



The Indian Journal for Research in Law and Management

Open Access Law Journal – Copyright © 2024

Editor-in-Chief – Dr. Muktai Deb Chavan; Publisher – Alden Vas; ISSN: 2583-9896

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THALER v. COMPTROLLER- GENERAL OF PATENTS, DESIGNS AND TRADEMARKS:

A Case Analysis of whether AI can be an inventor or not?

Abstract

The case of Thaler v. Comptroller-General of Patent, Designs and Trademarks presented a significant legal challenge to the United Kingdom Supreme Court regarding the eligibility of Artificial Intelligence (AI) to be recognized as an inventor under the Patents Act of 1977. This research paper provided a comprehensive analysis of the case, examining the facts, background, and proceedings leading up to the judgement delivered by the Supreme Court. The paper scrutinizes the provisions under scrutiny, particularly Section 7 and Section 13 of the UK Patents Act 1977, which address the right to apply for and obtain a Patent, as well as the right to be mentioned as an inventor and provide information to the UK Intellectual Property Office. The judgment's analysis focuses on the scope and meaning of "inventor" in the 1977 Act, the ownership of inventions created by AI, and the decision of the Hearing Officer regarding the withdrawal of the patent applications. This case analysis sheds light on the complex legal questions surrounding AI-generated inventions and their recognition within the existing patent framework.

Keywords: Artificial Intelligence, Patent, Inventor, Machine, Invention, etc.

INTRODUCTION

Not long ago in March 2023, the Supreme Court of The United Kingdom (UKSC) was presented with an appeal of a distinct character before a bench of five judges and in December of the same year the judgment was given out. What makes the judgment of *Thaler v. Comptroller- General of Patents, Designs and Trademarks*¹ special and of distinctive character is that it dealt with the issue of whether any invention generated by a machine powered by Artificial Intelligence (AI) can be declared the

¹ [2023] UKSC 49

‘inventor’ of any such invention under the Patents Act of 1977. The judgment was conjointly delivered by Lord Hodge, Deputy President, Lord Kitchin, Lord Hamblen, Lord Legatt, Lord Richards.

- **CASE NAME:** Thaler v. Comptroller- General of Patents, Designs and Trade Marks
- **COURT:** United Kingdom Supreme Court
- **BENCH:** Lord Hodge, Lord Kitchin, Lord Hamblen, Lord Richards
- **DECIDED ON:** 20th December 2023
- **STATUTE INVOLVED:** Section 7 and 13 of the UK Patents Act 1977, Patent Rules of 2007

FACTS & BACKGROUND OF THE CASE

1. On 17th October 2018, Dr. Thaler filed a patent application for a new food or beverage container (UK Patent Application GB1816909.4). On 7th November 2018, Dr thaler filed another patent application for a new light beacon and emergency attention method (UK Patent Application GB1818161.0). Both the applications were made under the 1977 Act and did not designate a human inventor.
2. The request for grant forms accompanying the applications states that Dr Thaler was not the inventor of the described inventions. This is because it is common for a person who is not an inventor to apply for a patent, for reasons such as being the employer of the inventor or successor in title of the inventor.
3. The UK Intellectual Property Office (UKIPO) responded to Dr. Thaler’s applications with letters on 19th and 27th November, 2018 respectively, requesting further information. The UKIPO notified Dr Thaler that he needed to file a statement of inventorship, identifying the inventor(s) and explaining how he derived the right to patent. Dr Thaler was required to file these statements within sixteen months of the filing date.
4. On 23rd July 2019, Dr Thaler filed statements of inventorship for each application, stating that the inventions were created by the AI of a machine called DABUS and that he owned the machine.
5. On 8th August 2019, the UKIPO informed Dr Thaler that he had not complied with the requirements of the 1977 Act because he failed to identify believed to be the inventor and explain how he derived the right to apply for the patent. Dr Thaler was then asked to file replacement forms that met the requirements of the 1977 Act, with the warning that failure to do so would result in the applications being considered withdrawn.

6. In a letter dated 28 August 2019, Dr Thaler's patents attorney, Mr. Robert Jehan, argued that the original forms had been filed correctly and met the requirements. Mr. Jehan stated that the inventor's mention was a procedural requirement and enclosed an amended form naming DABUS as the inventor. Subsequently he requested a hearing if the objection was maintained.

PROCEEDINGS

Before the appeal came before the hon'ble Supreme Court, the following proceedings were undertaken:

1. The objection to Dr. Thaler's patent applications was upheld, and a hearing took place on November 14, 2019. The Hearing Officer determined that DABUS, the machine mentioned as the inventor, did not qualify as a person under the 1977 Act and therefore could not be considered an inventor. The Hearing Officer further concluded that DABUS had no rights to transfer, and Dr Thaler was not entitled to the grant of a patent based on his ownership of DABUS. As a result, the applications were deemed withdrawn at the end of the sixteen- month period specified by rule 10 (3).
2. Dr Thaler appealed the decision to the High Court, but the appeal was dismissed on September 21, 2020. The Court found that Dr Thaler was not the inventor, and his argument for entitlement to the patents was without merit. A subsequent appeal to the Court of Appeal was also dismissed on September 21, 2021. The majority of the court held that DABUS could not be considered an inventor under the 1977 Act, and Dr Thaler had failed to identify the inventor or provide a valid basis for his claim to the patents.
3. Briss LJ, while agreeing that DABUS was not an inventor, found that Dr. Thaler had complied with the requirements of the 1977 Act by identifying DABUS as the inventor and asserting his ownership of the machine. Briss LJ believed that the fact that the inventor was a machine did not prevent the grant of a patent to Dr Thaler and would have allowed the appeal. The statutory scheme governing the right to apply for and secure a patent for an invention under the 1977 Act will be further explored in the subsequent analysis.

PROVISIONS UNDER SCRUTINY

❖ Section 7- *The right to apply for and obtain a patent*

The Section 7 of the 1977 Act establishes the right to apply for and obtain a patent. It defines the categories of individuals who can be granted a patent and establishing the presumption of

entitlement for the applicant(s) making the application. The provision ensures that the inventor, joint inventors, successors in title, or individuals with specific legal rights are recognized as the rightful recipients of a patent.

Sub-section (1) states that any person, either alone or jointly with another, may make an application for a patent. This means that individuals or groups of individuals have the right to seek patent protection for their inventions.

Sub-section (2) outlines the criteria for granting a patent. The primary right to a patent belongs to the inventor or inventors of the invention (*Section 7 (2)(a)*). However, if there are circumstances specified by law, foreign law, treaties, international conventions, or agreements made with the inventor before the invention's creation, another person or persons may be granted the patent (*Section 7 (b)*). Additionally, the successor(s) in title to the inventor or another person mentioned in clause (a) or (b) can also be granted the patent (*Section 7 (2)(c)*). The provision emphasizes that the patent can only be granted to these specific individuals or entities and not to any other person.

Sub-section (3) defines the terms "inventor" and "joint inventor". An inventor is the actual deviser of the invention, and a joint inventor is construed accordingly. This clarifies that an inventor is the person who came up with the invention's conception in collaboration with others.

Sub-section (4) established a presumption regarding the entitlement to be granted a patent. It states that unless proven otherwise, the person who makes the patent application is considered to be the individual entitled to receive the patent under sub-section (2). Similarly, if two or more person jointly make the application, they are presumed to be the entitled parties.

❖ **Section 13: *The right to be mentioned as inventor, and the provision of information by the applicant***

Section 13 of the 1977 Act addresses the right of the inventor to be mentioned as such in any patent granted for the invention and imposes an obligation on the applicant for a patent to provide certain information to the UK Intellectual Property Office (UKIPO).

Sub-section (1) establishes the right of the inventor or joint inventors to be mentioned as such in any patent granted for the invention. It also provides the right to be mentioned, if possible, in any published patent application for the invention. If the inventor or inventors are not mentioned, they have the right to be mentioned in accordance with the rules specified in a prescribed document. This subsection emphasizes the importance of recognizing the contribution of the inventor(s) by mentioning them in the patent and patent application.

Sub-section (2) imposes an obligation on the applicant for a patent to provide specific information to the UKIPO. The applicant must, within the prescribed period, file a statement with the UKIPO that includes the following information:

- a. Identification of the person or persons believed to be the inventor(s).
- b. If the applicant is not the sole inventor or the applicants are not the joint inventors, an indication of the derivation of their right to be granted the patent. Failure to provide this information within the prescribed period will result in the application being considered withdrawn. This requirement ensures that the UKIPO has the necessary information regarding the inventorship of the invention.

Sub-section (3) allows any person who believed that a person mentioned as the sole or joint inventor should not have been mentioned to apply to the comptroller (an official in charge of granting patents) for a certificate to that effect. The comptroller has the authority to issue such a certificate if warranted. If a certificate is issued, the comptroller must rectify any undistributed copies of the patent and any prescribed documents that mention the inventor(s) accordingly. This provision provided a mechanism for challenging the inventorship attribution in a patent.

ISSUES RAISED

1. The scope and meaning of “inventor” in the 1977 Act
2. Was Dr Thaler nevertheless the owner of any invention in any technical advance made by DABUS and entitled to apply for and obtain a patent in respect of it?
3. Was the Hearing Officer entitled to hold that the applications would be withdrawn?

ANALYSIS OF THE JUDGMENT

ISSUE 1: Scope and meaning of “inventor” under the 1977 Act

While conducting a thorough analysis of the issue at hand, namely the scope and meaning of the term “inventor” in the 1977 Act, it becomes evident that the prevailing interpretation excludes machines such as DABUS from being recognized as inventors. This conclusion is supported not only by the Comptroller but also by every Lord Justice who sat on the bench hearing the appeal.

The essence of Dr Thaler’s argument has been that the technical advancements and novel products disclosed in the patent applications were conceived by DABUS, and AI machine. Dr Thaler asserts that DABUS autonomously generated these innovations using artificial intelligence (AI). While the Comptroller accepts the factual basis of Dr Thaler’s claims for the purposes of these proceedings, it has constantly rejected the notion that DABUS qualifies as an inventor within the framework of the 1977 Act.

Kitchin LJ found himself in agreement with the Comptroller’s stance on this issue. The analysis of the structure and content of Sections 7 and 13 of the Act, both in isolation and in the broader context of the legislation, leads to a single interpretation: an inventor, as understood within the 1977 Act, must be a *natural person*. DABUS, being a machine, lacks personhood altogether and cannot be classified as a natural person.

This interpretation aligns with the overall framework established in Section 7. It allows any individual, including legal entities such as corporate employees, to submit a patent application. Nonetheless, the primary recipient of a patent is the inventor. However, in certain circumstances, a patent may be granted to a person or persons specified in Section 7(2)(b), or to the successor or successors in title of any person mentioned in Section 7(2)(a) or (b), as outlined in Section 7(2)(c). While these persons need not necessarily be natural persons, they must possess legal personality.

The decision of the House of Lords in the *Yeda Research Case*², reinforces the notion that the determination of entitlement to a patent necessitates establishing the inventor or inventors of the claimed invention. Lord Hoffman, in his remarks, concurs that the inventor, as defined in Section 7 (3), is an individual who conceived the inventive concept. This aligns with the statement made by Laddie J in *University of Southampton’s Applications*³. Identifying the inventorship requires a careful

² *Yeda Research and Development Company Ltd. v. Rhone-Poulenc Rorer Intl. Holdings Inc & Others* [2007] UKHL 43
³ [2004] EWHC 2107 (Pat);

assessment of the evidence presented by the parties regarding the nature of the inventive concept and the contributions made by individuals involved.

Additionally, Section 13 of the Act reinforces the requirement for an inventor to be a person. Section 13 (1) grants the inventor the right to be mentioned, and Section 13(2) obliges the applicant to identify the person or persons believed to be inventor or inventors. These provisions do not contemplate a machine being recognized as an inventor.

Taking all these considerations into account, Kitchin LJ state that the interpretation that an inventor must be a natural person is grounded in the structure and content of the 1977 Act, as well as the broader legal framework surrounding patent entitlement. While DABUS may have helped play a significant role in generating the technical advances described in the patent applications, it does not possess the legal status of a person and cannot fulfill the requirements of an inventor as defined in the Act.

ISSUE 2: Was Dr Thaler nevertheless the owner of any invention in any technical advance made by DABUS and entitled to apply for and obtain a patent in respect of it?

In this analysis, the issue at hand is whether Dr Thaler, as the owner of the DABUS machine, is entitled to apply for and obtain a patent for any technical advances made by DABUS and described in the patent applications. The court discusses two significant difficulties faced by Dr Thaler in making this claim.

The first difficulty is that DABUS, being a machine without legal personality, does not meet the definition of an inventor under the 1977 Act. The court emphasizes that this is not merely a formal objection but goes to the core of the patent system, which grants a monopoly for an invention. The 1977 Act requires that there be an inventor who is a person, and DABUS does not fulfill this requirement.

The second difficulty is that Dr Thaler, even if not considering DABUS as the inventor, does not have an independent right to obtain a patent for any technical advances made by the machine. The court highlights that Section 7 of the 1977 Act provides a complete code for the right to apply for and obtain a patent. The applicant must be a person falling within the specified categories, such as being entitled to the whole of the property in the invention or being the successor in title. Dr Thaler does not satisfy any part of this code.

Dr Thaler argues that he should be entitled to file applications and obtain patents based on his ownership of DABUS. However, the court found this argument to be without merit and failing to

address the underlying issues. Section 7(2)(a) of the Act requires there to be an inventor who is a person, and DABUS does not fulfill this requirement.

Dr Thaler further argues that an invention is a kind of property, and the 1977 Act recognizes property in inventions, which can be transferred. He relies on provisions such as Section 39 that deal with the ownership of inventions made by employees or employers. However, the court disagrees with this interpretation, stating that Dr Thaler has not identifies any basis in law that would grant him the right to apply for an obtain a patent through ownership of DABUS.

The court rejects Dr Thaler's reliance on the doctrine of accession, which concerns tangible property produced by existing tangible property. The court explains that the doctrine of accession does not apply to the situation at hand, where the inventions in question are conceptions for new and non-obvious devices and methods generated autonomously by DABUS.

Ultimately, the court determines that Dr. Thaler has never had the right to secure patents for the technical developments made by DABUS. The hon'ble Supreme Court agrees with reasoning of Court of Appeal on this matter.

ISSUE 3: Was the Hearing Officer entitled to hold that the applications would be taken to be withdrawn?

With the third and the last issue at hand, we delve into whether the Hearing Officer for the Comptroller was justified in deeming the patent applications withdrawn due to non-compliance with Section 13 of the 1977 Act. The court's contention was that the Hearing Officer was indeed entitled to reach this conclusion.

Section 13 of the 1977 Act lays out several pertinent requirements that must be met in a case such as this, and it becomes evident that Dr Thaler failed to fulfill any of them. Firstly, he neglected to identify any individual or individuals whom he believed to be the inventors of the inventions described in the applications. Curiously, he did not provide any names or even offer a general description of the persons involved. The Court noted that this is not a case where Dr Thaler was genuinely mistaken or unable to identify the actual inventor; he simply chose to proceed on the basis that the inventions were made by DABUS, an AI-powered machine acting autonomously. However, the court reaffirmed that DABUS, being a machine, cannot be considered an inventor under the 1977 Act.

Secondly, the court considers whether Dr Thaker satisfied Section 13(2)(b) of the Act, which requires indicating the derivation of the right to be granted the patent when relying on DABUS as the inventor. Th court found that Dr Thaler failed to meet this requirement as well. While the UK Intellectual

Property Office (UKIPO) does not have the function of investigating the correctness of an applicant's indication of the derivation of their right to be granted a patent, the court clarifies that the UKIPO has the power to intervene if the indication is obviously defective or insufficient. In this case, Dr Thaler asserted that his ownership of DABUS was sufficient, but the court disagreed and concluded that owning DABUS does not provide a proper basis for accepting the application.

As a result, the court determined that Dr Thaler did not satisfy the requirements of Section 13(2) of the Act. Consequently, the court disagreed with the reasoning of Briss LJ (Court of Appeals), who arrived at a different conclusion. The bench stated that the applications must be considered withdrawn as prescribed by Section 13(2) when the applicant fails to file a statement within the relevant period identifying the inventor or inventors or indicating the derivation of the right to be granted the patent, as in the case here.

Thus, the court held that the Hearing Officer was justified in ruling that the applications would be taken to be withdrawn due to a failure to satisfy the requirements of Section 13 of the 1977 Act.

CONCLUSION

It is important to acknowledge the rapid advancements made in the technological sector and the increasing role of AI systems in different varying fields, including innovation. However, the question of whether machines should be recognized as inventors under patent law is a complex and evolving one. It raised fundamental questions about the nature of creativity, responsibility, and legal rights. These are matters that require careful consideration and possibly legislative intervention to ensure that patent law keeps pace with technological advancements while preserving the intended framework of inventorship.

Henceforth, the interpretation that a natural person is the only entity that can be recognized as an inventor under the 1977 Act is consistent with the legislative intent and the legal framework surrounding patent entitlement. While machines like DABUS may contribute to the generation of innovative ideas, they do not possess the legal status and attributes necessary to meet the requirements of an inventor. The determination of entitlement to a patent must remain firmly rooted in the contributions and creative endeavors of natural persons.