

OPINION UNDER SECTION 74A

Patent	GB 2569042 B
Proprietor(s)	Alex Gort-Barten
Exclusive Licensee	
Requester	Potter Clarkson LLP
Observer(s)	Jensen & Son (on behalf of the proprietor)
Date Opinion issued	16 July 2026

The request

1. The comptroller has been requested to issue an opinion as to whether patent number GB 2569042 B (the “patent”) is invalid by lack of novelty and/or inventive step given the following documents:

DO1 – DE 202009009125 U1 Nestec SA *published 09/09/2010*

DO2 – EP 1839543 B1 Nestec SA *published 25/06/2008*

DO3 - CN 205 322 111 U Jie Fu *published 22/06/2016*

The requestor also provided machine translations of documents D01 and D03 that they reference in the request.

2. The patent was filed on 8 November 2018, claiming an earliest priority date of 8 November 2017, and was granted on 29 July 2020 in the name of Alex Gort-Barten (the “proprietor”). The patent is currently in force.

Observations

3. Observations were received from the proprietor’s representative, Jensen & Son. I note that they state: *‘The law on anticipation is not what is stated in the Opinion request and for this reason alone, the Application should be dismissed.’* They also state *‘...each of the novelty attacks is based on “intrinsic” disclosure without explanation.’* They then specifically argue: *‘The Applicant has elected not to file any evidence in relation to the properties of paper... The novelty attacks must therefore fail as plastic deformation is not inevitable.’* I do not think that the request misrepresents the law, nor do I think that the request lacks essential detail which

might otherwise stop me from understanding their novelty argument and forming an opinion.

4. I note that in these observations, there is no specific discussion of the prior art when discussing novelty, instead the prior art is discussed only regarding inventive step. I shall consider all of the relevant observations made regarding what the observer consider the prior art does and does not disclose.
5. Observations in reply were received from Potter Clarkson. I note they refer to a pending EP application for substantially the same matter as the Patent here and the fact that, following third party observations filed with the EPO, a new examination report has been issued arguing lack of novelty based on document D01. I will not consider that examination report here. My opinion will be based only on the arguments presented by the request and the observations thereon. The existence of the examination process at the EPO does not bar me from issuing my opinion here.
6. The Observations in reply also contain extra detail regarding inventive step which is in contrast to the rather brief contents of the request itself. As this extra detail is directed at refuting the many points raised in the observations, I do not consider the observations in reply to be making additional arguments over that of the request. I will however base my opinion on the arguments as presented in the request.

Previous opinion

7. The request mentions a previous opinion on this patent: number 12/20 issued by the office on 20 October 2020. I note that the arguments in this request are different to those considered in the previous opinion. I also note that I am not bound by any conclusions made in that previous opinion.
8. The requester states that '*we will keep our inventive step submissions concise*' because of the previous opinion. To avoid doubt, my opinion will only consider the arguments made in this request, I will not take into account anything argued in that previous opinion.

The Patent GB 2569042 B

9. The invention relates to a metal pre-filled and sealed coffee capsule for use in certain compatible types of espresso machine where the capsule is inserted into a holding cage so that a mechanism with a clamping means can surround the capsule to pierce it and force heated water under pressure through the contained coffee. The metal is typically aluminium. The capsule of the invention is characterised by use of an additional seal means attached to the capsule that contacts the machine in use. Figure 6 shows one embodiment of the capsule body showing the hollow general truncated cone shape with a ring shaped flange at the base.

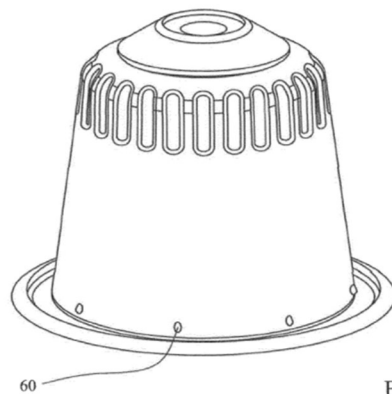


FIG. 6

10. Figure 1 shows a cross-section with flange 7 comprises an upstanding wall 8 at the outer edge, which thereby forms an upward facing gutter 9 between the wall of the capsule and the upstanding wall 8. Figure 2 shows an alternate embodiment and shows how the gutter receives a ring shaped seal 10 formed from paper or cellulose material that, in use, is clamped along with the flange in the mechanism of the machine. The seal is then plastically deformed by the clamp mechanism. Figure 2 shows the flange edge as a 'rolled edge' 17 'to retain the seal in position'. I note that the description does not refer to any 'upstanding wall' when discussing figure 2.

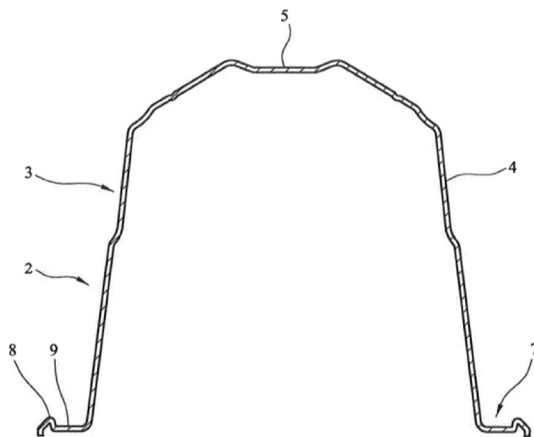


FIG. 1

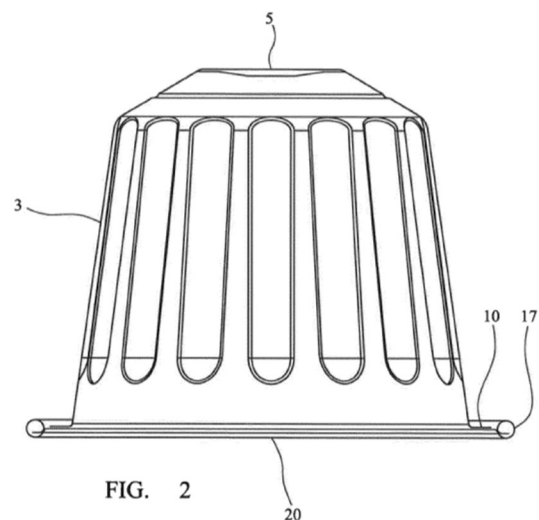


FIG. 2

11. The capsule has a lower cover 20 attached to the opposite side of the flange and over the otherwise open base of the capsule to retain the coffee. This bottom cover and the top surface 5 of the capsule are typically perforated in use by the machine to allow water flow. The ring seal may be glued onto the flange and/or retained by features of the capsule, such as protrusions 60 seen in figure 6.
12. The patent describes various types of seal for use in the capsule, including claimed laminates of cellulose and adhesive, and optionally having additional layers of 'bioplastic' or aluminium foil. It also describes a 'triplex laminate paper' which may carry adhesive. The patent says the seal is plastically deformed when clamped in the machine, and may additionally swell when wet thus increasing the seal performance.

Claim Construction

13. As a first step in determining the validity of the patent I must correctly construe the claims. This means interpreting them in the light of the description and drawings as instructed by Section 125(1) of the Patents Act 1997 (“the act”). In doing so I must interpret the claims in context through the eyes of the person skilled in the art. Ultimately the question is what the person skilled in the art would have understood the patentee to be using the language of the claims to mean. This approach has been confirmed in the decisions of the High Court in *Mylan v Yeda*¹ and the Court of Appeal in *Actavis v ICOS*².

14. Section 125(1) of the Act states that:

For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.

and the Protocol on the Interpretation of Article 69 of the EPC (which corresponds to section 125(1)) states that:

Article 69 should not be interpreted in the sense that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Neither should it be interpreted in the sense that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patentee has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patentee with a reasonable degree of certainty for third parties.

15. The granted patent has a single independent claim and 9 dependant claims. The request splits claim 1 into a number of features labelled (a) to (h), and I present the claim with such labels in bold:

1. **(a)** A capsule for use in a high pressure espresso coffee machine,
- (b)** which machine has a capsule cage for retaining the capsule in an extraction position,
- (c)** wherein the capsule is formed from a ductile metal,
- (d)** the capsule having a generally frusto-conical form with an upper surface

¹ *Generics UK Ltd (t/a Mylan) v Yeda Research and Dev. Co. Ltd & Anor* [2017] EWHC 2629 (Pat)

² *Actavis Group & Ors v ICOS Corp & Eli Lilly & Co.* [2017] EWCA Civ 1671

and a lower surface, an annular flange being provided at the lower surface,

(e) which annular flange is provided with sealing means on the surface facing towards the upper surface,

(f) wherein the sealing means comprises a ring formed from a cellulose material or paper,

(g) which ring deforms plastically in use when engaged by a capsule cage of a coffee machine to provide a seal,

(h) the seal being held in position on the flange.

16. Although the request does not consider claim construction at length, it does state, in relation to feature (g):

According to the description of the Patent, the feature related to the ring that “deforms plastically” is explicitly indicated as intrinsically related to the material of the ring, that is cellulose material: It has further been surprisingly found that the seal does not need to be made of an elastomeric material such as silicone. THE NON ELASTIC DEFORMATION OF PAPER OR OTHER CELLULOSE BASED MATERIAL provides a sufficiently strong seal that there is no meaningful leakage in known capsule machines.

17. I note that feature **(g)** defines the seal in terms of a possible use, but there is little explicit detail of what the capsule cage shape might be and what mechanism the machine might have and little detail of how the cage acts on the capsule. This is not helped by the fact that the Patent does not show any figures of such a cage nor of the capsule in use with the machine.
18. Firstly I note that claim 1 is to the capsule as such, and not to a method of use or a system. I also do not think that claim 1 was intended to be read as claiming the ‘capsule in use’ or a capsule after it has been used when the seal would have been plastically deformed. Thus I construe it to refer to a capsule before use and thus with a seal that has not yet been deformed by the machine.
19. In my opinion, the skilled reader would understand plastic deformation of a material to mean that the material has been exposed to a force causing a stress beyond its elastic limit, such that a deformation remains once the force is removed.
20. I think that the term ‘*cellulose based material*’ of itself is rather broad and does not convey how the material might be elastic, plastic or if it might be stiff and/or brittle.
21. I note that a preferred paper density and thickness is mentioned in the patent, but no other parameters or specific exemplar materials are given. The description does outline how a capsule machine works and refers to two patent numbers EP0870457 and WO2005/004683 for example machines, but it does not clearly define what clamping forces are expected to be applied to the seal. Some example thicknesses of the seal are given in the dependant claims, but not claim 1.
22. In my opinion, the skilled reader would understand that the deformation is caused by

the cage above the capsule, clamping at least the flange (and seal) onto a lower surface through which brewed coffee flows from the capsule. Further, it seems that the thickness of the seal might play a role in what type of deformation occurs in a specific machine, but it seems the claim should be construed broadly to not be limited to any specific shape of cage or lower surface.

23. A key issue I need to consider is what limitations, if any, the reference to future plastic deformation in feature (g) might have on the choice of the paper or cellulose material sealing ring. Such a situation can be viewed as a '*definition by result*', where the result is how the seal performs when used in a pressurised machine. Further I note that it is possible that a specific seal might work well in one specific coffee machine, but perform poorly in a different machine. I therefore construe feature (g) to mean that the seal is chosen such that there exists at least one machine where plastic deformation of the seal would occur in use.
24. I note that claim 1 does not specify what 'high pressure' means in feature (a). I construe this broadly to be a capsule suitable for any machine said to produce espresso coffee where hot pressurised water is forced through the capsule in use. I do not think 'high' can be construed to mean a specific range of pressures.
25. I also note that feature (h) does not say that the seal is directly attached to the flange, merely that it is 'held in position'. I am construing this broadly to include any arrangement that can hold the seal so that it is in contact with the flange.

The Law

26. Section 1(1) of the Patents Act 1977 ("the Act") reads:

A patent may be granted only for an invention in respect of the following conditions are satisfied, that is to say –

(a) the invention is new;

(b) it involves an inventive step

...

27. Section 2(2) of the Act states:

The state of the art in the case of an invention shall be taken to comprise all matter (whether a product, a process, information about either, or anything else) which has at any time before the priority date of that invention been made available to the public (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way.

28. Section 3 of the Act states:

An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

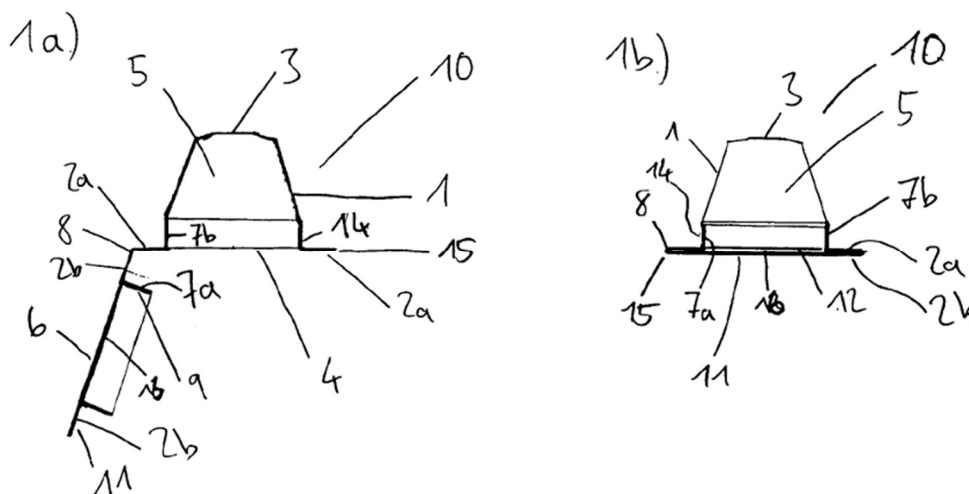
29. To determine whether or not an invention defined in a particular claim is inventive

over the prior art, I will rely on the principles established in *Pozzoli v BDMO*³, where the well-known *Windsurfing* steps were reformulated as:

- (1)(a) Identify the notional “person skilled in the art”;
- (1)(b) Identify the relevant common general knowledge of that person;
- (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
- (3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;
- (4) Viewed without any knowledge of the alleged invention as claimed, determine whether those differences constitute steps which would have been obvious to the person skilled in the art.

Novelty D01

30. Document D01 shows a coffee capsule 1 similar in shape to that shown in the drawings of the Patent. This coffee capsule 1 is said to be user fillable with figures 1a and 1b showing a lower cover 11 in an open and then closed position after coffee (or tea) is inserted into chamber 5. The capsule is said to be suitable for use with a pressurised hot water machine.



31. Paragraph 27 states that the capsule and lid can be made from polypropylene or from aluminium ‘using a deep-drawing process’. It is clear that the capsule has an upper facing lower flange formed by ‘edge region 2a’ said in paragraph 56 to be ‘flange-like’.
32. The observations argue that this capsule is ‘refillable’, but I disagree. It is my understanding that the capsule is single use, and is not re-fillable given that it is

³ *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588

shown being pierced at the top (by perforation means 29) and that the bottom cover breaks in use (perforations 25) to allow the brewed beverage to flow out. The observations also argue that:

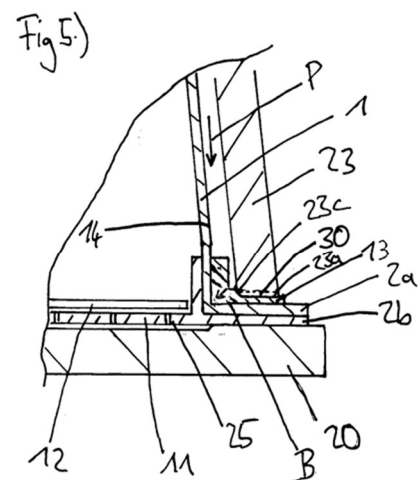
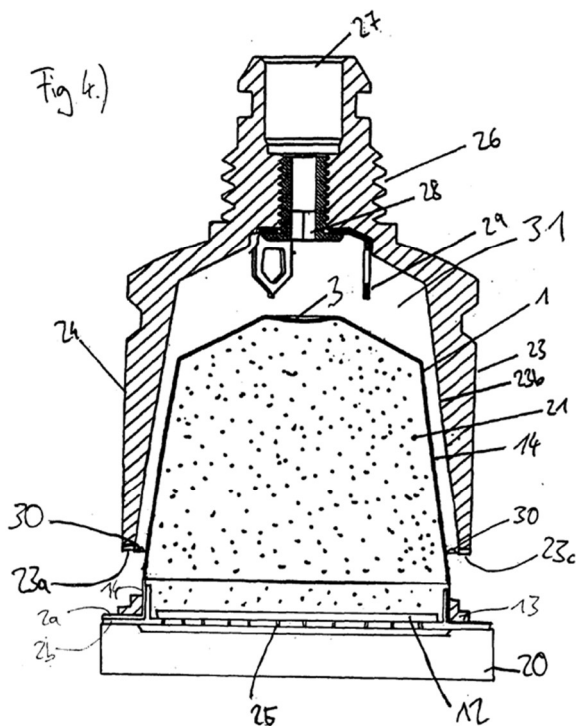
...the manner in which the lid is hinged to the capsule body about point 8 confirms that the only possible material is a plastic (see paragraphs 27, 45 and 56). It would not be possible to make a refillable capsule with such a construction from aluminium.

Again, I disagree with this, in part because I do not think the capsule is expected to be refillable. The observations in reply state:

Aluminium is one of the most ductile, malleable and easily formable metals in existence. Creating a "hinge" or a flexible fold line on a thin sheet of aluminium (a principle analogous to that of the tabs of cans or foldable metal containers) is a trivial stamping and deep-drawing operation that presents no physical obstacle.

I agree with the requestor and do not think the presence of hinge 8 excludes the use of aluminium. This is supported by what seems to be a clear statement in paragraph 27 of D01 saying aluminium can be used for the capsule and lid.

33. Figures 4 and 5 below show the capsule 1 inserted into the mechanism of the coffee machine prior to and after clamping of the enclosing, bell shaped, element 23 (eg cage) and capsule holder 20 (eg extraction surface) around the capsule.



These figures show one embodiment of seal 13 that is shaped as a ring element with

a L-shaped cross-section so that a portion extends over the flange 2a and a portion extends upwards on the side wall 14 of the capsule. Figure 5 shows this seal compressed between the 'cage edge' 23c and the capsule flange resting on the lower surface 20. While this seal is shown as having an L-shape, other alternate cross-sectional shapes for the seal are given as circular, square, rectangular and rectangular with a recess. These are shown in figures 2a-2d and 3a-3b, not all reproduced here. The request appears to focus more on the L-shaped seal than the other shapes. It is clear that the seal is carried by the capsule.

34. The request notes paragraphs 31 and 68 of D01 and quotes these portions of the translation:

[0031] The sealing element is preferably made of plastic, rubber, paper, cardboard or silicone.

[0068] The sealing element 13 is preferably made of one of the following materials: rubber, paper or soft plastic.

The request argues that features (e) and (f) of claim 1 are thus disclosed.

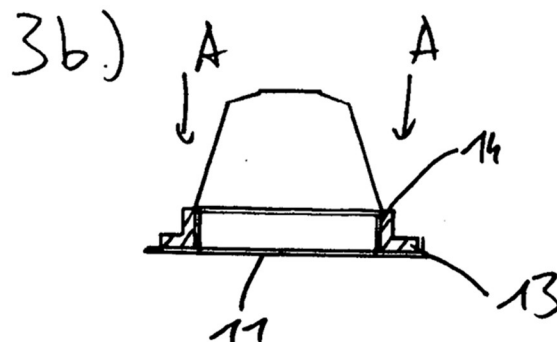
35. I note that paragraphs 63 to 67 discuss the round cross-section seal mostly in terms of an elastic material as it may be made to be stretched around the capsule to fit tightly to the capsule. However, for other less elastic materials, the shape of the seal can be chosen to provide a 'tight fit'. I note that paragraph 63 says:

'The inner diameter d2 is preferably designed such that a tight fit is made possible between the sealing element 13 and the outer side 14 of the capsule base body 1'

As noted above, paragraph 68 includes paper as one possible material for the sealing element. It is my understanding that the seal might be attached to the capsule by the user after the capsule has been filled and closed as paragraph 78 says:

Fig. 3a and Fig. 3b show preferred embodiments of the capsule 10 ... with the sealing element 13 attached in a side sectional view. As shown by the arrows A, the consumer only presses the sealing element 13 against the edge region 2a of the capsule body 1.

Figure 3b is shown below.



36. Paragraphs 67 and 69 also discuss the idea that *‘a sealing kit may ... comprise different sealing elements with different sealing elements which vary in their shape and dimensions ... can also vary in their hardness and/or density’*. Paragraph 70 to 74 also state that the seal dimensions can be chosen *‘in order to exert a predefined sealing force’* and that a height of between 0.8mm to 2mm can change to a height of between 0.2mm to 1mm *‘in the compressed state’*.
37. The observations argue that *“None of the seals shown in Figures 2 and 3 can be made from paper as paper cannot take that shape.”*. Earlier in the observations, in relation to the novelty of all citations, they also argue:

The Applicant has elected not to file any evidence in relation to the properties of paper. Use of paper as a gasket material in other fields is known. Properties of paper gasket materials would not, however, form part of the common general knowledge in the field. Since, however, gaskets are generally elastically compressible, there are entire classes of elastic and inelastic paper materials which would not fall within the scope of Claim 1. The novelty attacks must therefore fail as plastic deformation is not inevitable.

In the observations in reply the requestor argues:

In the industrial seal sector, paper, cardboard and cellulose pulp are regularly die-cut, pressed, thermoformed or molded (often coupled with binders or protective plastic films, just like the paper-plastic ring cited by D01) to obtain washers and rings with specific profiles (including "L"-shaped profiles ...

38. I am not persuaded by the observer that none of the gaskets can be made from paper. I do not think that the skilled reader would ignore the explicit disclosure of paper as a seal material. It is my opinion that, at the very least, the rectangular and square cross-sections would be understood by the skilled reader to be readily made using paper. Thus I conclude that features (a) to (f) of claim 1 are disclosed in D01.
39. Feature (h) of claim 1 requires *‘the seal being held in position on the flange.’* The request notes, among others, paragraphs 14 and 91:

[0014] ...- at least one sealing element which is designed to be mechanically connected to the outer surface of the capsule ...

[0091] As shown in Fig. 5, the sealing element 13, which is attached to the capsule 10, is compressible.

40. I think D01 teaches that the seal is placed onto the capsule next to the flange and maybe held there by a tight fit to the capsule sidewall. The figures show the seal 13 pushed next to the flange, as fig 3b. shows for example. The figures do not show any gap between the seal and the flange. It is not said that the seal is directly attached to the flange. I think that what D01 discloses does fall within the scope of feature (h) as the seal is held in position next to the flange, without a gap, and thus can said to be *‘on the flange’*.
41. The remaining feature of claim 1 is (g) which requires that the *‘...ring deforms*

plastically in use...'. The request notes that paragraphs 30 and 31 say the sealing element may be made of '*..deformable material...*' and that it can be '*... paper, cardboard...*'. The request says that in D01:

'The feature "plastically" is not explicitly mentioned. However, it is directly and unambiguously derivable by a person skilled in the art considering that in D01 the ring is formed by a cellulose material or paper. The feature related to the ring that deforms "plastically" in use when engaged by a capsule cage of a coffee machine to provide a seal, is considered intrinsically disclosed in D01.'

42. The observations in reply notes that what a document might implicitly disclose needs to be considered based on the skilled reader. Of the various case law mentioned, I note a passage from *General Tire*⁴ at pages 485-6:-

"If the prior inventor's publication contains a clear description of, or clear instructions to do or make, something that would infringe the patentee's claim if carried out after the grant of the patentee's patent, the patentee's claim will have been shown to lack the necessary novelty, that is to say, it will have been anticipated. The prior inventor, however, and the patentee may have approached the same device from different starting points and may for this reason, or it may be for other reasons, have so described their devices that it cannot be immediately discerned from a reading of the language which they have respectively used that they have discovered in truth the same device; but if carrying out the directions contained in the prior inventor's publication will inevitably result in something being made or done which, if the patentee's patent were valid, would constitute an infringement of the patentee's claim, this circumstance demonstrates that the patentee's claim has in fact been anticipated".

and the *General Tire* judgment cited in paragraph 2.03 then continues:

"If, on the other hand, the prior publication contains a direction which is capable of being carried out in a manner which would infringe the patentee's claim, but would be at least as likely to be carried out in a way which would not do so, the patentee's claim will not have been anticipated, although it may fail on the ground of obviousness. To anticipate the patentee's claim the prior publication must contain clear and unmistakable directions to do what the patentee claims to have invented ... A signpost, however clear, upon the road to the patentee's invention will not suffice. The prior inventor must be clearly shown to have planted his flag at the precise destination before the patentee".

The observer states the following:

*'The test for inevitability is strict. Thus in *Inhale v Quadrant* [2002] RPC 21, *Laddie J* held that even though it was "overwhelmingly likely" that the prior*

⁴ *General Tire & Rubber Company v Firestone Tyre & Rubber Company Limited*, [1972] RPC 457,

art had formed a composition within the claims of the patent in suit, that was not enough for the purposes of anticipation.'

43. The observer argues that 'The seal in D01 deforms elastically, not plastically, see eg paragraphs 35 and 64' because an elastic seal would be reusable for the refillable capsule. The also refer to paragraphs 89 onwards which I note refers to how the surface of the cage contacting the seal may be shaped to reduce the chance of the capsule sticking when the machine unclamps.

44. In reply, the requestor argues that:

It is an intrinsic and unavoidable physical property of paper and cardboard that, when subjected to the mechanical/hydraulic clamping forces of a high-pressure coffee machine, they undergo a permanent crushing, i.e., a plastic deformation of the fibres. ... the phenomenon of paper deformation "in use" described in patent GB2569042B1 is exactly the same physical behaviour that inevitably occurs when clamping the paper ring of D01 in the machine. If the effect is "plastic" in the patent, it is necessarily so also in the prior art that employs the exact same material.

45. It is clearly stated that when in-use, the seal of D01 is expected to be compressed and deformed to provide the required sealing effect and that this applies to all of the disclosed materials, including paper / card. I agree that D01 does not explicitly state that a paper seal will be plastically deformed. I disagree with the observer that the seal must only deform elastically; I do not think this is what the skilled reader is taught.

46. I think that the skilled reader would know that relatively thin paper can be easily plastically deformed such as by folding or embossing, but they would not necessarily be familiar with the properties of thicker paper and card in the suggested preferred thicknesses of 0.8 to 2.2mm of D01.

47. I conclude that, while the skilled reader of D01 may think that plastic deformation is possible for a paper seal, given the evidence I have to hand, such deformation is not disclosed either explicitly or implicitly in D01 and so feature (g) is not disclosed.

48. It is my opinion that document D01 discloses features (a) to (f) and (h) of claim 1 but not feature (g). Thus the claim is novel in the light of D01.

Novelty D02

49. Document D02 shows a capsule that can contain coffee for a machine using pressurised hot water substantially the same shape as that shown in the patent, with a frusto-conical body 7 and a bottom flange 6 carrying a lid. The machine comprise a capsule enclosing bell member 9 and a capsule holder 13 with a relief surface 12, which in use clamp around the capsule.

50. D02 discloses a number of embodiments of how a seal can be formed around the flange when clamped. Some embodiments have a seal formed by deformation of the flange such that the capsule material itself acts as a seal. Other embodiments show

a seal formed by attaching a different material to the capsule. The request notes that paragraph 48 states the machine may be for make espresso and focusses on the embodiment of figures 6 to 9 which shows a sealing member 8.

51. Figures 6 and 9 below show the machine before and after clamping around the capsule. Figure 9 shows how the top of the capsule is pierced and the bottom lid is perforated when pressed against the extraction surface 12.

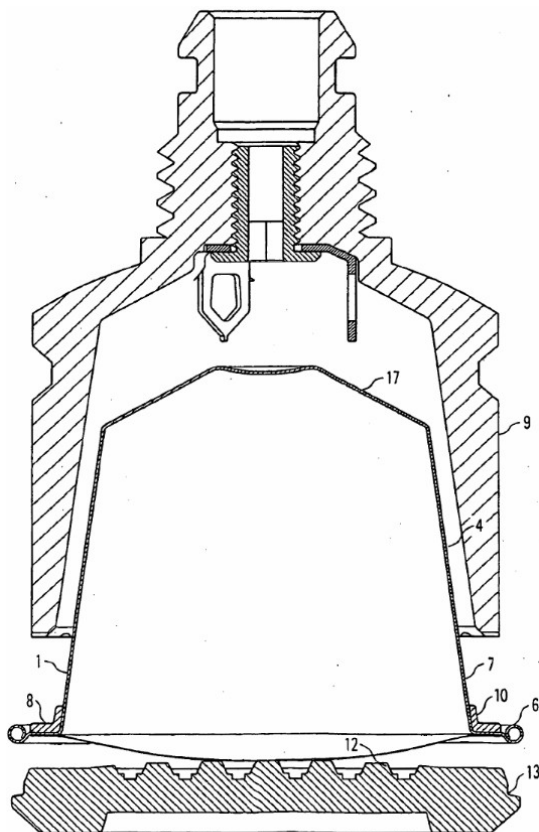


Fig. 6

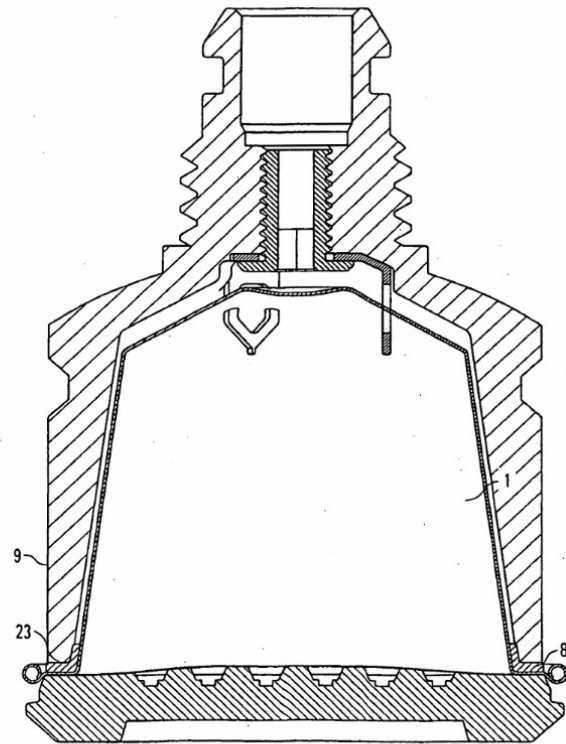


Fig. 9

52. The request notes paragraph 54, which discusses embodiments that do not have the additional sealing material 8; It says:

[0054] In case the material of the sealing member is the same as the one used for the capsule (e.g. a metal such as aluminum or plastics), preferably the resilient nature of the sealing member, as defined in the claims is procured by the geometrical shape of the sealing member.

Looking through the description of D02, this is the only reference I can find to materials used to make the capsule itself and I think that the skilled reader would understand that the capsule of the embodiment of 6 to 9 would also be made of aluminium or of plastic, and thus there is disclosure of a ductile metal as feature (c) of claim 1 requires. This is not disputed by the observer. Further the observer does not dispute that the capsule has features (d) and (e) of claim 1 with the seal 8 on the upper surface of the flange.

53. The request notes paragraphs 27 to 28 that says:

[0027] The inelastic sealing material can be selected from the group comprising plastics, metal, fibres, paper, powder, cotton, viscous paste and foamed or sintered material and combinations thereof.
[0028] The sealing material is plastically deformable.

which echoes claim 23 of D02 which the requestor also cites:

23. A capsule for containing a beverage ingredient, the capsule (1) being provided with a dedicated sealing member (8) at its outer face, the sealing member (8) being made from an inelastic material, which sealing member material is different to the material constituting the capsule (1) and is plastically deformable.

Looking at the whole description, there are a variety of sealing materials disclosed and a variety of types of material and I note that this material can also be resilient, that is elastic. In all cases, the sealing material 8 must be compressible. In relation to the portion of the description discussing figures 6 to 9, the only thing that is said about sealing material 8 is in paragraph 64 where it *‘..is compressable..’* and *‘a non-symmetrical, ie L-shaped cross-section’*. It can be seen in the figures how the seal contacts both the sidewall 7 and the flange rim 6 as paragraph 64 describes.

54. The observations refer to paragraphs 67 and 69 regarding clamping and pinching of the seal, but I cannot find any such reference in those paragraphs; It is possible that the observer may have noted the wrong paragraph numbers. The words ‘clamp’ or ‘clamping’ do not appear to be used in D02. I note pinching is referred to in later paragraphs such as 85 (in relation to figures 15a-16b) which says:

[0085] In the closed position the sealing material 8 can be at least partially pinched between one of the enclosure members 9, 13 and the rim portion 6 and/or the side walls 7 of the capsule 1.

55. The observations also say that *‘Paragraph 82 states that the sealing material does not have to be resilient (elastic) but can also be inelastic, i.e. it does not deform.’*. Again it seems 82 is an incorrect number; It maybe that they meant paragraph 99 which I note says:

[0099] The sealing material does not necessary have to be resilient, but can also be inelastic, as it is used once only. The preferred dimensions of the sealing material is a thickness of between 0.3 to 2.5 mm, preferably 0.5 to 2 mm, most preferably between 0.75 and 1.25 mm.

I disagree with the observer when they assert that inelastic means *‘it does not deform’*; I do not think that is what the skilled reader would understand this paragraph to mean. In the observations in reply, the requestor argues that *‘In materials physics .. “inelastic” ... represents the exact opposite of non-deformability ... By definition, it undergoes plastic deformation.’* I agree with the requestor and consider that what is disclosed in D02 by the term *‘inelastic’* is plastic deformation, as the seal is required to compress in use.

56. The observations mostly refer to the later figures 15a to 16b and focus on other embodiments where the sealing material 8 has a substantially round cross-section. I

note these figures relate to how the seal reacts to the applied pressurised water and how the seal itself is thus '*pressurised*' and deformed thus improving the seal of the capsule edge to the machine. The observations note that the pinching only provides a partial sealing arrangement, and that these figures show '*... that the seal is dynamically compressed by the fluid pressure to create a wedge effect...*' and that this action '*...forces the seal against any gap, which may be zero, between the capsule cage and the flange*'. They then argue that for a round cross-section, the gasket '*...is based on a silicon moulding and the properties would not be relevant to a paper gasket...*' and assert problems that a paper gasket would have: that such a gasket would need to be glued to the capsule and this glue would allow the gasket to move away from the capsule; and that paper would likely tear from the deformation.

57. In reply, the requestor notes that the disclosed pinching means that '*mechanical clamping is designed to initiate the sealing process before any fluid enters.*' and that '*The patentee attempts to draw an artificial distinction between a "static" seal and a "dynamic fluid-driven" seal. In the field of high-pressure espresso extraction (operating at up to 19 bar), every capsule seal behaves dynamically under the influence of fluid pressure.*' They also note that other shapes are disclosed, including the L-shape shown in the figures reproduced above, and that tearing or glue issues would be unlikely for such shapes.
58. The observations finally state '*The seal is not plastically deformed by engagement with the capsule cage.*'. The requestor refutes this.
59. For novelty, I need to consider what the skilled reader would learn from reading D02. I agree with the requestor that such a reader is told that a coffee capsule may be aluminium and can have a seal of a different material that in use is at least partially pinched between a 'capsule cage' and the upper surface of a flange of the capsule. This seal is shown to be a ring about a frusto-conical capsule. I disagree with the observer that the skilled reader would dismiss the explicitly stated use of paper as impracticable, and disagree that there is no disclosure of plastic deformation. I think that the overall teaching is that any of the materials listed, including '*paper, cardboard*' could be compressed and deform to act as a seal in use, and that the deformation could be elastic or plastic. I see no reason to think that the skilled reader would think the L-shape seal cannot be formed from paper or card and that such a seal is, at least in part, on a surface of the flange.
60. In relation to feature (g) of claim 1, the seal of D02 does deform in use '*when engaged by a capsule cage ... to provide a seal*', and I consider that the claim does not exclude the situation where a seal might deform when pinched and further deform when pressurised. D02 explicitly states that the seal may plastically deform, and paragraph 27 states that such a seal may be made of paper. Thus the skilled reader is taught features (a) to (g) of claim 1.
61. In relation to final feature (h), the requestor argues this is disclosed and quotes these paragraphs:

[0064] ...The sealing member 8 according to this embodiment is compressible. It covers both a portion of the side wall 7 and the area between the outer end of the flange-like rim 6 of the capsule 1 and said side wall 7.

[0032] The sealing material can be attached to the outer face of the capsule by gluing, welding, press-fitting and/or crimping.

62. I note that paragraph 32 echoes claim 12 in D02 which follows claim 10 that says the sealing material may be paper. Other paragraphs state this material is *'attached to the capsule'* or *'the outer surface of the capsule'* or, as above, is *'attached to the outer face capsule'*. I note that D02 does not explicitly say that the seal is glued or otherwise directly attached to the flange portion. Feature (h) requires for *'the seal being held in position on the flange'* and I think that this is what the skilled reader is told.
63. In conclusion, it is my opinion that all of the features of claim 1 are disclosed by D02 and that it is an enabling disclosure. Thus claim 1 is invalid due to lack of novelty.

Dependant claims

64. The request then argues that dependant claims 2, 3, 4, 6, 7, 9 and 10 also lack novelty given the disclosures in D02. The observer makes no specific comment on this.
65. Claim 2 reads *'A capsule according to Claim 1, wherein the seal comprises a first layer of cellulose material and a second layer of adhesive material'*. The request notes that paper is disclosed as a suitable sealing material in D02 along with attaching the material using glue. While it might be obvious to the skilled reader that a layer of adhesive might be tried with a seal layer, this is not explicitly disclosed in the description, nor is it shown in the figures. D02 does not direct to the user to any particular method of gluing and I do not think that a layer of adhesive is the inevitable method required in D02. It is my opinion that the skilled reader is not taught to use a layer of adhesive on a seal layer, either explicitly or implicitly. Thus I find claim 2 is novel in the light of D02.
66. Claim 3 reads *'A capsule according to Claim 2, wherein the seal comprises a further layer of a bioplastic material'* and claim 4 reads *'A capsule according to Claim 2, wherein the seal comprises a further layer of aluminium foil and a further adhesive layer'*. As claim 2 is novel, it follows that claims 3 and 4 are also novel. I note that while plastic is noted in D02, I can see no hint of 'bioplastic' as such (which I understand to refer to readily bio-degradable plastic), nor do I find specific disclosure of a paper and aluminium laminate with two adhesive layers.
67. Claim 6 reads *'A capsule according to any one of Claims 1 to 5, wherein the seal has a thickness of between 0.1 and 0.3mm'* and claim 7 reads *'A capsule according to Claim 6, wherein the seal is approximately 0.25mm thick.'* The request refers to paragraph 34 which states *'[0034] The sealing material can have a thickness of 0.3mm to 2.5mm, preferably 0.5mm to 2mm.'* I find that there is overlap in the ranges for a thickness of 0.3mm, and thus find that claim 6 is anticipated, but claim 7 is not.
68. Claim 9 reads *'A capsule according to any one of Claims 1 to 8, wherein the seal comprises a triplex laminate'* and claim 10 reads *'A capsule according to Claim 9, wherein the triplex laminate paper has an adhesive underside'*. The request cites the following paragraphs as disclosing the matter of these claims:

[0018]The sealing material can be constituted of both inelastic material and resilient material such as in layers, filler matrix or blend or other forms.

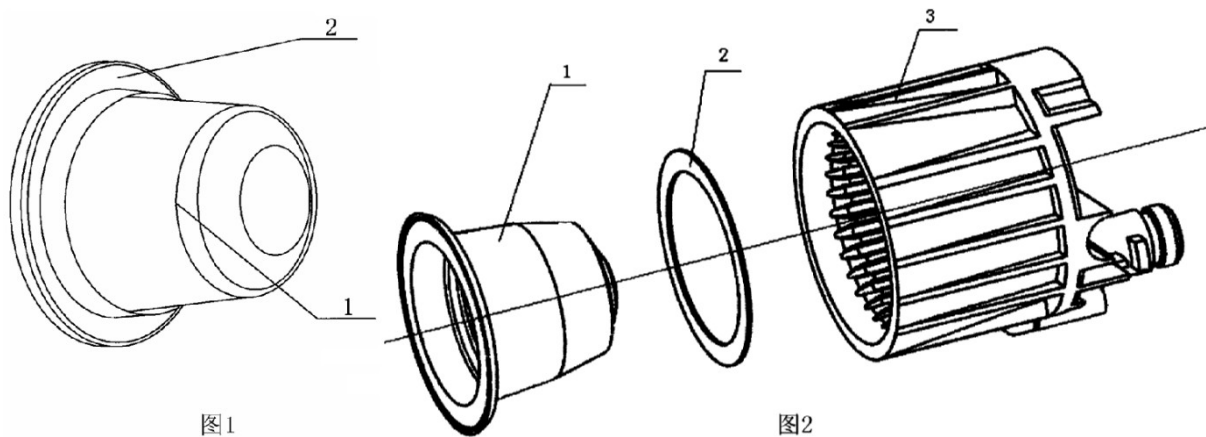
[0034] Further on, the sealing member 8 can be integral to the capsule 1 or a separate piece. In the latter case the sealing member can be mounted releasably to the base body 4 or fixed thereto e.g. by welding or by means of an adhesive.

While these paragraphs disclose the idea that multiple layers of materials might be used for a seal, they do not disclose to the skilled reader any specific possible combination of layers. Nor is there any disclosure of laminated paper as such. Thus claims 9 and 10 are novel over the disclosure of D02.

69. In summary, I find that claims 2, 3, 4, 7, 9 and 10 do not lack novelty, but claim 6 does lack novelty.

Novelty D03

70. I shall refer to the paragraphs and text from the provided machine translation.
71. Document D03 shows in figure 2 an exploded diagram of coffee capsule 1 for use in a espresso machine where the capsule is inserted into capsule containing magazine 3 with a sealing ring 2 carried by the upper face of the bottom flange of the capsule.



72. The request notes regarding feature (c) of claim 1 that D03 refers to polypropylene and notes that this is a ductile plastic material. It then argues:

Technical advantages or specific features related to the use of ductile metal are not indicated in the description of the Patent [Figure 2 shows a similar capsule to that of Figure 1 made of a ductile metal such as aluminium having a generally frustoconical form for the main body 2.] The selection of metal instead of plastic is a mere alternative. It is obvious for a person skilled in the art of coffee capsules for high pressure espresso coffee machines to select metal for forming a capsule.

and concludes by saying that all features of claim 1 are disclosed by D03.

73. I disagree. D03 does not disclose a metal capsule, only a plastic one. There is nothing I can find in the machine translation that suggests a ductile metal as an alternate, such as aluminium. While it may be known to the skilled reader that aluminium coffee capsules are common, this is not something that D03 tells the reader.
74. There seems no dispute in the observations that features (b), (d) and (e) are disclosed, but the observations do refute that the capsule is for use in a high pressure machine stating *'it does not disclose whether it is a high pressure or low pressure system as both are able to make espresso coffee.'* The request notes paragraph 4 that refers to a machine making espresso, but that paragraph does not mention any expected pressure applied to the capsule. In the observations in reply, the requestor notes that D03 does refer to a situation where if the seal were missing it would mean *'the pressure that water pump exports is inadequate'* and that reference to this pump *'firmly places it within the high-pressure domain.'* I consider that 'espresso coffee' implies that pressurised hot water is applied to coffee grounds and given the context of D03 and a broad construction of feature (a), I think that this is disclosed.
75. The request notes the following parts of D03:

[0012] Described sealing ring is paperboard sealing ring

[0025] Described sealing ring is rubber seal, EVI sealing ring, paper-plastic stick sealing ring, paperboard sealing ring.

The request argues that 'paperboard' would be understood to be a cellulose material. The observer notes that *'paper and paperboard are not synonyms.'* I think that the skilled reader would understand this as a disclosure of a cellulose material for the seal and thus feature (f) is disclosed.

76. The request argues that the part of paragraph 14 saying *'and reached good sealing effectiveness between capsule cup and the magazine of sealing ring.'* implies that, for a cellulose material seal, that seal undergoes plastic deformation as such behaviour because:

it is considered to be directly and unambiguously derivable by a person skilled in the art considering that in D03 the ring is formed by a cellulose material, has a thickness in the range of 0.1-0.8 mm and provides a strong seal.

and that the disclosed thickness range encompasses the preferred range of 0.1 to 0.3mm in the Patent where plastic deformation occurs. The observer argues against this saying

The disclosure in relation to the sealing ring is limited to a list of materials in paragraph 20 (or 25 of the translation) consisting of rubber sealing ring, an EVI sealing ring, a paper plastic composite sealing ring, or a cardboard sealing ring. The first two are rubber elastic materials and the other two in the absence of teaching to the contrary can and will be elastic materials.

77. I disagree with the observer because I do not think that the skilled reader of D03 would view the list of possible materials to mean that they would only form elastic seals in use. I also disagree with the requestor because I do not find a disclosure of a plastically deforming cellulose seal, either explicitly or implicitly. Thus I consider that feature (g) is not disclosed by D03.
78. Finally, I agree with the requestor that the reference to gluing in paragraph 14, along with the figures, does disclose feature (h) of claim 1.
79. I find that D03 does not disclose features (c) and (g) of claim 1 and thus it is not anticipated. It is my opinion that claim 1 is novel in the light of D03.
80. Because claim 1 is novel, it follows that the dependant claims are also novel. I will therefore not comment on the arguments the request presents regarding the dependant claims.

Inventive step

81. The request raises the matter of inventive step in rather generalised terms, and has no specific comment regarding D01 or D03 other than this statement:

Nonetheless, in the unlikely event that the UKIPO does identify any differences, then we submit that each of D01, D02 and D03 provide a clear teaching as to how a separate sealing ring (such as one made of cellulose material or paper) is applied to a capsule made of a ductile material (such as aluminum or PP polypropylene), which is standard for coffee capsules.

I understand that this is directed to claim 1. There seems to be no argument presented regarding the dependant claims.

82. The request does provide a little more detail regarding a potential inventive step for D02, but in their argument, the request does not clearly state what difference there is between the inventive concept of claim 1 and D02. However, because I have found that D02 shows claim 1 lacks novelty, and is thus invalid, I do not need to give my opinion on inventive step.
83. I concluded that document D01 disclosed all of the features of claim 1 apart from feature (g) which requires the seal to be plastically deformed. The above statement does not address the obviousness of plastic deformation as such. The request does not specifically argue that when providing a paper seal for D01 it would be obvious for it to be selected so as to be plastically deformed in use. Instead, the request argues that plastic deformation is implicitly disclosed. I do not think that the request provides a sufficiently detailed argument for me to give an opinion on the obviousness of document D01.
84. I concluded that document D03 at least differed from claim 1 because both features (c) and (g) were absent. Feature (c) appears to be addressed in the statement above, which argues that aluminium and polypropylene are both ductile materials 'standard for coffee capsules'. But as with document D01, I do not think there is a sufficient argument presented regarding feature (g) for inventive step.

85. I conclude that there is not sufficient detail in the request for me to give an opinion as to whether claim 1 lacks an inventive step given any of documents D01, D02 or D03.

Conclusion

86. It is my opinion that claims 1 and 6 are not novel in the light of document D02.
87. I decline to give an opinion regarding lack of inventive step.
88. Accordingly, it is my opinion that the patent is invalid for lack of novelty based on the argument and evidence submitted by the requester.

Application for review

89. Under section 74B and rule 98, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

Gareth Lewis
Examiner

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.