



PATENTS ACT 1977

APPLICANT	Eric Warren
ISSUE	Whether patent application GB1616513.6 complies with sections 1(1)(b), 4A(1)(a), 14(5)(b) and 76(2) of the Patents Act 1977
HEARING OFFICER	Phil Thorpe

DECISION

Introduction

- 1 Patent application GB1616513.6 entitled “Apparatus and method for killing pathogens” was filed on 29 September 2016 claiming priority from GB application 1522622.8 which was filed on 21 December 2015. The application was published on 28 June 2017 having publication number GB2545770.
- 2 Despite several rounds of correspondence between the examiner and the applicant’s representative and amendments to the claims, the applicant was unable to satisfy the examiner that the application met the requirements of the Patents Act 1977 (the Act). In particular, the examiner was not satisfied that the claimed invention is inventive, that it does not contain added subject matter, and that it is clear.
- 3 With the position unresolved, the applicant, in correspondence dated 14 May 2021, requested a hearing. The examiner subsequently summarised their objections in a letter dated the 25 May 2021. The matter came before me at a hearing on 1 July 2021 where the applicant was represented by Mr Ian Palmer. In advance of the hearing Mr Palmer provided submissions, for which I am grateful.
- 4 A discretionary extension to the compliance period was requested on 1 June 2021 to extend the compliance period. I can confirm that this request has been accepted and that the compliance period therefore extends to 9 August 2021.

The Invention

- 5 The invention is concerned with killing pathogens, such as bacteria, viruses and other infectious agents, in a volumetric space. In particular, the invention provides an apparatus and method for killing pathogens in the treatment space of an ambulance through the use of equipment to dispense stored hypochlorous acid (HOCL) in the form of a mist into the space. Furthermore, additives may be included in the stored

HOCL solution. These additives include deodorisers, insect repellents and/or substances providing fragrances or aromas.

- 6 The latest claims are those filed on the 18 May 2021. These comprise 12 claims in total, with claim 1 being a claim to an apparatus and claim 10 being a claim to a corresponding method. Claim one reads as follows:

Apparatus for killing pathogens in the air and on the surfaces of a volumetric space(s) forming the medical treatment space(s) inside an ambulance or like vehicle and on the exposed surfaces of people and/or creatures and/or items in that (those) volumetric space(s) comprising:-

- i) a volumetric space having exposed surfaces therein;
- ii) equipment incorporating the features of GB patent No. 2 450 536, specifically including:-
 - a) a storage facility containing a supply of ready to use hypochlorous acid (HOCl) or a solution thereof to kill pathogens;
 - b) a means to access, generate and dispense the HOCl or its solution in the form of a mist into the volumetric space so that it is circulated naturally or by forced convection therein;
 - c) an internal source of power or access to an external source of power;
 - d) a control system; and
- iii) the hypochlorous acid storage facility also includes one or any of other additives, such as deodorisers, insect repellents and / or substances providing fragrances or aromas;

characterised in that the control system is constructed so that it can activate the equipment to generate and dispense the mist as and when required so that said mist can be dispersed throughout the volumetric space and thus contact all exposed surfaces therein and kill the pathogens thereon and further characterised in that the apparatus can be operated either continuously or intermittently as required whether or not people/creatures are present in said space and further characterised in that the other additives may act to calm patients in the ambulance thus contributing to their therapeutic treatment.

Inventive Step

- 7 Section 1(1) states:

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;
- (c) it is capable of industrial application;

(d) the grant of a patent for it is not excluded by subsections (2) and (3) or section 4A below;

8 Section 3 then sets out how the presence of an inventive step is determined. It says:

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).

9 It is well-established that the approach to adopt when assessing whether an invention involves an inventive step is to work through the steps set out by the Court of Appeal in *Windsurfing*¹ and restated by that Court in *Pozzoli*². These steps are:

(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, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

10 The examiner considers that claims 1-12 do not provide an inventive step and has based his objection primarily on WO 2015/102997 A1 – referred to as ‘D7’ throughout the hearing. The examiner has also raised an inventive step objection on the basis of GB 2450536 A (D6), and further considers the claims to be not inventive in light of any of WO 2015/105852 A1, WO 2015/182548 A1, JP 2000/300649 A, JP 2000/197689 A, JP 2006/081802 A (D1-5).

11 At the hearing Mr Palmer agreed that the *Windsurfing/Pozzoli* test was the appropriate way to assess inventive step. At the hearing the discussion focussed on apparatus claim 1.

Applying the *Windsurfing/Pozzoli* test

Identify the notional “person skilled in the art” and the relevant common general knowledge of that person

12 The examiner considers the person skilled in the art to be “a designer of disinfection equipment for use in enclosed spaces” with “a particular interest in the use of disinfectant mists/fogs”. At the hearing Mr Palmer confirmed that he was comfortable with such a definition of the person skilled in the art.

13 The examiner states that the common general knowledge of such a person “would extend to knowing of commonly used disinfectant compositions, including an understanding of the safety (e.g. toxicity) of such compositions”. Furthermore, the examiner considers the common general knowledge to encompass “a knowledge of common methods of delivering such compositions, which includes the use of fogging

¹ *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59

² *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588

machines utilising a nebuliser. as well as other methods of vaporisation including evaporation arising from heating”.

- 14 Whilst not stated explicitly by the examiner, I think that including additives in disinfecting/cleaning products to make them smell more pleasant (or at least less disagreeable) to people is a common practise, and thus the person skilled in the art’s common general knowledge regarding disinfectant compositions would extend to including such an additive.
- 15 At the hearing Mr Palmer did not directly discuss the common general knowledge of the person skilled in the art – rather he focussed on the differences between the invention and the prior art. Mr Palmer did mention that the “designer would be familiar with this type of environment”, and with regard to insect repellent “he would know what that means, and how it works.”

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

- 16 At the hearing Mr Palmer agreed that claim 1 is directed to apparatus which is suitable for use in an ambulance or like vehicle. We then went on to discuss a number of concerns I had with claim 1.
- 17 Claim 1 is to an apparatus, but it then goes on to claim the volumetric space (i.e. part of the ambulance). Mr Palmer suggested that the wording of this could be changed, and ultimately, I do not think this has too much bearing on construing the inventive concept. Claim 1 also talks about equipment “incorporating the features of GB patent 2450536” and then lists specific features a)-d) of that patent. I think this leads to confusion as to what features are being claimed – i.e. whether the four features mentioned are an exclusive list. Again, I do not think this greatly impacts the construing of the inventive concept, but at the hearing Mr Palmer clarified that the features incorporated in claim 1 were those listed a)-d). Whilst there is some ambiguity as to what additive(s) is also included in the hypochlorous acid storage facility, Mr Palmer confirmed that the storage facility could include any of deodorisers, insect repellents, substances providing fragrances or aromas; or any combination of these.
- 18 Regarding the stated characterising features of claim 1, I noted that the features of the control system were defined by the outcome, or result to be achieved, and thus created some confusion as to the technical features being claimed. Again, ultimately, I do not think this is crucial in determining the inventive concept as it is apparent that the control system has to activate and dispense the mist.
- 19 Of more consequence is the final part of the claim which states that the additive(s) to the HOCL “may act to calm patients in the ambulance thus contributing to their therapeutic treatment”. The question here is does this impose any additional requirement on the nature of the additive or additives. Mr Palmer stated that “a pleasant sanitised environment will clearly be more acceptable to a patient” and “this will obviously contribute to his subsequent therapy: it will put him in a better frame of mind”. That however is entirely subjective. If a patient is allergic to fragrances, deodorants etc. then they are not going to be put at ease. Hence, I do not believe

this final part of the claim restricts the claim nor the specific additives listed in any way.

20 Mr Palmer was keen to stress at various points throughout the hearing, and in his submissions, that the apparatus was a 'sanitiser'. However, based on the claims currently on file I do not consider there to be any features which limit the apparatus to being a sanitiser. In particular, the preamble to claim 1 simply discusses "killing pathogens". Furthermore, there is nothing in claim 1 which limits the apparatus to producing a "dry mist" or that the apparatus is "ceiling mounted" – both of which were referred to by Mr Palmer during the hearing. Mr Palmer also discussed that the present apparatus was "useable where people are present". Whilst the claim refers to operating the apparatus whether or not people are present, I accept that the apparatus must be suitable for use, where people are present in the volumetric space.

21 Putting all this together, I construe the inventive concept of claim 1 to reside in:

"an apparatus, suitable for use in an ambulance or like vehicle, which has a storage facility containing hypochlorous acid (HOCL) and an additive(s) including any, or a combination of: deodorisers, insect repellents, substances providing fragrances or aromas, in which the HOCL and additive(s) can be dispensed into a vehicle space that may contain people in the form of a mist"

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 and viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

Document D7

22 WO 2015/102997 A1 (D7) was considered by the examiner to be the most relevant prior art. This document discloses apparatus comprising a storage facility (for example 623,624 in fig 8) containing a supply of disinfectant solution to kill pathogens. Paragraph 44, for example, of D7 discloses that the solution includes hypochlorous acid (HOCL). D7 also discusses that this solution has a pH value of "at least about 9.0 or higher" (see paragraph 44). The HOCL solution may be combined with another component – in particular a biocide (see paragraph 45). D7 further has a controller 650 and vapor generating element, or fogging equipment, (621,622) to dispense the solution in the form of a vapour or mist. In order for the apparatus to operate there must be a source of power. Paragraph 98 of D7 refers to various fogging equipment and various size ranges of droplet that can be produced – from 7 to 30 microns; 1 to 2 microns; 2 to 30 microns or 2 to 6 microns. Figure 8 from D7 is reproduced below.

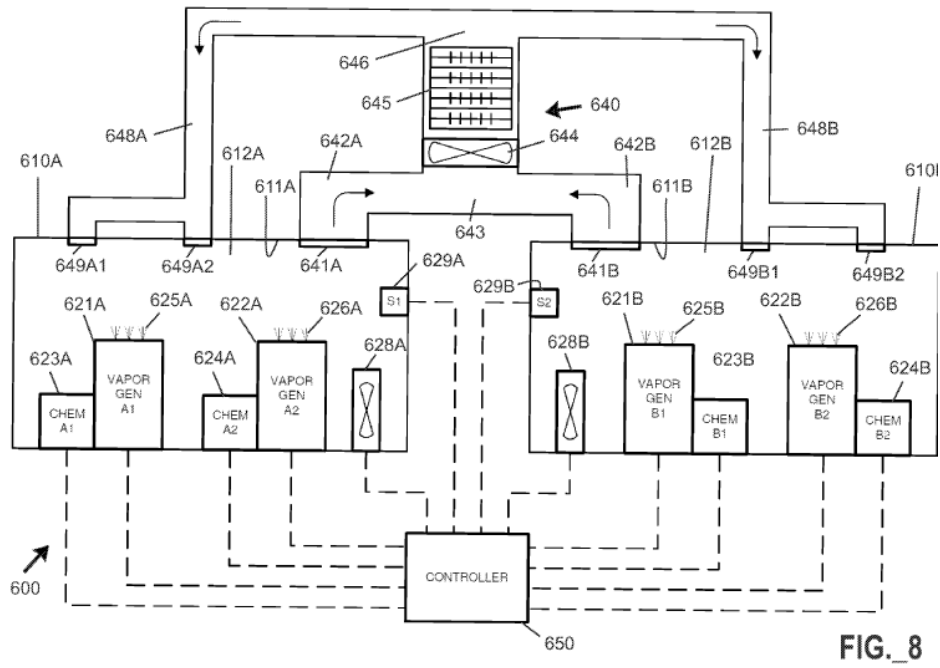


FIG. 8

- 23 At the hearing Mr Palmer agreed that the apparatus of D7 uses hypochlorous acid (HOCL) as it “is one of the agents cited” in the document. Paragraph 112 of D7 states that the apparatus may be used to “disinfect vehicles (e.g. emergency vehicles)”. There was some discussion at the hearing as to whether the apparatus of D7 was “suitable for use in an ambulance or the like”. Mr Palmer accepted it was but went on to argue that “D7 doesn’t disclose something which is useable with people or creatures present because of the strength of the hypochlorous acid” (i.e. pH 9 or higher).
- 24 There is support for Mr Palmer on this in the description of D7 where it notes that the method may be operated on a timer and/or remotely, to permit vaporized liquid disinfectant to be supplied for a specified time, and to permit the supply of vaporized liquid disinfectant to be stopped and remain off for a desired period of time (e.g., a waiting period) to permit vaporized disinfectant liquid to settle on surfaces and/or dissipate prior to re-entry of occupants into a treated space. It adds that it may be desirable to have a waiting period in a range of from 1 to 4 hours. A treated space may be generally considered safe to re-enter when airborne concentration of liquid disinfectant vapor is below 1 ppm.
- 25 The application as filed does not specify the precise pH level of the HOCL used by the invention though it notes that it is ready to use (RTU) HOCL that is:

“prepared by Aqualution Systems Ltd. of Histon, Cambridge, CB24 9PT under the trade names TriBioSan™, TriBioSan Zero™, BioSan™ and BioSan Zero™.

HOCl does not affect people's hair, skin, eyes, lungs or clothing but is lethal to pathogens, e.g. bacteria, viruses, etc. It has US Federal Drugs Agency (FDA) and USDA approval for use for a range of medical, food (direct and indirect contact) and human contact applications under 21 CFR 173,315, 21 CFR 172,2105, 21 CFR 176, 170 and 21 CFR 177,2800 and Environmental Protection Agency (EPA) approval under 40 CFR 180 1054. Aqueous solutions of HOCl are non-toxic to humans and animals and are fully biodegradable so do not represent an environmental hazard.”

- 26 Further guidance on the possible use of HOCL with people present can be found in documents D1-D3.
- 27 WO2015182548 (D2) which discloses a large-capacity ultrasonic space sterilizing humidifier using an aqueous hypochlorous acid solution notes that:
- “Here, when hypochlorous acid is explained, hypochlorous acid has its bactericidal power dependent on Ph, and shows the greatest bactericidal activity in a weakly acidic region which is harmless to the human body of Ph 5 to 6.”
- 28 Further, WO2015105852 (D1) discloses a method of disinfecting an area or enclosed space using a fog of a disinfecting composition comprising liquid droplets having diameters between about 0.5 micron and about 20 micron, the disinfecting composition comprising hypochlorous acid and wherein the disinfecting composition has a pH between about 3 and about 7.5. It notes that disinfecting compositions such as hypochlorous acid have been found to be highly effective against virtually all fungi, bacteria, and viruses while also showing no adverse effect on the cornea, sclera, mucous membrane, oropharynx/uvula area, epidermis, dermis, or fatty tissues of humans or animals after extended contact.
- 29 Finally JP2000300649 (D3) discloses the use of a concentration of the hypochlorous acid aqueous solution in the range of preferably 1 to 500 ppm, noting that is desirable to use a solution having a concentration of 60 ppm or less in a place where a person is present in consideration of safety to the body. This document does not specify any particular pH values for the solution.
- 30 So, what do I take from these various disclosures? It seems clear that hypochlorous acid is in some form suitable for use as a mist dispersant even when humans are present. I accept that that might not be the case where the HOCL solution has a higher pH level greater than for example 7.5.
- 31 Hence I consider the difference between D7 and the inventive concept to be the addition of an additive(s), including any, or a combination of: deodorisers, insect repellents, substances providing fragrances or aromas, to the hypochlorous acid (HOCL) solution and that the solution disclosed in D7 is at a pH level likely to make it unsuitable for use when people are present.
- 32 The examiner considers the provision of an aroma or fragrance into a composition designed to be vaporised in the presence of people to not be inventive, and that it is ‘de rigueur’ to undertake such a step. In his submission Mr Palmer suggests that it is easy to say a new combination of features ‘is obvious’, but takes a laterally-thinking person to suggest it in the first place, and the inclusion of a mister with sanitising aromatics is such an example. While Mr Palmer notes that the use of mist generated fragrances is known in conference venues, before board meetings etc. it is considered ‘fringe (quack) treatment’ and is definitely not mainstream medical practise. At the hearing Mr Palmer further emphasised that the apparatus of D7 was for fumigation and sterilisation (using strong chemicals), and thus questioned why fragrances would be put in into the mixture when you couldn’t have people present.
- 33 When presented with D7, I think it would be clear to the person skilled in the art, based on their common general knowledge, that an additive such as that producing a fragrance or aroma, or a deodoriser would be worth using in a solution which is to

be dispensed in an enclosed space such as the treatment area of an ambulance. One can consider such additives to be “lying in the road” for the skilled worker to use. I can see no technical reason why the apparatus in D7 would not be able to dispense the HOCL with the additives.

- 34 Also, the skilled person when presented with the possibility that the HOCl solution might be dispensed into a space where people are present would be mindful of the precise formulation used and would choose one that is safe. As noted in the description in the application in issue, ready to use solutions that would be safe in such circumstances are available off the shelf. There is nothing to indicate that the skilled person would not recognise that any of these off-the-shelf products could be used in the method and apparatus disclosed in D7. The skilled person would also appreciate that using less strong solutions will reduce the extent of any sterilization and would perhaps only sanitise the space however that is consistent with the aim of the invention in issue. If the invention in issue had claimed to provide the level of sterilization in D7 even where people are present, then that may have provided the necessary inventive step, but it has not done that.
- 35 Thus claim 1, and the corresponding method claim 10, do not provide the required inventive step in light of D7.

Document D6

- 36 The examiner also considers the claims to be obvious considering GB 2450536 A (D6). This is the document referred to in claim 1 and discloses a mist generating device having a storage facility 3 containing solution 13, dispensing means in the form of an ultrasonic nebuliser 9, and a control system 3,7. Again, it is implicit that there is a power source. Applications for the apparatus are stated as including “the dispersal of fragrances and sanitising chemicals within enclosed spaces, e.g. food fragrances within the premises of food retailers, and antibacterial agents in malodorous working environments”. Figure 1 from D6 is reproduced below.

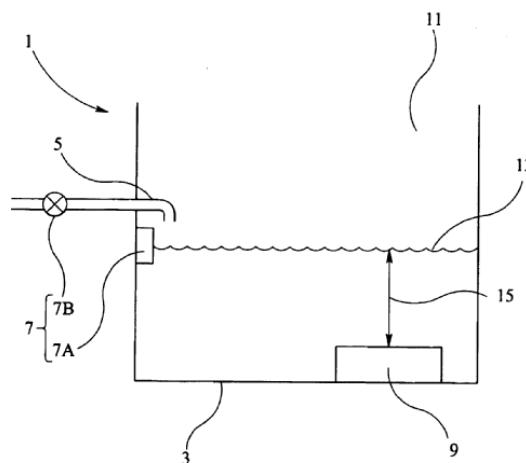


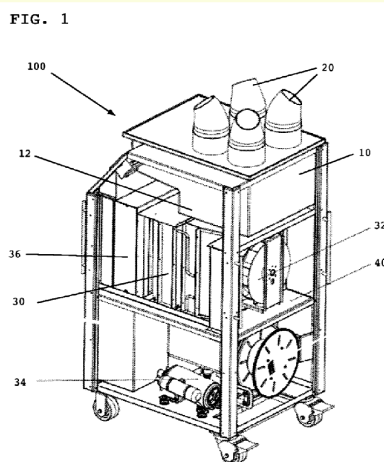
FIG 1

- 37 At the hearing I discussed with Mr Palmer whether the apparatus of D6 is suitable for use in an ambulance or the like. He accepted that it was, noting that the “apparatus of D6 is a standalone item – so yes it could be put on a shelf/floor of an ambulance”.

- 38 Whist D6 discloses the use of sanitising chemicals and fragrances in general, this document does not disclose *adding* a fragrance to a sanitising chemical. Nor does it disclose the use HOCL. The difference between D6 and the inventive concept is therefore the use of HOCL with the addition of an additive(s), including any, or a combination of: deodorisers, insect repellents, substances providing fragrances or aromas.
- 39 Starting from D6, I do not think the person skilled in the art would arrive at the particular chemical in claim 1 and its combination with an additive without some degree of invention. I do not think hypochlorous acid and an additive is lying in the road, as it were, for the skilled person to use. Thus, I consider claim 1, and corresponding method claim 10, to be inventive in light of D6.
- 40 Although they were not discussed in as much detail at the hearing, I will briefly discuss documents D1-5 taken account of the arguments set out in the pre-hearing report and Mr Palmers observations in his written responses and at the hearing.

Document D1

- 41 WO2015105852 discloses a portable disinfecting apparatus for disinfecting areas include for example airplane cabins, veterinary clinics, hospitals, including hospital operating rooms, nursing homes, day care centres, public restrooms, subway cars, and train cars.

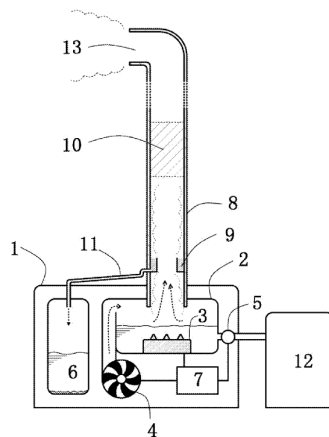


- 42 FIG. 1 shows a perspective view of an apparatus 100 according to one embodiment of the invention. Apparatus 100 includes a tank 10 for containing a disinfecting composition. Tank 10 includes a base 12 to which one or more nebulizers or similar devices (not shown) may be affixed or secured. Once a fog of disinfecting composition is produced, such as described above, the fog may be discharged through one or more ports or tubes 20, which, may be angled with respect to vertical and/or horizontal axes of apparatus 100. Such discharge may be achieved using, for example, a fan or similar device (not shown). Apparatus 100 further includes a dehumidifying device 30 having a dehumidifier fan 32 and a dehumidifier compressor 34, as well as a filtering device 40, such as an activated carbon filter.

- 43 The disinfecting composition which can be provided as a pre-manufactured liquid and can comprise hypochlorous acid, is dispersed as a fog with liquid droplets having diameters between about 0.5 micron and about 20 microns. As noted above the disinfecting composition, which has a pH of between 3 and 7.5, is not considered to produce any adverse effects due to extended contact with humans.
- 44 As Mr Palmer noted, D1 differs from the inventive step in that it does not disclose the addition of an additive(s), including any, or a combination of deodorisers, insect repellents, substances providing fragrances or aromas, to the hypochlorous acid (HOCL) solution. However, for the reasons that I have set out above I do not believe that the addition of such an additive would require an inventive step. I therefore find claim 1 and corresponding method claim 10 to be obvious in light of document D1.

Document D2

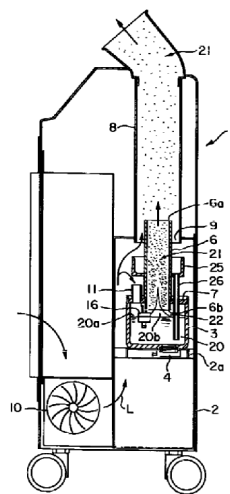
- 45 WO2015182548 discloses an ultrasonic space-sterilizing humidifier that delivers humidified air containing hypochlorous acid to spaces such as a hospital room. As shown in the figure below, the humidifier includes an ultrasonic generator 3 installed inside a storage tank 2, generating a hypochlorous acid-containing mist, an air duct 8 extending upwards from the ultrasonic generator 3, blowing means 4 for blowing the mist into the air duct 8. The air duct is designed to adsorb water droplets containing foreign substances with the description suggesting that the extent of the adsorption being dependent on the length of the pipe. A hypochlorous acid aqueous solution producing apparatus 12 separate from the humidifier main body housed



- 46 The description goes on to note as I have already discussed that the HOCL has *the greatest bactericidal activity in a weakly acidic region which is harmless to the human body of Ph 5 to 6 thus suggesting* that the apparatus is suitable for use where people are present.
- 47 D2 differs from the inventive concept in that it does not disclose the addition of any of the listed additives. Further it is not clear whether the apparatus which is described as “most suitable for use in a large space .. such as a hospital room” would be scalable to enable it to be used in a vehicle. These differences, in particular the scaling, are not ones that would be readily apparent to the skilled person and hence the claim 1 and corresponding method claim 10 are considered inventive over D2.

Document D3

JP 2000/300649 A like D1 above disclose apparatus for sterilizing and deodorizing a room using an aqueous solution containing hypochlorous acid. It notes that the solution has an excellent sterilizing and deodorizing effect. As shown in the drawing below the apparatus includes a tank 3 for storing a hypochlorous acid-containing aqueous solution 20, and an ultrasonic wave generator 4 for generating (fine particles 1 to 10 μm) 21. The mist passes out through tube 6 and pipe 8. As noted above the concentration of the hypochlorous acid aqueous solution is preferably 1 to 500 ppm, but it is desirable to use a solution having a concentration of 60 ppm or less in a place where a person is present in consideration of safety to the body.



- 48 There is nothing to suggest that the apparatus would not be suitable for use in an ambulance and hence D3 differs from the inventive concept only again in that it does not disclose the addition of any of the listed additives although it does refer to deodorizing. That however is achieved through the HOCL rather than any additives. But it is clear that deodorizing is an aim of the objection. That it might be achieved using an additive rather than relying on the HOCL would be something that would be obvious to the person skilled in the art. I therefore consider claim 1 and corresponding method claim 10 to be obvious in light of document D3.

Document D4

- 49 I can be brief with respect to JP2000197689 A as it has a number of similarities to D3, including the same inventor, but lacks much of the relevant detail of D3 and seems less suitable to the application set out in the inventive concept. I will therefore say no more about it.

Document D5

- 50 I can be similarly brief with JP-2004271070-A since it does not really disclose or suggest apparatus that would be suitable for use in an ambulance but rather relates to a more industrial application.

Dependent claims

- 51 Whilst the focus at the hearing was on the main independent claims, I have nevertheless also considered dependent claims 2-9 and 11-12 to try and identify anything that might provide the necessary inventive step. The dependent claims however relate to conventional features in the art of dispensing mists/fogs in spaces – such as nozzles, air circulating means (fans, air conditioners) – which do not appear to introduce any inventive step.

Added matter / Clarity

- 52 Section 76 states:

(2) 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 extending beyond that disclosed in the application as filed.

- 53 Guidance on section 76 has been provided in *Richardson-Vicks Inc's Patent*³ where Jacob J (as he was then) noted:

"The test of added matter is whether a skilled man would, upon looking at the amended specification, learn anything about the invention which he could not learn from the unamended specification."

and in *Bonzel and Schneider (Europe) AG v Intervention Ltd*⁴, where Aldous J (as he was then) stated:

"The decision as to whether there was an 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:

(a) To ascertain through the eyes of the skilled addressee what is disclosed, both explicitly and implicitly in the application.

(b) To do the same in respect of the patent as granted [or, in this case, the application as amended].

(c) 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."

- 54 The requirement that the claims be clear is set out in Section 14(5) of the Act:

The claim or claims shall –

(a) define the matter for which the applicant seeks protection;

(b) be clear and concise (my emphasis);

(c) be supported by the description; and

³ *Richardson-Vicks Inc.'s Patent* [1995] RPC 568

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

(d) relate to one invention or to a group of inventions which are so linked as to form a single inventive concept

55 The examiner has raised an objection that claims 1 and 10 currently on file add matter because the application as filed teaches a calming effect *only* for the use of pleasant fragrances and calming aromas – and not for the other additives defined in claims 1&10, in particular deodorisers and/or insect repellents. Claims 1 and 10 thus disclose matter that extends beyond that disclosed in the application as filed.

56 The examiner has also raised a clarity objection that “the other additives *may* act to calm patients” defines an optional feature and obscures the scope of the monopoly sought.

57 Both the examiner, in his pre-hearing report, and Mr Palmer at the hearing referred to page 8 lines 5-10 of the application as filed:

“Though the primary purpose of the mist is sanitising the air volume inside the ambulance, the use of additives in the mist may assist the Paramedics. For example, initial first aid is usually performed at the scene of the mishap, where there may be unpleasant smells and insects present. Thus, deodorisers and insect repellents in the mist will be beneficial. The patient(s) will be nervous and highly stressed and pleasant fragrances and therapeutically calming aromas will help to reassure them.”

58 At the hearing Mr Palmer quoted this passage, emphasising the final sentence and commenting “ditto insect repellent”.

59 I have already discussed the significance of this part of the claim when discussing the inventive concept. Hence whilst it does cast a little doubt on the scope of the claim it does not in my opinion add matter.

Method of Treatment by Therapy

60 The examiner has raised an objection that claims 10-12 encompass a method of treatment on patients within an ambulance by (aroma)therapy. He points out that patents shall not be granted for inventions of a method of treatment of the human body by therapy.

61 The examiner has raised the objection under ‘Clarity’ (i.e. section 14(5)(b)) of the Act). However, the section of the Act dealing with methods of treatment or diagnosis by therapy is section 4A. This states:

4A.-(1) A patent shall not be granted for the invention of-

(a) a method of treatment of the human or animal body by surgery or therapy, or

(b) a method of diagnosis practised on the human or animal body

62 At the hearing Mr Palmer considered that a method of treatment is invasive or internal, and that medical treatment normally involves creams or medicine or tablets i.e. internal or directly applied to the skin or optic examinations or acupuncture. He stated that the present invention was “not a form of treatment, just the background to calm the patient down so that the subsequent treatment will work more effectively”.

63 As discussed above with regard to inventive step, I think that the inventive concept in both claim 1 and claim 10 is really about a (chemical) additive in with the hypochlorous acid (HOCL) and the apparatus for dispensing such a combination, rather than a method of treatment by therapy.

Possible Amendments

64 In his submissions Mr Palmer emphasised that the purpose of the mist is to *sanitise* the space/surfaces of the vehicle, which he felt further distinguished the present invention from the prior art (which was concerned with sterilising/fumigating). The claims currently on file are not limited to such an arrangement, but Mr Palmer noted at the hearing that he would have preferred to use the word 'sanitise' in the claims. We discussed where the basis for any such amendment would be in the application as filed, with Mr Palmer noting that the word sanitise was used 12 times in the description and directed me, in particular, to page 7 lines 34-35 and page 8 line 5 as filed. I agreed at the hearing to consider the possible amendment of the claims to 'sanitise'

65 Having reviewed the specification, I consider that there is basis for an amendment to specify that the apparatus produces a mist to sanitise. However, the specification does not give any technical features regarding *how* the mist sanitises, beyond that required to kill pathogens in general. Whilst I note page 8 of the description discusses that "because the mist droplets are so fine, the liquid will not 'wet' the surface" and "HOCl, in the concentrations present, does not harm people or things but it is lethal to bacteria, viruses and other pathogens" I do not see that vague references to the size of the mist and the concentration of the HOCL clearly defines a sanitising mister. Further given the weight of documents against the applicant on inventive step and that several the documents refer to sanitising then any such amendment would not overcome the inventive step objections. Further there is a real possibility that any such amendment would define the claims by the result to be achieved and be contrary to Section 14(5)(b) of the Act.

Decision

66 I find that the invention defined in claims 1-12 of GB1616513.6 is not inventive over any of WO 2015/102997 A1, JP 2000/300649 A or WO2015/105852 A1.

67 I find that claim 10 does not relate to a method of treatment by therapy. I have concluded that claims 1 and 10 do not add matter.

68 I therefore refuse the application under section 18(3).

Appeal

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

Phil Thorpe

Deputy Director, acting for the Comptroller