 990 F.2d 1237, 1248 (Fed. Cir. 1993)). “Because a machine does not qualify as an inventor,” the USPTO concluded that it had “properly issued the Notice . . . noting the inventor was not identified by his or her legal name.” *Id.* The USPTO further explained the way for plaintiff to patent the inventions:

the use of a machine as a tool by natural person(s) does not generally preclude natural person(s) from qualifying as an inventor or joint inventors if the natural person(s) contributed to the conception of the claimed invention. See MPEP § 2137.01. . . . Where an application names an incorrect inventor, the applicant could submit a request to correct inventorship under 37 CFR 1.48. See MPEP § 602.01(c) et seq.; see also MPEP § 706.03(a), subsection IV.

AR 133; 412.

⁴ Pursuant to 37 C.F.R. § 1.181(a)(3), an applicant may file an administrative petition asking the USPTO Director “[t]o invoke the supervisory authority of the Director in appropriate circumstances.”

On January 20, 2020, plaintiff sought reconsideration of the USPTO's decision by filing a "Petition to the Director Under 37 CFR 1.181 – Request for Reconsideration." AR 135-46; 414-25. On April 22, 2020, the USPTO denied plaintiff's request for reconsideration in a final written decision, which plaintiff challenges in this civil action. AR 205-13; 456-64. Relying on multiple sections of Title 35 of the United States Code, the USPTO explained that "the patent statutes preclude such a broad interpretation" of "inventor" to cover machines. AR 209; 460. Additionally, although the USPTO acknowledged that the relevant Federal Circuit decisions holding that "only natural persons can be 'inventors'" were "in the context of states and corporations," it concluded that "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." AR 210; 461 (quoting Max-Planck, 734 F.3d at 1323; Beech Aircraft, 990 F.2d at 1248). The USPTO also pointed to "numerous references to the inventor as a 'person' in Title 37 of the Code of Federal Regulations," and the definition of "conception" in the Manual of Patent Examining Procedure ("MPEP") as "the complete performance of the mental part of the inventive act" and "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" as further underscoring that only a natural person may be an "inventor." AR 211; 462. The USPTO addressed plaintiff's remaining arguments, including policy considerations, and held that "they do not overcome the plain language of the patent laws as passed by the Congress and as interpreted by the courts." AR 212; 463 (citing Glaxo Ops. UK Ltd. v. Quigg, 894 F.2d 392, 399-400 (Fed. Cir. 1990) for the holding that the USPTO and courts must honor the plain meaning of the patent statutes when

Congress has spoken on an issue, and that striking policy balances when crafting legislative language is within the province of Congress).

Plaintiff filed this civil action seeking review of the USPTO's decision, and, after an agreed briefing schedule was entered, plaintiff and defendants filed their cross-motions for summary judgment without having engaged in discovery. The parties' motions have been fully briefed, and oral argument was heard on the record by teleconference due to the COVID-19 pandemic.

II. DISCUSSION

A. Standard of Review

Under the APA, 701 U.S.C. § 701, et seq., a court may only set aside a final agency action if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). An action is arbitrary and capricious if the agency “relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983). “A court reviewing the agency decision ‘must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.’” Burandt v. Dudas, 528 F.3d 1329, 1332 (Fed. Cir. 2008) (quoting Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc., 419 U.S. 281, 285 (1974)). “An abuse of discretion occurs where the decision is based on an erroneous interpretation of the law, on factual findings that are not supported by substantial evidence, or represents an unreasonable judgment

in weighing relevant factors.” Id. “The focal point for judicial review [under the APA] should be the administrative record already in existence.” SourceAmerica v. United States Dep’t of Educ., 368 F. Supp. 3d 974, 986 (E.D. Va. 2019) (alterations in original) (quoting Camp v. Pitts, 411 U.S. 138, 142 (1973)), vacated in part on other grounds by 826 F. App’x 272 (2020). Under Fed. R. Civ. P. 56(a), summary judgment is appropriate where the movant shows that there is no “genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.”

B. Analysis

The USPTO argues that its interpretation of the various provisions of the Patent Act at issue here—primarily 35 U.S.C. §§ 100 and 115—is entitled to deference pursuant to the Supreme Court’s decision in Skidmore v. Swift & Co., which accords deference to agency interpretations of statutory provisions that “constitute a body of experience and informed judgment to which courts and litigants may properly resort for guidance to the extent that those decisions have the power to persuade.” 323 U.S. 134, 140 (1944). “The weight of such a judgment in a particular case will depend upon the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control.” Id. Similarly, the Federal Circuit has held that

the Supreme Court intends for us to defer to an agency interpretation of the statute that it administers if the agency has conducted a careful analysis of the statutory issue, if the agency’s position has been consistent and reflects agency-wide policy, and if the agency’s position constitutes a reasonable conclusion as to the proper construction of the statute, even if we might not have adopted that construction without the benefit of the agency’s analysis.

Cathedral Candle Co. v. ITC, 400 F.3d 1352, 1366 (Fed. Cir. 2005).

Plaintiff argues that defendants are not entitled to Skidmore deference because defendants did not “consider alternative interpretations or statutory constructions or the constitutional imperative in rejecting the Applications,” did not “provide any evidence that Congress intended to exclude AI-[g]enerated [i]nventions from patentability,” and did “not engage with the effects of their interpretation.” [Dkt. No. 28] at 9. Plaintiff’s arguments are rejected because they attempt to add requirements for Skidmore deference that are counter to Supreme Court and Federal Circuit holdings. Contrary to plaintiff’s unsupported assertions as to inadequate consideration of “alternative interpretations,” the USPTO’s interpretation of the Patent Act was carefully considered and was consistent with the Patent Act’s language and the caselaw. The decision also explained why plaintiff’s policy arguments as to the effects of the agency’s interpretation were rejected, and the decision reached a reasonable conclusion regarding the proper construction of the statute. Plaintiff has pointed to no USPTO policies with which the decision is inconsistent. Accordingly, the USPTO’s interpretation that an “inventor” must be a natural person is entitled to deference.

Even if no deference were due, the USPTO’s conclusion is correct under the law. The question of whether the Patent Act requires that an “inventor” be a human being is a question of statutory construction. Accordingly, the plain language of the statute controls. See, e.g., Shoshone Indian Tribe v. United States, 364 F.3d 1339, 1345 (Fed. Cir. 2004). As the Supreme Court has held: “The preeminent canon of statutory interpretation requires us to ‘presume that [the] legislature says in a statute what it means and means in a statute what it says there.’ Thus, our inquiry begins with the statutory text, and ends there as well if the text is unambiguous.”

BedRoc Ltd., LLC v. United States, 541 U.S. 176, 183 (2004) (quoting Connecticut Nat. Bank v. Germain, 503 U.S. 249, 253-54 (1992)) (internal citations omitted).

Using the legislative authority provided by the Constitution’s Patent Clause, see U.S. Const. art. I, § 8, cl. 8, Congress codified the Patent Act in 1952, see Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176, 180 (1980), and has amended the Patent Act a number of times in the ensuing sixty years. In 2011, Congress promulgated the America Invents Act, which, as relevant here, formally amended the Patent Act to provide an explicit statutory definition for the term “inventor” to mean “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). The America Invents Act also added that “joint inventor” means “any one of the individuals who invented or discovered the subject matter of a joint invention.” Id. § 100(g). Additionally, Congress has required that “[a]n application for patent shall be made, or authorized to be made, by the inventor . . . in writing to the Director.” 35 U.S.C. § 111(a)(1). “[E]ach 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” which “shall contain statements that— . . . such individual believes himself or herself to be the original inventor or joint inventor of [the] claimed invention.” Id. § 115(b). An applicant may also submit a “substitute statement” to the USPTO “in lieu of” the oath or declaration:

A substitute statement under paragraph (1) is permitted with respect to any individual who—

(A) is unable to file the oath or declaration under subsection (a) because the individual—

- (i) is deceased;
- (ii) is under legal incapacity; or
- (iii) cannot be found or reached after diligent effort; or

(B) is under an obligation to assign the invention but has refused to make the oath or declaration required under subsection (a).

Id. § 115(d)(2). The “substitute statement” must also “identify the individual to whom the statement applies” as well as the circumstances triggering the exception to the oath or declaration requirement. Id. § 115(d)(3).

As the statutory language highlights above, both of the definitions provided by Congress for the terms “inventor” and “joint inventor” within the Patent Act reference an “individual” or “individuals.” 35 U.S.C. §§ 100(f)-(g). Congress used the same term—“individual”—in other significant provisions of the Patent Act which reference an “inventor,” including requiring that “each individual who is the inventor or a joint inventor” execute an oath or declaration, and permitting a substitute statement in lieu of the oath or declaration “with respect to any individual who” meets the requirements. Id. § 115(a)(1). Similarly, the oath or declaration must contain a statement that “such individual believes himself or herself to be the original inventor or joint inventor of [the] claimed invention.” Id. § 115(b)(2). Accordingly, the issue of whether an artificial intelligence machine can be an “inventor” turns on the plain meaning of the statutory term “individual.”

The Supreme Court recently conducted a statutory construction analysis regarding Congress’s use of the term “individual” in the Torture Victim Protection Act (“TVPA”), ultimately concluding that “[t]he ordinary meaning of the word, fortified by its statutory context,” referred to a “natural person[.]” Mohamad v. Palestinian Auth., 566 U.S. 449, 453-54 (2012). Although the TVPA and Patent Act concern different subject matter, the Supreme Court’s statutory analysis of the term “individual” remains applicable here. “Because the [Patent

Act] does not define the term ‘individual,’ we look first to the word’s ordinary meaning.” Id. at 454. When used “[a]s a noun, ‘individual’ ordinarily means ‘[a] human being, a person.’” Id. (quoting 7 Oxford English Dictionary 880 (2d ed. 1989)) (also citing Random House Dictionary of the English Language 974 (2d ed. 1987) (“a person”); Webster’s Third New International Dictionary 1152 (1986) (“a particular person”)). As the Supreme Court recognized, these definitions accord with “how we use the word in everyday parlance”:

We say “the individual went to the store,” “the individual left the room,” and “the individual took the car,” each time referring unmistakably to a natural person. And no one, we hazard to guess, refers in normal parlance to an organization as an “individual.” Evidencing that common usage, this Court routinely uses “individual” to denote a natural person, and in particular to distinguish between a natural person and a corporation.

Id. Similarly, the Patent Act uses the term “individual” as a noun, and therefore “‘individual’ ordinarily means ‘[a] human being, a person.’” Id. at 454. As in Mohamed, this definition is consistent with the ordinary usage of the term “individual” to refer to a human being, as artificial intelligence machines or systems are not normally referred to as “individuals” in ordinary parlance.

Relying on the Dictionary Act’s denotation of “individual” as “distinct from the list of artificial entities that precedes it,” the Supreme Court explained that “Congress does not, in the ordinary course, employ the word any differently” from its common usage. Id. (citing 1 U.S.C. § 1). The Dictionary Act applies to all congressional enactments, and similarly applies to the Patent Act. See Ngiraingas v. Sanchez, 495 U.S. 182, 190 (1990) (holding that the Dictionary Act “supplied[s] rules of construction for all legislation”). Notably, although “Congress remains free, as always, to give the word a broader or different meaning . . . before we will assume it

has done so, there must be some indication Congress intended such a result. Mohamad, 566 U.S. at 455 (emphasis in original).

Congress's use of the term "individual" in the Patent Act strengthens the conclusion that an "inventor" must be a natural person. Congress provided that in executing the oath or declaration accompanying a patent application, the inventor must include a statement 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(b)(2) (emphasis added). The Supreme Court has recognized the principle that "a word is known by the company it keeps (the doctrine of noscitur a sociis)" and that this principle is a "rule we rely upon to avoid ascribing to one word a meaning so broad that it is inconsistent with its accompanying words, thus giving 'unintended breadth to the Acts of Congress.'" Gustafson v. Alloyd Co., 513 U.S. 561, 575 (1995) (quoting Jarecki v. G.D. Searle & Co., 367 U.S. 303, 307 (1961)). By using personal pronouns such as "himself or herself" and the verb "believes" in adjacent terms modifying "individual," Congress was clearly referencing a natural person. Because "there is a presumption that a given term is used to mean the same thing throughout a statute," the term "individual" is presumed to have a consistent meaning throughout the Patent Act. Mohamad, 566 U.S. at 456. As the USPTO correctly observes, plaintiff relies on no statutory text within the Patent Act to support his argument that Congress intended to deviate from the typical use of "individual" as meaning a natural person. Instead, plaintiff argues that "[e]ven if statutory and judicial language refers to inventors as individuals, none of this has been in the context of AI-[g]enerated [i]nventions." [Dkt. No. 19] at 17. That argument does not undercut that the ordinary meaning of

the word “individual,” fortified by its statutory context, refers to natural persons, which necessarily excludes artificial intelligence machines.

This conclusion is further buttressed by the Federal Circuit’s consistent holdings that under current patent law “inventors must be natural persons.” Max-Planck, 734 F.3d at 1323; see also Beech Aircraft, 990 F.2d at 1248. In Max-Planck, the Federal Circuit evaluated whether a state was the real party in interest where a state university sued officials of another state university (but not the university itself) to correct inventorship of a patent. In holding that “a State has no core sovereign interest in inventorship,” the Federal Circuit stated that “[i]t is axiomatic that inventors are the individuals that conceive of the invention: [c]onception is the touchstone of inventorship,” and that “[t]o perform this mental act [of conception], inventors must be natural persons and cannot be corporations or sovereigns.” 734 F.3d at 1323. In Beech Aircraft, the Federal Circuit stated that a corporation “could never have been declared an ‘inventor,’ as [the corporation] was merely a corporate assignee and only natural persons can be ‘inventors.’” 990 F.2d at 1248 (citing 35 U.S.C. §§ 115–118). Although these cases did not squarely address the issue raised in this civil action, the unequivocal statements from the Federal Circuit that “inventors must be natural persons” and “only natural persons can be ‘inventors’” support the plain meaning of “individual” in the Patent Act as referring only to a natural person and not to an artificial intelligence machine. Max-Planck, 734 F.3d at 1323; Beech Aircraft, 990 F.2d at 1248.

Having neither facts nor law to support his argument, plaintiff’s main argument is that policy considerations and the general purpose of the Constitution’s Patent Clause and the Patent

Act require that the statute be read to encompass artificial intelligence machines as “inventors.”

Plaintiff argues that:

Allowing patents for AI-Generated Inventions will result in more innovation. It will incentivize the development of AI capable of producing patentable output by making that output more valuable. . . . Patents also incentivize commercialization and disclosure of information, and this incentive applies with equal force to a human and an AI-Generated Invention. By contrast, denying patent protection for AI-Generated Inventions threatens to undermine the patent system by failing to encourage the production of socially valuable inventions.

Patent law also protects the moral rights of human inventors and listing an AI as an inventor where appropriate would protect these human rights. . . . [I]t will discourage individuals from listing themselves as inventors without having contributed to an invention’s conception merely because their name is needed to obtain a patent. Allowing a person to be listed as an inventor for an AI-Generated Invention would not be unfair to an AI, which has no interest in being acknowledged, but allowing people to take credit for work they have not done would devalue human inventorship.

[Dkt. No. 19] at 11-12. Accordingly, plaintiff argues that the Court should seek to give effect to Congress’s intent “to create a system that would encourage innovation, as well as to promote disclosure of information and commercialization of new technologies.” *Id.* at 12. Plaintiff provides no support for his argument that these policy considerations should override the plain meaning of a statutory term. Moreover, the Supreme Court has held that there must be “some indication” that Congress intended a particular provision to be one of the “rare statute[s]” that contains a different meaning for the term “individual.” *Mohamad*, 566 U.S. at 455 (emphasis in original). Accordingly, plaintiff’s position that the USPTO must “provide . . . evidence that Congress intended to prohibit patents on AI-[g]enerated [i]nventions” has the burden exactly backwards. [Dkt. No. 28] at 12.

The Supreme Court and Federal Circuit have explicitly held that policy considerations cannot overcome a statute’s plain language, and that “[m]atters of policy are for Congress, not

the courts, to decide.” Fisons PLC v. Quigg, 876 F.2d 99, 101 (Fed. Cir. 1989)⁵; Sandoz Inc. v. Amgen Inc., 137 S. Ct. 1664, 1678 (2017) (“Even if we were persuaded that Amgen had the better of the policy arguments, those arguments could not overcome the statute’s plain language, which is our ‘primary guide’ to Congress’ preferred policy.”); see also Kimble v. Marvel Entm’t, LLC, 576 U.S. 446, 463-64 (2015) (holding that, although one litigant “also [sought] support from the wellspring of all patent policy: the goal of promoting innovation[,] . . . [c]laims that a statutory precedent has serious and harmful consequences for innovation are (to repeat this opinion’s refrain) more appropriately addressed to Congress”).

In response to plaintiff’s accusations that the USPTO has not considered the policy ramifications of its decision that an artificial intelligence machine cannot be an “inventor,” the USPTO represents that it “continues to study the impact of artificial intelligence on current patent regulations, and has engaged the public-at-large in a conversation on the subject.” [Dkt. Nos. 24, 25] at 21 n.10. Specifically, the USPTO points to a conference on artificial intelligence policy it held in January 2019, and to requests for public comment “on a whole host of issues related to the intersection of intellectual property policy and artificial intelligence” it issued in August and October 2019. In October 2020, the USPTO issued a comprehensive report on those

⁵ Specifically, the Supreme Court held:

Fisons makes what can only be characterized as a “policy argument” pointing to statements of lofty goals indicating that Congress broadly sought to encourage pharmaceutical innovation by enacting the 1984 Act. . . . It is irrelevant, however, that we might agree with Fisons that, as a matter of policy, Congress might better achieve its goals through a more liberal grant of patent term extension benefits. Matters of policy are for Congress, not the courts, to decide.

Fisons PLC v. Quigg, 876 F.2d 99, 101 (Fed. Cir. 1989).

comments. Id. (citing Public Views on Artificial Intelligence and Patent Policy, available at https://www.uspto.gov/sites/default/files/documents/USPTO_AI-Report_2020-10-07.pdf (visited August 31, 2021)). Many commentators disagreed with plaintiff’s view that artificial intelligence machines should be recognized as inventors—for example, the report found general themes among the comments that:

The majority of public commenters, while not offering definitions of [artificial intelligence (“AI”)], agreed that the current state of the art is limited to “narrow” AI. Narrow AI systems are those that perform individual tasks in well-defined domains (e.g., image recognition, translation, etc.). The majority viewed the concept of artificial general intelligence (AGI)—intelligence akin to that possessed by humankind and beyond—as merely a theoretical possibility that could arise in a distant future.

Based on the majority view that AGI has not yet arrived, the majority of comments suggested that current AI could neither invent nor author without human intervention. The comments suggested that human beings remain integral to the operation of AI, and this is an important consideration in evaluating whether IP law needs modification in view of the current state of AI technology.

Id. at ii-iii; see also id. at 6.

Additionally, the USPTO points to the fact that, contrary to plaintiff’s assertion that the “statutes relied upon by Defendants were passed long before AI-[g]enerated [i]nventions were a reality” and that if Congress had contemplated this artificial intelligence issue, it would have included artificial intelligence machines within the definition of “inventors”; Congress defined an “inventor” as an “individual” through the America Invents Act in 2011, when artificial intelligence was already in existence. See Pub. L. 112-29, § 3(a), 125 Stat. 285 (Sept. 16, 2011); see also H.R. Rep. No. 112-98 (June 1, 2011), available at 2011 U.S.C.C.A.N. 67, 67.

Accordingly, plaintiff’s policy arguments do not override the overwhelming evidence that Congress intended to limit the definition of “inventor” to natural persons. As technology evolves,

there may come a time when artificial intelligence reaches a level of sophistication such that it might satisfy accepted meanings of inventorship. But that time has not yet arrived, and, if it does, it will be up to Congress to decide how, if at all, it wants to expand the scope of patent law.

III. CONCLUSION

For the reasons stated above, Defendants' Motion for Summary Judgment [Dkt. No. 23] will be granted, Plaintiff's Motion for Summary Judgment [Dkt. No. 18] will be denied, and Apper's Motion to Take Leave to Accept Attached Amicus Curiae Memorandum Opposing MSJ and Motion to Waive Fees [Dkt. No. 27] will be granted by an Order to be issued with this Memorandum Opinion.

Entered this 2ND day of September, 2021.

Alexandria, Virginia

lsl 

Leonie M. Brinkena
United States District Judge

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA**

Alexandria Division

Stephen Thaler)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 1:20cv903
)	
)	
Andrei Iancu, et al)	
)	
Defendant.)	

JUDGMENT

Pursuant to the order of this Court entered on September 2, 2021 and in accordance with Federal Rules of Civil Procedure 58, JUDGMENT is hereby entered in favor of the Defendants and against the Plaintiff.

FERNANDO GALINDO, CLERK OF COURT

By: _____ /s/
D. Van Metre
Deputy Clerk

Dated: 09/02/2021
Alexandria, Virginia