Intellectual Property Office

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08 July 2025

PATENTS ACT 1977

APPLICANT	Roller Deo Ltd
ISSUE	Whether patent application GB2300669.5 complies with Section 76(2) and Section 1(1)(b)
HEARING OFFICER	Laura Starrs

DECISION

Introduction

1 Patent application, GB2300669.5, entitled "Hygiene composition dispensable using apparatus" was filed on 17th January 2023 with no priority claim in the name of Roller Deo Ltd ("the applicant") and it was published as GB2626323A on 24th July 2024. The normal unextended period for putting the application in order is due to end on 17th July 2027.

2 Despite several rounds of correspondence, the applicant was unable to persuade the examiner that the claims, as amended on 8 August 2024, provided an inventive step, as required by Section 1(1)(b) of the Patents Act 1977 (hereinafter "the Act"). In addition, the examiner also considered the claims to contain added subject matter and thus they did not comply with Section 76(2) of the Act.

3 Following further phone calls between the applicant and the examiner which failed to resolve the impasse, the applicant requested a hearing on 17 December 2024. The examiner issued a pre-hearing report on 20 January 2025 which was based on the claims as amended on 8 August 2024. In the pre-hearing report, the examiner set out objections that claim 1 contained two items of added matter, in contravention of section 76(2) and that claims 1-9 all lacked an inventive step, as required by section 1(1)(b).

4 The applicant submitted skeleton arguments on 11 March 2025 in which they outlined arguments in favour of the claims comprising an inventive step as well as submitting two auxiliary claim sets. I note that the claims as amended on 8 August 2024 and the auxiliary claims submitted on 11 March 2025 were only directed towards resolving the inventive step issue. There were no observations made regarding the added matter objections nor did the amendments appear to address the added matter.

5 The application came before me at an oral hearing held by video conference on 14 March 2025. The applicant was represented by Richard Bickford-Smith and Marcelo

Motta of Basck Limited. Also present were the CEO of Roller Deo Ltd, Milo Pinckney, my assistant and an observer.

The Application

6 The application concerns a hygiene composition dispensable using an apparatus, in particular a natural personal care product such as an antiperspirant or a cleaning lotion. The application considers that the current market for such products has a number of disadvantages, such as requiring industrial mixing, mixing outside the application apparatus, and additional shipping. The application identifies that the way to overcome these disadvantages is to have a hygiene composition formed by combining and mixing a solute with water in the application apparatus itself.

The Claims

7 The applicant has submitted multiple versions of the claims for consideration during this procedure. The first, which I shall call the main request, is the amended claims filed on 8 August 2024. These are the claims that were the subject of the pre-hearing report. The applicant submitted two auxiliary requests with their skeleton arguments of 11 March 2025 which I shall call auxiliary request 1 and auxiliary request 2 respectively.

Main request – Claim 1 as amended 8 August 2024

8 Claim 1 as amended 8 August 2024 is as follows:

A method of using an apparatus to dispense a hygiene composition, wherein the apparatus includes:

(i) a container configured to hold the hygiene composition therein, wherein the container includes a neck portion,

(ii) a cradle that has a spherical ball that, when in use, is coated in the hygiene composition,

wherein the ball is configured to dispense the hygiene composition when moved, and wherein the cradle is removably attached to the container;

(iii) a lid that is removably attached to the container;

wherein the hygiene composition comprises a solute comprising:

(iv) at least one preservative agent in an amount between 0.5% w/w to 3% w/w with respect to the total weight of the solute; and

(v) at least one antimicrobial agent in an amount between 5% w/w to 25% w/w with respect to the total weight of the solute;

wherein the method includes:

(a) pouring the solute into the container;

(b) adding water into the container in an amount between 70% w/w/ to 96% w/w with respect to the total weight of the hygiene composition; and

(c) shaking the container including its contents of the solute and the water to mix them to form the hygiene composition.

Auxiliary request 1 – Claim 1 as submitted in skeleton arguments of 11 March 2025

9 Claim 1 of the first auxiliary request submitted on 11 March 2025 reads as follows (emphasis added to show difference with respect to claim 1 of the main request):

A method of using an apparatus to dispense a hygiene composition, wherein the apparatus includes:

(i) a container configured to hold the hygiene composition therein, wherein the container includes a neck portion,

(ii) a cradle that has a spherical ball that, when in use, is coated in the hygiene composition,

wherein the ball is configured to dispense the hygiene composition when moved, and wherein the cradle is removably attached to the container;

(iii) a lid that is removably attached to the container;

wherein the hygiene composition comprises a solute capable of dissolving or dispersing thoroughly in water without requiring any external tool for the dissolution thereof, comprising:

(iv) at least one preservative agent in an amount between 0.5% w/w to 3% w/w with respect to the total weight of the solute; and

(v) at least one antimicrobial agent in an amount between 5% w/w to 25% w/w with respect to the total weight of the solute

wherein the method includes:

(a) pouring the solute into the container;

(b) adding water into the container in an amount between 70% w/w to 96% w/w/ with respect to the total weight of the hygiene composition; and

(c) shaking the container including its contents of the solute and the water to mix them to form the hygiene composition.

Auxiliary request 2 - Claim 1 as submitted in skeleton arguments of 11 March 2025

10 Claim 1 of the second auxiliary request submitted on 11 March 2025 reads as follows (emphasis added to show difference with respect to claim 1 of the main request):

A method of using an apparatus to dispense a hygiene composition, wherein the apparatus includes:

(i) a container configured to hold the hygiene composition therein, wherein the container includes a neck portion,

(ii) a cradle that has a spherical ball that, when in use, is coated in the hygiene composition,

wherein the ball is configured to dispense the hygiene composition when moved, and wherein the cradle is removably attached to the container;

(iii) a lid that is removably attached to the container;

wherein the hygiene composition comprises a solute capable of dissolving or dispersing thoroughly in water without requiring any external tool for the dissolution thereof, comprising:

(iv) at least one preservative agent in an amount between 0.5% w/w to 3% w/w with respect to the total weight of the solute; and

(v) at least one antimicrobial agent in an amount between 5% w/w to 25% w/w with respect to the total weight of the solute; and

(vi) wherein the hygiene composition comprises Caprylic Acid in an amount between 0.1% w/w to 1% w/w with respect to the total weight of the hygiene composition, Benzyl Alcohol in an amount between 0.1% w/w to 1% w/w with respect to the total weight of the hygiene composition, Hexanediol in an amount between 0.5% w /w to 5% w/w with respect to the total weight of the hygiene composition, Lonicera japonica in an amount between 0.1% w/w to 1% w/w with respect to the total weight of the hygiene composition, Lonicera caprifolium in an amount between 0.1% w/w to 1% w/w with respect to the total weight of the hygiene composition, Leuconostoc/Radish Root Ferment Filtrate in an amount between 0.5% w/w to 4% w/w with respect to the total weight of the hygiene composition, Sodium Benzoate in an amount between 0.1% w /w to 0.5% w /w with respect to the total weight of the hygiene composition, Inulin in an amount between 0.5% w/w to 5% w/w with respect to the total weight of the hygiene composition

11 After the hearing, the applicant filed amended versions of the main request and both auxiliary requests on 21 March 2025. These amended versions were filed with the aim of resolving the added matter issues which had not been addressed in the main request of 8 August 2024 or the auxiliary requests of 11 March 2025. For completeness I have reproduced the amended requests below.

Amended main request – as on 21 March 2025

12 Claim 1 as amended on 21 March 2025 reads as follows (emphasis added to show difference with respect to claim 1 of the main request of 8 August 2024):

A method of using an apparatus to dispense a hygiene composition, wherein the apparatus includes:

(i) a container configured to hold the hygiene composition therein, wherein the container includes a neck portion,

(ii) a cradle that has a spherical ball that, when in use, is coated in the hygiene composition,

wherein the ball is configured to dispense the hygiene composition when moved, and wherein the cradle is removably attached to the container;

(iii) a lid that is removably attached to the container;

wherein the hygiene composition comprises a solute, in an amount between 4% to 30% w/w with respect to the total weight of the hygiene composition, comprising:

(iv) at least one preservative agent in an amount between 0.5% w/w to 3% w/w with respect to the total weight of the solute; and

(v) at least one antimicrobial agent in an amount between 5% w/w to 25% w/w with respect to the total weight of the solute;

wherein the method includes:

(a) pouring the solute into the container;

(b) adding water into the container in an amount between 70% w/w to 96% w/w with respect to the total weight of the hygiene composition; and

(c) shaking the container including its contents of the solute and the water to mix them to form the hygiene composition.

Amended auxiliary request 1 – as amended on 21 March 2025

13 Claim 1 of the first auxiliary request submitted as amended on 21 March 2025 reads as follows (emphasis added to show difference with respect to previous first auxiliary request of 11 March 2025):

A method of using an apparatus to dispense a hygiene composition, wherein the apparatus includes:

(i) a container configured to hold the hygiene composition therein, wherein the container includes a neck portion,

(ii) a cradle that has a spherical ball that, when in use, is coated in the hygiene composition,

wherein the ball is configured to dispense the hygiene composition when moved, and wherein the cradle is removably attached to the container;

(iii) a lid that is removably attached to the container;

wherein the hygiene composition comprises a solute in an amount between 4% w/w to 30% w/w with respect to the total weight of the hygiene composition, capable of dissolving or dispersing thoroughly in water without requiring any external tool for the dissolution thereof, comprising:

(iv) at least one preservative agent in an amount between 0.5% w/w to 3% w/w with respect to the total weight of the solute; and

(v) at least one antimicrobial agent in an amount between 5% w/w to 25% w/w with respect to the total weight of the solute

wherein the method includes:

(a) pouring the solute into the container;

(b) adding water into the container in an amount between 70% w/w to 96% w/w/ with respect to the total weight of the hygiene composition; and

(c) shaking the container including its contents of the solute and the water to mix them to form the hygiene composition.

Amended auxiliary request 2 – as amended on 21 March 2025

14 Claim 1 of the second auxiliary request submitted as amended on 21 March 2025 reads as follows (emphasis added to show difference with respect to previous second auxiliary request of 11 March 2025):

A method of using an apparatus to dispense a hygiene composition, wherein the apparatus includes:

(i) a container configured to hold the hygiene composition therein, wherein the container includes a neck portion,

(ii) a cradle that has a spherical ball that, when in use, is coated in the hygiene composition, wherein the ball is configured to dispense the hygiene composition when moved, and wherein the cradle is removably attached to the container;

(iii) a lid that is removably attached to the container;

wherein the hygiene composition comprises a solute in an amount between 4% w/w to 30% w/w with respect to the total weight of the hygiene composition, capable of dissolving or dispersing thoroughly in water without requiring any external tool for the dissolution thereof, comprising:

(iv) at least one preservative agent in an amount between 0.5% w/w/ to 3% w/w with respect to the total weight of the solute; and

(v) at least one antimicrobial agent in an amount between 5% w/w to 25% w/w with respect to the total weight of the solute; and

(vi) wherein the hygiene composition comprises Caprylic Acid in an amount between 0.1 % w/w to 1 % w/w with respect to the total weight of the hygiene composition. Benzyl Alcohol in an amount between 0.1 % w/w to 1% w/w with respect to the total weight of the hygiene composition, Hexanediol in an amount between 0.5% w/w to 5% w/w with respect to the total weight of the hygiene composition, Lonicera japonica in an amount between 0.1 % w/w to 1% w/w with respect to the total weight of the hygiene composition, Lonicera caprifolium in an amount between 0.1% w/w to 1% w/w with respect to the total weight of the hygiene composition. Leuconostoc/Radish Root Ferment Filtrate in an amount between 0.5% w/w to 4% w/w with respect to the total weight of the hygiene composition. Sodium Benzoate in an amount between 0.1% w/w to 0.5% w/w with respect to the total weight of the hygiene composition, Inulin in an amount between 0.5% w/w to 5% w/w with respect to the total weight of the hygiene composition.

The Law

Inventive step

15 Section 1(1) of the Patents Act 1977 states:

1(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –

(a) the invention is new;

(b) it involves an inventive step;

…

16 Sections 2(1) & 2(2) of the Act read:

2(1) An invention shall be taken to be new if it does not form part of the state of the art.

2(2) 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.

17 Section 3 of the Act states:

3 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).

18 In addition to statute, in *Windsurfing*[1] the Court of Appeal held that the question of obviousness

> "*has to be answered, not by looking with the benefit of hindsight at what is known now and what was known at the priority date and asking whether the former flows naturally and obviously from the latter, but by hypothesizing what would have been obvious at the priority date to a person skilled in the art to which the patent in suit relates*."

19 The four-step test used in *Windsurfing* was reformulated by the Court of Appeal in *Pozzoli*[2] as follows:

> *(1) (a) Identify the notional "person skilled in the art"*
> *(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, do those differences constitute steps which would have been obvious*

20 In *Generics v Yeda*[3], the Court of Appeal considered the law regarding selection inventions, with reference to Dr Reddy's and the EPO Board of Appeal decision in T 939/92 AGREVO/Triazoles 6 OJEPO 309. The position following the judgment in *Generics* is as follows:

> *i) Article 56 of the EPC is in part based on the underlying principle that the scope of the patent monopoly must be justified by the patentee's contribution to the art;*
>
> *ii) If the alleged contribution is a technical effect which is not common to substantially everything covered by a claim, it cannot be used for the purposes of judging obviousness;*
>
> *iii) In such circumstances the claim must either be restricted to the subject matter which makes the technical contribution, or a different contribution common to the whole claim must be found;*
>
> *iv) A selection from the prior art which is purely arbitrary and cannot be justified by some useful technical property is likely to be held to be obvious because it does not make a real technical advance;*

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[1] *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd* [1985] RPC 59
[2] *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588
[3] *Generics [UK] Ltd (t/a Mylan) v Yeda Research and Development Co Ltd & Anor* [2013] EWCA Civ 925 (29 July 2013)

v) A technical effect which is not rendered plausible by the patent specification may not be taken into account in assessing inventive step;

vi) Later evidence may be cited to support a technical effect made plausible by the specification;

vii) Provided the technical effect is made plausible, no further proof of the existence of the effect is to be demanded of the specification before judging obviousness by reference to the technical effect put forward.

Added matter

21 Section 76(2) states:

> *No amendment of an application for a patent shall be allowed under section 15A(6), 18(3) or 19(1) if it results in the application disclosing matter beyond that disclosed in the application as filed.*

22 In the present case the amendments submitted on 8th August 2024 were in response to an examination report so fall under 18(3) amendments.

23 Aldous J (as he was then) set out the approach to assessing added matter in *Bonzel and Schneider*[4], where he stated:

> "The decision as to whether there was extension of disclosure must be made on a comparison of the two documents read through the eyes of a skilled addressee. The task of the court is threefold:
>
> (1) To ascertain through the eyes of the skilled addressee what is disclosed, both explicitly and implicitly in the application.
>
> (2) To do the same in respect of the patent as granted.
>
> (3) To compare the two disclosures and decide whether any subject matter relevant to the invention has been added whether by deletion or addition. The comparison is strict in the sense that subject matter will be added unless such matter is clearly and unambiguously disclosed in the application either explicitly or implicitly."

Analysis

Added Matter

24 In the pre-hearing report, the examiner has identified two issues of added matter in claim 1, as amended on 8 August 2024. The first relates to the percentage amount of solute present within the hygiene composition.

25 The application as filed discloses hygiene compositions comprising 4-30% solute and 70-96% water (paragraph [0006]). There are no contrary statements teaching towards a solute range broader than 4-30% thus the examiner considered that the

[4] *Bonzel and Schneider (Europe) AG v Intervention Ltd* [1991] RPC 553

specification as filed explicitly taught the hygiene composition must comprise at least 4% and up to 30% solute.

26 Claim 1 as amended defines the hygiene composition comprising a solute and 70 - 96% water. The nature of the term "comprising" used in claim 1 allows for additional components to be included other than the water and solute, hence it is not inherent that the undefined 4-30% of the composition consists solely of the solute. Thus claim 1 defines a hygiene composition where the solute could be present in any amount up to 30%. The examiner thus concluded that the person skilled in the art is taught the solute may be present in amounts below 4% in the application as amended, which is not taught in the application as filed.

27 The second issue identified relates to the ranges in which the preservative agent and antimicrobial agent are present in the hygiene composition. The application as filed discloses various endpoints for the amounts of preservative and antimicrobial agent, all of which are with respect to the total amount of the hygiene composition (see paragraphs [0011] and [0013]). As there is no contrary teaching away from the amounts being with respect to the total hygiene composition, the examiner considered this a necessary feature.

28 Claim 1, as amended on 8 August 2024, defines the composition comprises 0.5-3% preservative and 5-25% antimicrobial with respect to the total weight of the solute. Therefore, the examiner argued that construing claim 1 to define at least 4% and up to 30% solute with respect to the total hygiene composition, the composition in claim 1 as amended comprised 0.02-0.9% preservative and 0.2-7.5% antimicrobial with respect to the total hygiene composition. Such ranges are not disclosed in the application as filed and so the examiner considered the amendment to claim 1 to contain added matter.

29 The applicant did not address the issues of added matter either in correspondence ahead of the pre-hearing report being issued nor in their skeleton arguments. At the hearing Mr Bickford-Smith explained that the applicant did not object to the points of added matter that had been raised and that they would be happy to amend the claim to remove the added matter, essentially returning the claimed ranges to those as originally filed. Mr Bickford-Smith also clarified their view that the crux of their arguments regarding the inventiveness of the claims was not affected by changes made to the ranges by the added matter.

30 Therefore, I proposed that the hearing proceed on the basis of the claims, as amended on 8 August 2024 (and the auxiliary requests of 11 March 2025) as if the added matter were not present, i.e. the solute is present in an amount of at least 4% and below 30%, and the composition comprises 0.5-3% preservative and 5-25% antimicrobial with respect to the total weight of the hygiene composition. Mr Bickford-Smith confirmed he was happy to proceed on that basis.

31 At this point I wish to note the amended versions of the main request and both auxiliary requests which the applicant filed on 21 March 2025. I am grateful to applicant and their representatives for filing these amended requests. I consider the amended versions of the claims resolve the first issue of added matter by re-introducing the requirement that the solute is present in an amount between 4% to 30% w/w with respect to the total weight of the hygiene composition. However, the

relative amounts of the preservative and antimicrobial agents are still defined with respect to the total weight of the solute rather than the weight of the hygiene composition. Therefore, I consider that the second added matter issue is still present in the amended claims. Consequently, I shall proceed to consider the inventiveness of the main request of 8 August 2024 and the auxiliary requests of 11 March 2025 as outlined in the preceding paragraph.

Inventive Step

32 To re-iterate the point above, for the purposes of considering the issue of inventive step, claim 1 as amened 8 August 2024 has been construed such that the solute is present in an amount between 4-30% w/w of the total hygiene composition and the amounts of preservative and antimicrobial agents to be defined with respect to the weight of the total hygiene composition rather than the total weight of the solute.

Step 1: (a)Identify the notional person skilled in the art and (b) identify the relevant common general knowledge of that person

33 The definition of the person skilled in the art and their common general knowledge is not in dispute. In the pre-hearing report, the person skilled in the art is defined as a formulation chemist who will have an awareness of common components in hygiene and deodorant compositions as well as the desirable characteristics of such compositions. At the hearing, Mr Bickford-Smith agreed with this definition, and I see no reason to deviate from it.

Step 2: Identify the inventive concept of the claim in question or if that cannot readily be done, construe it

34 In the pre-hearing report, the examiner has identified the inventive concept as:

"a method of using an apparatus to dispense a hygiene composition, the method comprising pouring a solute comprising 0.5-3% preservative and 5-25% antimicrobial (referred to as "the defined amounts" from this point) into a container of the apparatus, pouring 70-96% water into the apparatus, and shaking the mixture, where the apparatus comprises a container with a neck portion, a cradle holding a ball which, in use, is coated with the liquid and dispenses the liquid when moved, and a lid, where the cradle and lid are removably attached to the container (i.e., where the apparatus is a rollerball container)."

35 In the skeleton arguments, and at the hearing, the applicant argued for alternative formulation of the inventive concept. They start by observing that the term "solute", while used in its natural meaning as it would be recognised by a person skilled in the art must be read in the context of paragraph [0009] of the specification which states:

"The term "solute" as used herein refers to a substance that is produced by removing or reducing a diluting agent or by selective accumulation of atoms or molecules of the substance. It will be appreciated that the solute is capable of dissolving or dispersing thoroughly in water without requiring any external tool for the dissolution thereof."

36 According to the applicant, the invention lies in the overall method which in their view provides clear technical advantages over the prior art. In the hearing, Mr Bickford-Smith explained that initially the application was directed towards a formulation, but during the prosecution of the case, it was recognised that the inventiveness lay in the overall methodology which allows an end user to mix the products in a single container without external utensils and that the mixing occurs in a matter of 20-30 minutes. The claim was redrafted to include the methodological steps. Mr Bickford-Smith argued that claim 1 as amended on 8 August 2024, was limited to solutes as defined by paragraph [0009] of the specification and this meant that the claim was limited to those hygiene compositions which mix readily with water without requiring an external tool.

37 Essentially, Mr Bickford-Smith appears to be arguing that only solutes with components that fall within the claimed ranges that dissolve in water without requiring an external tool for the mixing, are within the scope of the claim. He appears to be asking me to ignore any compositions falling within the claimed ranges that do not mix readily without the assistance of an external tool. I do not find this a convincing argument. How is the person skilled in the art to know which compositions within the defined ranges mix readily with water and which do not? The specification as filed does not provide any details of how this distinction may be made, merely making assertive statements that a distinction can be made (paragraph [0009]). The person skilled in the art must rely on their common general knowledge which would inform them of conditions (both chemical and physical) that impact the ease with which the solute dissolves in water.

38 I accept that the solute must be capable of dissolving in water. Construing the claim in the context of paragraph [0009] of the specification, I also agree that the solute is capable of dissolving without requiring any external tool. However, I note that paragraph [0009] goes on to state:

> “Optionally, the apparatus may be shaken or left undisturbed for a certain amount of time in order to increase the rate of dissolution. Optionally, the apparatus may be shaken for the time between 5 seconds to 20 seconds or left undisturbed for the time of 20 to 30 minutes.”

39 Therefore, it seems clear to me that shaking the apparatus to affect mixing is advantageous. So advantageous that it has been included as an essential feature of claim 1, despite the description merely stating that it is optional.

40 Claim 1 consists of three parts, an apparatus, a solute and the method to make the hygiene composition. Features (i), (ii) and (iii) relate to the apparatus, features (iv) and (v) relate to the solute and steps (a), (b) and (c) are the method steps. The apparatus features appear to be an entirely conventional rollerball container commonly used to dispense deodorant compositions albeit one with a detachable cradle and lid.

41 In my view the crux of the inventive concept lies in the combination of the hygiene composition and the method by which the composition is formed by dissolving the solute in water. I believe the statement of the inventive concept formulated by the examiner in the pre-hearing report captures this combination. It includes the step of mixing the solute and the water to form a hygiene composition by shaking the

container of the rollerball. This is, I believe, consistent with the applicant's view that the solute is capable of dissolving without requiring any external tool. Therefore, I shall adopt the examiner's formulation of the inventive concept as set out in the pre-hearing report.

Step 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

42 The examiner has cited six documents and consider that the claims are obvious in light of each of them individually. The six documents are:

D1	Greener Beauty, 2022, "Milly & Sissy Cotton Fresh Deodorant", [online], Available from: https://www.greenerbeauty.com/product/milly-sissy-cotton-fresh-deodorant/ (Accessed 06/12/2023)		See especially sections entitled 'Ingredients' and 'How to use'.
D2	DE 19520789 A1	WEILAND WOLFGANG	See especially column 3, lines 2-8.
D3	US 2017/151580 A1	TOH et al.	See especially figures 2-5 and paragraph [0031].
D4	US 2022/295967 A1	WISE	See especially paragraphs [0009] and [0078].
D5	WO 01/01945 A1	ASKEW DARREN JOHN	See especially figure 3.
D6	Farm Girl Inspirations, 2016, "Best DIY Roll-On Deodorant (works like crazy)! Stop the stink for up to 48 hours, no joke.", [online], Available from: https://www.joyelick.com/2015/06/best-diy-roll-on-deodorant-works-like.html (Accessed 06/12/2023)		See especially sections entitled 'Ingredients' and 'Instructions'

43 At the hearing and in their skeleton arguments, the applicant restricted detailed comments to document D1. In their view, D1 was the closest prior art and D2 – D6 only served as examples which disclosed specific ingredients. In their view D2 – D6 do not disclose the specific combination of features in the inventive concept.

Document D1

44 D1 discloses a deodorant refill sachet comprising a powder including sodium benzoate (preservative) and zinc oxide (antimicrobial) which is gently mixed with water (at 45-50 degrees Celsius) in a jug to make a hygiene composition before being poured into a rollerball apparatus and then shaken. The method dissolves 6g of powder in 40ml of water (around 13% w/w solute to 87% w/w water at 45ºC). D1 is silent with respect to the amounts of the preservative and antimicrobial agents present in the solute.

45 The examiner considered that the differences between D1 and the inventive concept to be (1) the use of a jug for the mixing of the solute in water instead of mixing in the rollerball apparatus itself, (2) the fact that D1 is silent on defining the amounts of preservative and antimicrobial agents in the hygiene composition

46 The powder disclosed in D1 dissolves in water and thus may be considered as a solute. The applicant's argument is that the definition of solute from paragraph [0009] of the specification as filed includes that it must be capable of dissolving without requiring an external tool.

47 In the hearing, the applicant argued that D1 required the use of a whisk and that the use of this external tool was a difference between the disclosure of D1 and the present inventive concept. I do not agree with this assessment. In the section on "How to Use", D1 discloses the method of using the product which is as follows:

"Pour 40 ml of hot water (45 – 50^{o}C) into a jug

Loosen the powder in a sachet, pour into the jug and gently mix ensuring you don't create foam, then pour into the 50ml deo bottle

Add the roller and lid and give it a good shake

Leave it overnight for all the ingredients to make friends

In the morning give it another good shake & you're ready to go"

48 There does not appear to be any reference in D1 to using a whisk to mix the solute with the water. D1 specifically requires gentle mixing to avoid forming a foam which to my mind does not suggest whisking. The instructions appear silent on how the mixing is done although I note there is one photograph included that shows a spoon. Nevertheless, the written instructions leave it to the user to decide how to mix the solute in the water, merely instructing them to do so gently.

49 This then has the difference from the inventive concept that the hygiene composition isn't formed by pouring a solute into a rollerball apparatus, then adding water to the rollerball apparatus. Rather the hygiene composition is first gently mixed in a jug before being transferred to a rollerball apparatus and further shaken.

50 The applicant has further argued that the method disclosed in D1 differs from the claims because it is necessary to leave the hygiene composition of D1 overnight. The specification of the present application states that the hygiene composition is ready in 20-30 minutes. However, this feature of being ready in 20-30 minutes isn't claimed. Therefore, I do not agree that being left overnight is a distinction between the disclosure of D1 and the present application.

51 The applicant also suggested at the hearing that a thermometer would be required in carrying out the method disclosed in D1 and that this is a further difference between D1 and the inventive concept. D1 mentions that hot water is required, and a specific temperature range is mentioned (45 – 50 degrees Celsius). However, D1 does not specifically mention the need to measure the temperature of the hot water with any precision. In addition, the common general knowledge of the skilled person would include how water temperature affects dissolution rates. They would further consider

from reading D1 that a precise measurement of water temperature was not strictly necessary. Therefore, I do not consider the requirement of a thermometer to be a difference between D1 and the inventive concept.

52 In my view there are two differences between D1 and the inventive concept. First, D1 is silent on the relative amounts of the preservative and antimicrobial agents present in the solute. Second, the solute is mixed with water in a jug before transferring it to the rollerball apparatus in D1 whereas in the present application mixing is done in the rollerball apparatus. For completeness, I shall now summarise the differences between documents D2 – D6 and inventive concept.

Document D2

53 In the pre-hearing report, the examiner summarises that D2 discloses a deodorant composition comprising a powder in a sachet which is poured into a liquid and dissolved by shaking (column 3, lines 2-8). The composition may be dispensed from a rollerball apparatus (column 1, lines 59-61). D2 is silent with respect to the composition of the powder, and it appears the hygiene composition is formed before transferring to the rollerball apparatus. I agree with this summary.

Document D3

54 D3 discloses a dispenser for a hygiene composition comprising a refill container which contains the hygiene composition (figure 2) which is placed into a container and pierced to release the composition (figures 3 and 4) and water is subsequently added (figure 5). Alternatively, the refill container is completely water-soluble (column 3, lines 7-9). Notably, the composition of D3 is not mixed in an intermediate container and is formed directly in the final container. D3 is silent with respect to the composition of the solute, does not use a rollerball apparatus and does not give instruction to shake the composition.

Document D4

55 D4 discloses a refillable deodorant dispenser (see paragraph [0009]) which may be used with a refill solution in a cartridge. The refill solution comprises a solute intended to be mixed with a solvent. The cartridge may be water-soluble, and it is placed inside the dispenser containing the solvent which dissolves the cartridge including the solute thus forming the deodorant (See paragraph [0078]). Figures 7 and 8 show a rollerball apparatus can be used. D4 does not disclose the composition of the solute, nor does it mention shaking the composition to mix.

Document D5

56 D5 discloses a refillable deodorant dispenser (figure 3). Alum is added to the dispenser and water is subsequently added to produce a deodorant composition. Notably, the composition of D5 is not mixed in an intermediate container and is formed directly in the final container. D5 does not disclose a preservative, nor the defined amounts of the components used, it does not use a rollerball apparatus and D5 does disclose not shaking the composition to mix.

Document D6

57 D6 discloses a roll-on deodorant composition that can be made at home using natural ingredients. The composition is made my mixing a solute and water in a bowl using a whisk for mixing. D6 does not disclose the components of the present hygiene solution in the relative defined amounts, nor does it disclose forming the hygiene composition in the rollerball dispenser.

Step 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

Document D1

58 As stated above, there are two differences between D1 and the inventive concept. First, D1 does not disclose the relative amounts of the preservative and antimicrobial agents present in the solute. Second, the solute is mixed with water in a jug before transferring it to the rollerball apparatus rather than mixing in the rollerball apparatus itself. I consider the apparatus features of the claim to be an entirely conventional rollerball container commonly used to dispense hygiene compositions such as deodorants.

59 The examiner has argued that the relative amounts of the preservative and antimicrobial agents in the solute are arbitrary selections and thus not considered to provide a technical contribution for the purposes of assessing inventive step. This is highlighted on page 6 of the pre-hearing report which states:

"In light of Generics [UK] LTD (t/a Mylan) v Yeda Research and Development co. LTD & Anor [2013] EWCA Civ 925, in order for the technical effect to confer a selection invention and therefore an inventive step, it must be limited to the subject matter which makes the technical contribution. In relation to the present application, the technical effect must be associated with a specific set of ingredients making the solute and a particular form they are provided in which enables the disclosed uniformity and speed of dissolution. However, it is noted there is no particular solute composition, preservatives or antimicrobials which have been identified and exemplified to which this technical effect can be attributed. Resultantly, it would not appear the present application may derive any inventiveness from the composition of the solute, therefore the amounts used are obvious selections and it is merely a matter of choice to mix the composition in the rollerball apparatus over an intermediate container".

60 In the examiners view, the specification as filed only broadly defines the preservative and antimicrobial agents used in the specified amounts. The examiner argued that the alleged technical effect of increased uniformity and speed of formation of the solution (as presented in paragraph [0010] and [0041] of the agent's letter dated 25 January 2024), is not made plausible across the whole range claimed.

61 At the hearing, the applicant's representative Mr Motta presented a counterargument to this view. What I understand Mr Motta to be arguing is that not only must the solute be formed with antimicrobial and preservative agents in the claimed ranges, but the solute must also dissolve as stated in paragraph [0009] of the description. This combination of features makes the selection purposeful in Mr Motta's view.

62 I agree with the examiner's point that the description as filed does not exemplify any solute composition including proportions of preservative and antimicrobial agents within the composition. All that is disclosed are statements which specify embodiments at either end of the claimed ranges.

63 Paragraph [0010] states:

"In an embodiment, the hygiene composition comprises 4% w/w solute and 96% w/w water with respect to the total weight of the hygiene composition. In another embodiment, the hygiene composition comprises 30% w/w solute and 70% w/w water with respect to the total weight of the hygiene composition. It will be appreciated that the solute is engineered or formulated using a combination of ingredients in accurate proportions such that when the solute comes in contact with the water in the apparatus it forms a uniform hygiene composition inside the apparatus."

64 Paragraph [0011] goes on to state:

"The solute comprises at least one preservative agent. Herein, the term "preservative agent" refers to a substance that is added to the hygiene composition to prevent decomposition by microbial growth or by undesirable chemical changes. Optionally, the concentration of the preservative agent lies in the range between 0%, 0.5%, 1 %, 1.5% or 2% up to 0.5%, 1 %, 1.5%, 2% or 3% w/w with respect to the total weight of the hygiene composition."

65 Paragraph [0013] then states:

"The solute comprises at least one antimicrobial agent in an amount between 0% w/w to 25% w/w with respect to the total weight of the hygiene composition…Optionally, the concentration of the at least one antimicrobial agent lies in the range between 0%, 5%, 10%, 15%, or 20% up to 5%, 10%, 15%, 20% or 25% w/w with respect to the total weight of the hygiene composition."

66 Paragraphs [0010], [0011], and [0013] are the only refences made in the description to the compositions of the solute in the hygiene composition and these merely make statements about the end points of the ranges claimed in claim 1. Assuming this disclosure to be sufficient to allow the skilled person to work the invention, in the absence of any further teaching in the application the person skilled in the art must rely on their common general knowledge to infer which compositions within the claimed range would dissolve uniformly and quickly as stated in paragraph [0009] of the description. The person skilled in the art, based on their common general knowledge, would find it obvious to identify the optimal amounts of the antimicrobial and preservative agents in D1 which are well known components of hygiene compositions present in typical amounts. Therefore, I agree with the examiner that the claimed ranges do not form a technical effect that has been made plausible across the whole range that is claimed and thus the selection of the ranges is arbitrary.

67 The examiner has argued that the skilled person would readily consider, as a routine workshop modification, mixing the solute/powder and water in D1 in the rollerball apparatus rather than a separate jug. At the hearing, the applicant and their

representatives placed great emphasis on the need for external tools to mix the composition of D1 where the present application only requires mixing in the rollerball dispenser.

68 As I have already discussed above, D1 does not specifically require an additional mixing tool such as a whisk, as stated by the applicant. The only difference is that the composition is gently mixed in a jug so as to avoid forming a foam before being transferred to the rollerball dispenser and shaken. In my view, the person skilled in the art would find this an obvious workshop modification. Such a skilled person would know of various suitable ways to mix the solute and water disclosed in D1 without forming a foam, including placing the ingredients in the closed dispenser and gently inverting or shaking it.

69 While I have described the two differences between D1 and the inventive concept separately above, I have considered if the skilled person would find the combination of them obvious. In my mind they would. The form of the claim is unusual in that it combines a method, an apparatus and a solute composition. However, I do not believe the combination itself to provide any synergy between the three elements of the claim. The apparatus is a conventional rollerball. The solute composition comprises well-known components in proportions that the skilled person would find typical. The method of mixing the solute and composition is one which the skilled person would find obvious irrespective of the characteristics of the hygiene composition. Consequently, I find that claim 1 as amended on 8 August 2024, lacks an inventive step over the disclosure of D1.

70 Claims 2 – 9 of the amended claims filed 8 August 2024 relate to additional features of the hygiene composition which are well known components of such compositions. Sodium benzoate is a well-known preservative and potassium alum is a well-known antimicrobial. Additionally, the use of texturisers and thickeners, such as arrowroot and xanthan gum, in cosmetic and hygiene compositions as well as emollients are all well-known ingredients. Consequently, I consider claims 2 – 9 to lack an inventive step.

Documents D2 – D6

71 In the pre-hearing report, the examiner has argued that the claims lack an inventive step over the disclosures of each of D2 – D6 individually. The examiner followed similar reasoning in coming to their conclusion as they did in considering D1. The applicant did not address the disclosures of D2 – D6 in their skeleton arguments or at the hearing. In their view, D1 was the closest prior art to the present application.

72 I agree with the applicant that D1 is the closest prior art to the present application. Having found the claims to lack an inventive step over the disclosure of D1, I do not consider it necessary to analyse the inventiveness of the claims against D2 – D6 in detail.

Auxiliary Request Claims

73 Claim 1 of Auxiliary request 1 differs from the claim of the main request only in that the auxiliary request specifically includes the requirement that the solute is capable of dissolving or dispersing thoroughly in water without requiring any external tool for

the dissolution. This amendment is merely adding specific wording to the claim which reflects construing the claim in the context of paragraph [0009] of the description as filed. This is the argument that the applicant put forward at the hearing in relation to the main claim set and which I have already adopted in considering the inventiveness of the main request claims above. As I have already concluded above, D1 does not specifically require an additional mixing tool such as a whisk, as stated by the applicant. The only difference is that the composition is gently mixed in a jug before being transferred to the rollerball dispenser and shaken. In my view, the person skilled in the art would find this an obvious workshop modification. Therefore, I find the claims of Auxiliary request 1 to lack an inventive step for the same reasons as set out above.

74 Claim 1 of Auxiliary request 2 differs from claim 1 of the main request by specifically including the requirement the solute is capable of dissolving or dispersing thoroughly in water without requiring any external tool for the dissolution and by details of other components in the hygiene composition (caprylic acid, benzyl alcohol, hexanediol, lonicera japonica, leuconostoc/radish root ferment filtrate, sodium benzoate, inulin). These all appear to be well known components found in hygiene compositions such as deodorants. In my view the person skilled in the art would know of these typical additional components as part of the common general knowledge. Furthermore, the ranges specified in the claims appear to be arbitrary selection for the same reasons as found above in relation to the main request. Therefore, I find the claims of Auxiliary request 2 to lack an inventive step.

75 The amended claims filed on 21 March 2025 differ only from those amended on 8 August 2024 in that they re-introduced the requirement that the solute is present in an amount between 4% to 30% w/w with respect to the total weight of the hygiene composition. The amendments have no material effect on the matter of inventive step. Therefore, I find the amended claims and amended auxiliary requests filed on 21 March to lack an inventive step.

Conclusion

76 I find the claims of the main request filed 8 August 2024 to lack an inventive step as required by section 1(1)(b) of the Patents Act 1977 and to also contain added matter contrary to section 76(2). I also find Auxiliary request 1 and Auxiliary request 2 claims, filed with the skeleton arguments on 11 March 2025 and the amended auxiliary request claims filed on 21 March 2025 to lack an inventive step and contain added matter. I have carefully considered the dependent claims, and the description, and I do not see anything which could form the basis of a valid claim. Therefore, I refuse the application under section 18(3).

Appeal

77 Any appeal must be lodged within 28 days after the date of this decision.

LAURA STARRS
Patent Examination Group Head