THE PATENTSACT,1970

(AS AMENDED)

SECTION15

202017019068 **"FOOD CONTAINER AND DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION"**	
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INVENTOR(s)	**DABUS** **(DEVICE FOR THE AUTONOMOUS BOOTSTRAPPING OF UNIFIED SENTIENCE)**

1. The present patent application relates to *"a food container that 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 application was filed on 05.05.2020 and originally contained twenty (20) numbers of claims.

2. The application was examined under Sections 12 and 13 of the *Patents Act, 1970* (as amended), and a First Examination Report (hereinafter "FER") was issued on 26.10.2021.

3. The FER issued on 26.10.2021 contained the standard objections under the Patents Act, 1970, including lack of novelty under Section 2(1)(j), lack of inventive step under Section 2(1)(ja), non-compliance with unity of invention under Section 10(5), and indefiniteness of the claims.

   In addition to the aforesaid statutory objections, it is further noted that the present application is unique in that the named inventor is "DABUS" (DEVICE FOR THE AUTONOMOUS BOOTSTRAPPING OF UNIFIED SETTIENCE), an artificial intelligence system. As the existing legal framework under the Patents Act, 1970 permits only natural persons to be recognised as inventors, the indication of an AI-based non-human entity as an inventor is not permissible under the Act and the corresponding Rules. Accordingly, an additional objection pertaining to the non-compliance with the statutory requirement of a natural person as inventor was raised as follows:

   > **"***The present application cannot be proceed for the formal and technical examination because that the true and first inventor of the invention is artificial intelligence (Device for the Autonomous Bootstrapping of Unified Sentience), which is not a person as per section 2 and section 6 of The Patent Act 1970.***"**

4. Thereafter, the agent for the applicant filed a detailed response to the FER on 25.07.2022 accompanied by amended Claims 1–9.

5. Pursuant to the Applicant's request for extension of time filed through Form-4 dated 21.04.2022, the period for filing the response to the FER was extended by a further three (03) months in accordance with sub-rule (6) of Rule 24B of the Patents (Amendment) Rules, 2016. Consequently, the extended due date for submitting the response to the FER stood revised to 03.12.2022.

6. Thereafter, a hearing was offered under section 14 of the Indian Patents Act, the intimation of said hearing (hearing notice) was sent to the applicant's agent vide e-mail dated 12.12.2025, wherein certain objections in the FER as regards to the lack of inventive step under Section 2(1)(ja), objection on inventorship under section 6, 7, 10 of the Patents Act were maintained with the following detailed reasoning and analysis:

INVENTIVE STEP — SECTION 2(1)(JA)

7. The requirement communicated in the paragraph titled *"Inventive Step"* of this Office letter dated 26.10.2021 has not been met. The observations of the Applicant have been duly considered; however, the submissions and the accompanying amendments are not satisfactory to overcome the objection for the following reasons:

APPLICANT'S SUBMISSIONS

The First Examination Report (FER) dated 26.10.2021 raised, inter alia, an objection that the claimed subject-matter lacks an inventive step under Section 2(1)(ja) of the Patents Act, 1970. The FER relies upon documents D1 (DE 10004386), D2 (JP 2017505736) and D3 (US 5803301).

The Applicant submitted amended claims 1-9 (Claims 10-20 are deleted) along with the following argument:

- D1 discloses only specific part-cylindrical abutment surfaces and a wall of non-uniform thickness and therefore does not disclose a fractal profile or the uniform thickness. Moreover, there is no disclosure of the container being flexible to provide for coupling and uncoupling in the manner provided by claim 1 of the present invention.

- D2 does not have a generally cylindrical form with a top or a base, either end of the generally cylindrical wall nor is their disclosure that the wall is flexible to permit coupling and uncoupling of a variety of containers together, like the present invention.

- D3 discloses the formation of projections on the inner surface of a resin layer that coats the inside surface of the metal wall of the 5 container. This is described, in column 4 lines 52-60, and throughout the remainder of the description. In column 5, lines 16 and 17, it is acknowledged that the inner resin layer varies in thickness, while in column 6, lines 22 and 23 that the projections must have a bot shape, with examples being given in column 8, lines 11-15, all of which are regular shapes and cannot be described as being fractal. This cited art therefore not relevant to the claims of the present invention as it does not disclose a wall having a fractal profile with corresponding convex and concave fractal elements on the 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 of claim 1.

Therefore, the Applicant submits that none of the documents D1-D3 either alone or in combination disclose the features as recited in independent claim 1 of the present application. In view of the above facts, it would not be obvious for a person skilled in the art to obtain the technical solution of independent claim 1 by referring to the cited documents D1-D3 either alone or in combination. Hence, it is submitted that amended independent claim 1 is novel and inventive over cited documents D1- D3.

CONTROLLER OBSERVATIONS

8. The statutory test for inventive step requires examination of whether the claimed subject-matter is obvious to a person skilled in the art in light of the prior art as a whole. The assessment follows the established problem-solution approach*: identify the closest prior art, ascertain the distinguishing features and the technical effect produced thereby, define the objective technical problem, and determine whether the skilled person*, starting from the closest prior art and having regard to common general knowledge and other cited documents, would have arrived at the claimed solution in an obvious manner.

Document D1 is considered as closest prior art disclosing a cylindrical container having strip-like shapes with oppositely curved, partially cylindrical stop surfaces (part-cylindrical abutment surfaces). D1 thus discloses a container wall provided with raised/ recessed formations that cooperate for abutment/engagement purposes. Although D1's specific geometry is not described as "fractal", the presence of corresponding concave/convex inter-engaging formations on inner/outer surfaces directed to mechanical coupling is a relevant teaching.

D2 discloses containers with peripheral features such as annular flanges, collars and groove/thread arrangements for engagement; D3 discloses projections on an inner resin layer and variations in layer thickness. Taken together these documents demonstrate established design choices and technical options for producing inter-engaging surfaces, projections and surface-profile modifications in container technology.

A person skilled in the art seeking to provide containers that can couple and de-couple would properly look to known solutions such as complementary convex/concave profiles (D1), annular flanges/threads/grooves for engagement (D2) and projections or textured resin layers (D3). The combination of these teachings to arrive at a container having complementary pits and bulges and flexible walls able to inter-engage is a credible and obvious design path. There is no persuasive evidence in the Applicant's reply of a technical prejudice which would have deterred the skilled person from combining these known features, nor is there quantitative data showing an unexpected

synergistic effect.

Starting from D1 and having regard to the teachings of D2 and D3, would have been able to arrive at the claimed combination by applying routine design considerations and known material choices to achieve a container that mechanically couples and decouples with complementary surface features. Consequently, the inventive step objection under Section 2(1)(ja) is sustained in respect of independent Claim 1 as presently drafted.

Claims 2–9 are dependent on Claim 1 and recite alternative/particular forms of pits, bulges, adhesives, materials etc. Given that Claim 1 is held to lack inventive step for the reasons set out above, the dependent claims that do not introduce an independent non-obvious technical contribution must also fall with Claim 1. The Applicant has not shown that any dependent claim recites a distinct technical feature producing an unexpected effect. Therefore the inventive step objection is also maintained against the dependent claims.

OTHER REQUIREMENTS

9. The Applicant acknowledges the objection that the named inventor, *Device for the Autonomous Bootstrapping of Unified Sentience (DABUS)*, constitutes an artificial intelligence system and therefore does not fall within the statutory definition of a "person" under Sections 2(1)(s) and 6 of the Patents Act, 1970.

However, the Applicant reiterates that DABUS is the "true and first deviser" of the invention and asserts that no natural person qualifies as an inventor in this case. The Applicant further relies on various foreign legal precedents, policy documents, and recommendations including Report No. 161 of the Rajya Sabha (2021 regarding the Review of the Intellectual Property Rights Regime in India (presented to the Rajya Sabha on 23rd July 2021)[3], which recognized the importance of AI-based invention and submitted that:

> *"As regards the economic impact of AI, the Committee was informed that an Accenture research report had estimated that the benefits from AI related innovations, if drawn in an optimal manner, would add USD 957 billion by 2035 to the Indian economy.* ***However, in order to extract benefits from AI, revisiting of IPR legislations and implementing a strong IPR framework is desirable****."*

Applicant further submitted that this report has the following point, which recommends a separate category for the protection of AI-based inventions as IPRs (please refer to report 161 pages 30-31) (provided below for ease).

"*The Committee notes that the relevance and utility of cutting edge technologies such as Artificial Intelligence (AI) and machine learning would increase manifold in the present world especially in the times of Covid-19 pandemic wherein the digital applications are playing a crucial role in responding to the crisis. Moreover, the huge benefits of AI and its applications in India's revenue generation and economy as well as its impact on technological innovation necessitate its expansion in a secured manner. In view of this, the Committee recommends that a separate category of rights for AI and AI related inventions and solutions should be created for their protection as IPRs. It further recommends that the Department should make efforts in reviewing the existing legislations of The Patents Act, 1970 and Copyright Act, 1957 to incorporate the emerging technologies of AI and AI related inventions in their ambit*."

10. The submissions made by the Applicant in response to the objection on inventorship have been duly considered. However, the same are not found persuasive for the reasons set out below:

10.1 Section 6 of the Patents Act, 1970 clearly stipulates that a patent application may be filed only by:

(a) a *person* claiming to be the true and first inventor;
(b) a *person* being the assignee of such true and first inventor; or
(c) the *legal representative* of a deceased true and first inventor.

The statutory language expressly contemplates an inventor who is a natural person capable of possessing legal rights, assigning such rights, and being represented after death. An artificial intelligence system, such as DABUS, does not fall within any of the recognised categories under Section 6 and therefore cannot be the origin point of a valid patent application.

10.2 Section 7(2) and 7(3), read with Section 10(6), mandate the filing of:

(a) proof of right to make the application.
(b) a declaration as to inventorship, and

These statutory requirements necessarily involve providing particulars such as *nationality, address, and signature* of the inventor, as well as a valid executed assignment where applicable. A machine or artificial intelligence system is inherently incapable of executing a declaration, possessing legal attributes, or transferring rights. Thus, DABUS cannot fulfill the mandatory statutory requirements under Section 7.

10.3 While Section 2(1)(y) refers to an "importer" or a "person to whom the invention is communicated," the contextual interpretation of this provision when read harmoniously with Sections 6 and 7 makes it evident that the term "inventor" presupposes a human actor. The provisions concerning assignment, legal representation, and execution of declarations necessarily imply human inventorship and exclude machines or autonomous systems.

10.4 The Patents Act recognises non-natural persons only when expressly provided (e.g., "Government" being included within the definition of "person" under Section 2(1)(s)). No analogous statutory extension exists for machines, AI systems, algorithms, or technological constructs. In absence of explicit legislative recognition, DABUS cannot be treated as:

(a) a "person,"

(b) an "inventor," or

(c) a holder or source of legal rights capable of assignment.

10.5 Section 2(1)(ja) requires that inventive step be assessed from the standpoint of a *person skilled in the art*. This again presupposes that the inventive act originates from a human mind capable of technical judgments. The statutory framework does not envisage an assessment of inventive activity purportedly originating from an autonomous machine or non-human entity.

Accordingly, for the foregoing reasons, the objection regarding the naming of DABUS as the inventor is sustained. The Applicant's response does not overcome the statutory bar under Sections 2(1)(y), 6, 7, and 10 of the Patents Act, 1970.

Proof of Right

11. Section 7(2)–(3) requires:

(a) documentary proof of assignment or derivation of rights, and

(b) a verified declaration of inventorship

No such compliant documentation exists or can exist when the purported inventor is a machine. The PCT Rule 4.17(ii) declaration is not a substitute for mandatory requirements under the Indian Act.

12. In response to the Hearing Notice dated 12.12.2025, the agent for the Applicant filed a request for adjournment on 09.01.2026 under Rule 129A of the Patents Rules, 2003.

13. Upon consideration of the adjournment request dated 09.01.2026, the hearing was adjourned. Subsequently, an intimation of the adjourned hearing (Hearing Notice) was issued to the applicant's agent vide e-mail dated 12.01.2026.

14. In response to the Hearing Notice dated 12.01.2026, the agent for the Applicant filed a request for adjournment on 09.02.2026 under Rule 129A of the Patents Rules, 2003.

15. Upon consideration of the adjournment request dated 09.02.2026, the hearing was adjourned. Subsequently, an intimation of the adjourned hearing (Hearing Notice) was issued to the applicant's agent vide e-mail dated 10.02.2026.

16. In reference to the hearing notice dated 10.02.2026 and a Hearing under Section 14 of the Indian Patents Act was conducted on 12.03.2026, the hearing was attended by the autrhorised agent **SATISH KUMAR RANA** (**IN/PA-1989**).

17. In response to the objection raised in the hearing notice dated 10.02.2026 and oral hearing held on 12.03.2026, agent for the applicant submitted post-hearing written submission on 23.03.2026.

18. Upon careful consideration of the submissions made during oral hearing on 12.03.2026, written response filed thereafter on 23.03.2026, and the applicable statutory provisions, apart from the inventive step requirement under section 2(1)(ja) of the patents act, the issues arising for determination are:

    - Whether an artificial intelligence system (DABUS) can be recognised as a “true and first inventor” under the Patents Act, 1970;

    - Whether the applicant has complied with Sections 6, 7 and 10 regarding declaration of inventorship and proof of right; and

    - Whether reliance upon PCT Rule 4.17(ii) satisfies statutory requirements under Indian law.

19. The Applicant has submitted that DABUS autonomously generated the invention and therefore must be recognised as the “true and first inventor.” It is further argued that the Act nowhere expressly restricts inventorship to natural persons and should therefore be interpreted expansively to accommodate technological developments.

    The argument advanced by the applicant is not persuasive; Section 6(1) of the Patents Act, 1970 clearly stipulates the categories of persons who are entitled to make an application for a patent. As per the said provision, an application for a patent may be made only by:

(a) the true and first inventor,

(b) the assignee of the true and first inventor, or

(c) the legal representative of a deceased true and first inventor.

The statutory structure necessarily presupposes that the inventor is an entity capable of:

- holding legal rights,
- assigning such rights, and
- being represented upon death.

An artificial intelligence system cannot satisfy any of these statutory attributes.

An identical interpretation has been adopted by the *United Kingdom Supreme Court in Thaler v Comptroller of Patents (2023) while construing Section 7 of the UK Patents Act 1977*, which is materially analogous to Section 6 of the Indian Patents Act. The Court held that an inventor must be a natural person capable of owning and transferring rights and that an artificial intelligence system cannot qualify as such. The reasoning applies squarely to Section 6 of the Indian statute, which employs the same entitlement framework based on assignment and legal succession.

Accordingly, the designation of DABUS as inventor is inconsistent with Section 6 of the Patents Act, 1970.

20. The Applicant has argued that Section 2(1)(y) merely excludes importers and communicators from the definition of "true and first inventor" and does not affirmatively restrict inventorship to humans.

The argument is not persuasive, Section 2(1)(y) must be read harmoniously with Sections 6, 7 and 10. The requirement under Section 7(3) to declare the "person" believed to be the true and first inventor, and the requirement under Section 10(6) to furnish a declaration in prescribed form identifying such inventor, necessarily presuppose a legally competent declarant.

A similar statutory interpretation was adopted by the *European Patent Office Board of Appeal in the DABUS matters while construing Article 81 EPC read with Rule 19 EPC*, which require designation of inventor by name and address. The EPO held that such requirements necessarily imply human inventorship because only a natural person can be identified in the manner contemplated by statute.

These provisions correspond functionally to Sections 7(3) and 10(6) of the Indian Patents Act.

21. The Applicant has argued that Section 2(1)(s) defines "person" to include Government and therefore inventorship is not restricted to natural persons.

The argument does not appear to be supported by the intent of the relevant provisions of the Patents Act, 1970; Government is a juristic person recognised in law and capable of:

- owning property,
- assigning rights,
- suing and being sued.

Artificial intelligence systems possess none of these attributes, where Parliament intended to extend recognition beyond natural persons, it has done so expressly. No such inclusion exists for machines. Accordingly, inclusion of Government within Section 2(1)(s) does not support recognition of artificial intelligence as inventor.

PROOF OF RIGHT

22. In response to the objections under the sections 7(2)-(4), during oral hearing, the learned agent submitted that artificial intelligence could execute proof of right if required.

In this context applicant further submitted that the invention was generated by DABUS, an artificial intelligence system, and the Applicant seeks to disclose that fact candidly and accurately rather than misidentify a human as the inventor. In this regard, the Applicant, Mr. Stephen Thaler, is the owner of the DABUS source code, the owner of the computer on which DABUS operates, and the person who bears responsibility for the maintenance, operation, and ongoing costs of both DABUS and the underlying machine infrastructure.

The argument is not persuasive, Section 7(2) requires proof of right derived from the inventor. Ownership of a machine does not confer entitlement to inventions allegedly generated by that machine unless assignment originates from a legally recognised inventor.

This position is consistent with the reasoning adopted by the Full Federal Court of Australia in *Commissioner of Patents v Thaler*, where entitlement provisions analogous to Section 7 of the Indian Act were interpreted as requiring derivation of rights from a natural person inventor.

23. Applicant further submitted that if AI-generated inventions are denied protection altogether because the AI system cannot be recognised as an inventor, the result is that a genuine category of inventions may fall outside the patent system entirely, this difficulty is reinforced by the fact that the Indian Patents Act does not expressly define the terms “person” and “true and first inventor” in a manner that unequivocally excludes non-human inventors. The Act does not expressly state that the inventor must be a human being possessing ordinary human attributes, and the statutory language leaves room for interpretative uncertainty. In particular, the use of broader legal concepts, including entities that are not natural persons in other contexts, gives rise to an area of ambiguity as to how these expressions should be applied in emerging technological circumstances involving autonomous AI-generated inventions.

The argument is not persuasive, Patent rights are statutory rights. Recognition of inventorship must arise within the statutory framework enacted by Parliament.

The **UK** Supreme Court in *Thaler v Comptroller* expressly rejected an identical argument while interpreting Section 7 of the UK Patents Act 1977, holding that absence of express prohibition does not imply inclusion where the statutory structure clearly presupposes human inventorship.

Sections 6 and 7 of the Indian Patents Act are structured in materially identical terms and therefore admit of the same interpretation.

Further, The expression "natural person" has a well-settled meaning in law and refers exclusively to a human being recognised by the legal system as capable of holding rights and duties. A natural person derives legal personality by virtue of birth and possesses the inherent capacity to acquire rights, incur obligations, and participate in legal relations. This understanding of the term is consistent across branches of jurisprudence including constitutional law, contract law, property law and intellectual property law. A machine or artificial intelligence system, being a technological construct created through programming and computational processes, does not possess biological existence and therefore cannot qualify as a natural person in the legal sense.

Further, a defining characteristic of a natural person is the possession of legal capacity. Such capacity includes the ability to own property, enter into legal relationships, assume responsibility for acts and omissions, make enforceable declarations, and be subject to rights and liabilities recognised by law. Artificial intelligence systems do not possess legal capacity of this nature. They cannot independently hold property, assume obligations, or be made accountable in law for representations or actions attributed to them. In the absence of such legal capacity, they cannot be regarded as natural persons.

Further, The expression "person" occurring in Indian statutes is ordinarily understood in light of **Section 3(42) of the General Clauses Act, 1897**, which provides that the term "person" includes any company or association or body of individuals, whether incorporated or not. This provision clarifies that while the term "person" extends beyond natural persons to include certain juridical entities recognised by law, such extension operates only in respect of entities capable of legal recognition. Machines and artificial intelligence systems are not recognised as legal entities under any statutory framework and therefore fall outside the scope of the expression "person" as understood in statutory interpretation.

Similarly, **Section 2(26) of the Bharatiya Nyaya Sanhita, 2023**, which corresponds to earlier criminal law definitions, provides that the word "person" includes any company or association or body of persons, whether incorporated or not. The inclusion of such collective entities reflects legislative recognition of juristic persons capable of bearing legal responsibility. However, the provision does not extend the meaning of "person" to technological systems or computational entities lacking legal status. The statutory definition therefore reinforces the distinction between legally recognised persons and non-legal instrumentalities such as machines.

Moreover, it is also a settled principle of jurisprudence that artificial or juristic persons exist only by virtue of legal recognition conferred through statute. Entities such as corporations, governments, societies, and trusts are treated as persons because the law expressly attributes legal personality to them. In the absence of such statutory recognition, no entity can claim the status of a person in law. Artificial intelligence systems are not recognised under any legislative framework as possessing legal personality and therefore cannot be treated as persons in either the natural or juristic sense.

Another essential attribute of a natural person is the ability to assume legal responsibility for acts and declarations. Legal systems attribute consequences to statements, undertakings, and representations made by persons on the basis that such persons possess intention and accountability. Artificial intelligence systems operate through algorithmic processes and lack independent volition, intention, or consciousness in the legal sense. As such, they cannot assume responsibility for representations attributed to them and cannot be treated as legal actors comparable to human individuals.

A further distinguishing feature of natural persons is their capacity to participate in legal relations through succession and representation. Natural persons may acquire rights during their lifetime and such rights may devolve upon their legal representatives upon death. This attribute reflects the continuity of legal personality recognised in human beings. Machines and artificial intelligence systems do not possess such attributes and cannot be subjects of succession or representation in law.

Judicial authorities across multiple jurisdictions have also consistently interpreted the expression "natural person" as referring exclusively to human beings. Courts in the United States, the United Kingdom, Germany, Japan and Australia, while examining questions relating to inventorship in the context of artificial intelligence, have uniformly held that only human individuals may be treated as natural persons within the meaning of statutory provisions governing legal rights and obligations. These interpretations reflect a consistent understanding across legal systems that technological systems, however advanced, do not possess the attributes necessary to qualify as natural persons.

Therefore the arguments does not align with the salutatory provisions of the patents act, Section 7(2) requires proof of right derived from the true and first inventor. Sections 7(3) and 10(6) require execution of declaration identifying such inventor.

24. The Applicant has relied upon declaration filed under PCT Rule 4.17(ii) and the decision in *Dow AgroSciences LLC v Controller of Patents*.

The argument is not persuasive; declarations under PCT Rule 4.17(ii) cannot override statutory requirements under Sections 6, 7 and 10 of the Patents Act. Where the designated inventor itself is not legally recognisable under national law, procedural declarations cannot cure the defect.

Further the decision *Dow AgroSciences LLC v Controller of Patents* is silent about Section 138(4) of The Patents Act while Section 138(4) of the Act which clearly stipulates for PCT applications designating India to have the effect of the filing of Section 7 of the Act.

Moreover in this regard, your attention may kindly be drawn to the order of IPAB (OA/39/2011/PT/CH dated 28/10/2013), established that submitting formal "proof of right" (assignment/employment agreement) is mandatory for PCT national phase applications in India, even if priority is already established, to prove the applicant's right to the invention.

25. The Applicant again has relied upon Parliamentary Committee Report No. 161 recommending review of intellectual property legislation to accommodate AI-generated inventions.

Such recommendations reflect policy considerations but do not alter the statutory position.
Until legislative amendment is enacted, inventorship must be determined strictly in accordance with Sections 6, 7 and 10.

Courts across jurisdictions considering DABUS applications—including the United Kingdom Supreme Court, the United States Federal Circuit, the German Federal Court of Justice, the Japan IP High Court, the European Patent Office Board of Appeal, and the Full Federal Court of Australia—have uniformly declined to recognise artificial intelligence as inventor under statutory regimes materially analogous to the Indian Patents Act.

26. A cumulative reading of the statutory framework under Sections 2(1)(y), 6, 7 and 10 of the Patents Act, 1970, together with interpretative support from the General Clauses Act, 1897 and consistent

judicial approaches across comparable jurisdictions, clearly establishes that the expression "true and first inventor" necessarily refers to a legally recognisable natural person possessing the capacity to hold rights, execute declarations, assign interests, and assume legal responsibility. An artificial intelligence system such as DABUS, lacking legal personality and statutory recognition as either a natural or juristic person, cannot satisfy these essential legal requirements. Further, reliance on ownership of the machine, PCT declarations, or policy recommendations cannot override the clear entitlement structure prescribed by the Act. Accordingly, the designation of DABUS as inventor is not sustainable in law, and the requirements relating to declaration of inventorship and proof of right remain unfulfilled.

Invention u/s 2(1)(ja):

Identification of the Person Skilled in the Art (PSITA)

27. The person skilled in the art, in the present case, is considered to be a mechanical/packaging engineer or container-design technologist having ordinary knowledge and practical experience in the field of design and manufacture of beverage or storage containers with releasable engagement structures, including surface-profile modifications, interlocking formations, and wall-geometry optimisation for stacking, coupling, and handling convenience. Such a person is presumed to be aware of routine structural variations in container walls used for engagement, reinforcement, and manufacturability.

Common General Knowledge (CGK) of the PSITA

28. At the priority date, the following constituted common general knowledge in the field of container engineering:
    - Use of complementary concave and convex engagement formations for releasable coupling between adjacent containers;
    - Provision of annular flanges, collars, threaded formations, ribs, grooves, pits, and projections for mechanical inter-engagement;
    - Modification of container-wall surface geometry to enhance structural strength, dent resistance, stacking stability, or engagement functionality;
    - Use of polymeric or thin metallic container walls possessing inherent flexibility enabling elastic deformation during engagement/disengagement operations.

    Such knowledge is reflected in standard packaging engineering practice and widely disclosed in prior art documents such as D1, D2, and D3, which collectively demonstrate routine implementation of patterned engagement features on container bodies.

Closest Prior Art and Distinguishing Features

29. Document D1 represents the closest prior art as it discloses cylindrical containers having complementary engagement formations enabling releasable inter-engagement between adjacent containers.

    The subject matter of Claim 1 differs from D1 primarily in that:

    - the engagement formations are defined as having a "fractal" surface geometry, and
    - the container wall is described as flexible, enabling coupling and disengagement through elastic deformation.

    However, D1 already teaches the same functional principle of wall-based complementary engagement formations. Therefore, the distinguishing feature resides only in the selection of a particular geometric configuration of the engagement surface rather than in a different engagement mechanism.

    Accordingly, the objective technical problem is properly formulated as:

    > *how to provide an alternative surface-profile configuration for facilitating releasable engagement between adjacent containers.*

    The Applicant has proposed that the problem relates to improving convenience of coupling and decoupling through a flexible fractal wall structure. However, no comparative experimental data or technical evidence has been provided demonstrating that the claimed fractal geometry produces any unexpected technical advantage over known engagement structures.

    Accordingly, the problem must be treated as one of providing alternative engagement geometry, rather than a non-obvious technical advance.

30. Applicant submitted that Inventive feature of the present invention is "*a flexible container wall having a fractal interlocking surface geometry that enables repeated coupling and disengagement of multiple containers directly through wall-to-wall inter-engagement of pits and bulges, without requiring separate caps, threads, or external fastening structure*."

    Further, Document D2 is concerned with a beverage container having a recessed top and a removable threaded cover arrangement. It does not teach or suggest modifying the side wall of the container into a flexible fractal profile having complementary pits and bulges for direct inter-engagement of multiple containers. Accordingly, the inventive feature of the present invention lies in the fractal, flexible, side-wall coupling architecture that allows containers to be repeatedly joined and separated by elastic deformation of the wall profile.

    The argument is not persuasive as Document **D2 (JP 2017505736)** discloses containers having:

    - annular flanges,
    - collars,
    - threaded engagement structures,

- peripheral engagement formations.

Although D2 employs a different structural arrangement, it clearly teaches that engagement between containers may be achieved using complementary surface-profile features formed on container bodies.

Therefore, D2 reinforces the general technical teaching that modification of container-wall geometry to enable engagement constitutes a routine design option available to a person skilled in the art.

The Applicant's contention that D2 relates only to closure arrangements and not side-wall coupling is not persuasive, since the document nevertheless demonstrates the broader principle of engagement through complementary structural formations.

31. Applicant submitted that document D3 discloses a generally cylindrical food/beverage can with profiled wall formations that allow adjacent containers to inter-engage, but it does so through rigid strip-like protrusions and grooves rather than through a fractal wall profile and does not teach a flexible wall enabling release by elastic deformation.

    Further, D3 teaches a shock-resistant seamless can with dotted projections on an inner resin layer for dent resistance, not a releasable interlocking architecture between containers.

    The argument is not persuasive as Document **D3 (US 5803301)** discloses projections formed on the inner resin layer of a container wall for improving structural performance.

    While D3 primarily addresses shock resistance, it nevertheless teaches the formation of patterned surface projections and variations in wall profile geometry for functional enhancement of container walls.

    Thus, D3 establishes that modification of container-wall surface geometry through projections, pits, or patterned formations was already known in the art.

    Accordingly, incorporation of patterned surface features such as pits and bulges into container walls cannot be regarded as a non-obvious technical departure.

Motivation for Combining the Prior Art

32. A person skilled in the art starting from D1 and seeking to provide an alternative engagement surface geometry would naturally consider teachings from D2 and D3, which disclose:
    - complementary engagement formations implemented through structural surface modifications (D2), and
    - patterned projections and wall-profile variations for functional enhancement (D3).

    Since all three documents belong to the same technical field of container-wall structural design and address closely related engineering considerations, their combination represents a **routine workshop modification** rather than an inventive step.

The substitution of one known surface geometry (annular or ribbed formations) with another patterned geometry (including pits and bulges described as fractal) would have been an obvious design alternative available to the skilled person without requiring inventive ingenuity.

However, the mere use of the term "fractal" does not establish inventive step unless it produces a demonstrable technical effect beyond what is achievable using conventional engagement geometries.

33. Although the Applicant emphasised the presence of a "fractal" wall profile, the mere adoption of a particular mathematical descriptor for surface geometry does not establish inventiveness in the absence of:

- comparative experimental validation,
- quantified technical improvement, or
- demonstration of unexpected functional advantage.

Accordingly, the claimed fractal configuration represents only a shape variation within the range of routine geometrical alternatives available for implementing known engagement functionality.

34. The feature relating to flexibility of the container wall likewise does not confer inventiveness, since flexibility is an inherent and routinely exploited property of polymeric or thin metallic container materials used in packaging technology for facilitating engagement and release operations.

Thus, no unexpected technical effect arises from this feature.

35. In view of the teachings of D1 as the closest prior art, read in combination with D2 and D3, and in absence of any demonstrated unexpected technical effect, the claimed subject matter of independent Claim 1 represents only a predictable modification of known container engagement structures.

Claims 2–9 being dependent upon Claim 1 do not introduce any independent technical feature capable of conferring inventiveness.

Accordingly, the subject matter of Claims 1–9 lacks inventive step within the meaning of Section 2(1)(ja) of the Patents Act, 1970**.**

36. In view of the foregoing analysis and after careful consideration of the submissions made by the Applicant in response to the First Examination Report, the written submissions filed after the hearing, and the arguments advanced during the oral hearing, it is concluded that the objections relating to lack of inventive step under Section 2(1)(ja) of the Patents Act, 1970 remain unaddressed and unsatisfied. Further, the designation of an artificial intelligence system (DABUS) as the "true and first inventor" is not permissible under the statutory framework of Sections 2(1)(y), 6, 7 and 10 of the Patents Act, 1970, and the Applicant has failed to comply with the mandatory requirements relating to declaration

of inventorship and proof of right. Since these deficiencies go to the root of patentability as well as entitlement to apply for a patent, and no allowable subject matter remains on record, the present patent application is hereby **refused** under the provisions of the Patents Act, 1970.

Dated: 15.04.2026

(NEERAJ KUMAR MEENA)
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