Patents Act 1977 **Opinion Number** **24/17**

OPINION UNDER SECTION 74A

Patent	GB 2532833 C
Proprietor(s)	Titan HealthCare (Anti-Bacterial) Products Limited
Exclusive Licensee	
Requester	Biocote Limited
Observer(s)	
Date Opinion issued	06 March 2018

The request

1. The comptroller has been requested by Biocote Limited ("the Requester") to issue an opinion as to whether the claims of GB2532833 ("the Patent") lack novelty or an inventive step in light of documents D1-D11 provided by the Requester. The request was received from the Requester's representative on 6 December 2017. It was accompanied by a statement explaining the request as well as copies of the documents.

2. One of the documents D8 (JP2010053219) was cited pre-grant during prosecution of the Patent. In particular it was cited as category "Y" in the initial search and examination reports and later in a subsequent report. An opinion request must raise a new question and not just repeat arguments already considered pre-grant. I do not consider D8 to raise a new question as a similar inventive step argument is presented with this document here as was raised pre-grant. I will therefore not consider D8 in this opinion.

3. There were no observations or observations in reply.

The Patent

4. The Patent entitled 'Antimicrobial plastic door pull handle' was filed on 10 August 2015, granted on 12 October 2016 and remains in force. The Patent was later republished under publication number GB2532833 C to correct a publishing error.

5. The Patent relates to a door handle 1 consisting of a pull bar 2 and a rectangular back plate 3 (see Figures 1a and 1b of the Patent reproduced below). The Patent

explains that door handles have the potential to harbour unwanted microbes on their surfaces and in any recesses that are present and therefore it is important to inhibit the growth of such organisms especially when the door handles are used in environments such as schools and hospitals having a high throughput of human traffic. In the invention of the Patent the door handle is formed from a thermoplastic polymer. An antimicrobial agent is dispersed within the polymer material so that the entire polymer structure exhibits antimicrobial properties. The pull bar 2 and back plate 3 are also integrally formed as a unitary item for example by an injection moulding process. This means the handle can be produced using a single mould, the overall strength of the handle is improved, and there is an absence of joins where bacteria and fungi could accumulate. Finally, the intersection between the pull bar 2 and the back plate 3 includes smooth corners 4 to allow the handle to be easily cleaned and to prevent the build-up of microbes.

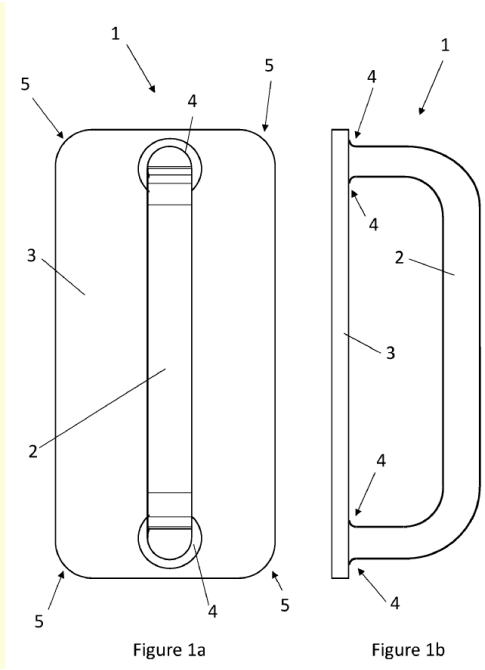

Figure 1a Figure 1b

6. There are 10 claims including one independent claim, claim 1, 8 dependant claims and an omnibus claim. Claim 1 reads as follows with the features separated out using the same notation as used by the Requester:

> *1. A door pull handle consisting of*
> *1i. a pull bar and*
> *1ii. a substantially rectangular backplate,*
> *1iii. wherein the pull bar and the backplate are integrally formed as a unitary item which comprises*
> *1iv. a thermoplastic polymer material and*
> *1v. an antimicrobial agent dispersed within the thermoplastic polymer material,*
> *1vi. and including radiused corners where the pull bar meets the backplate to allow easy cleaning and to prevent the build-up of microbes.*

Novelty and Inventive step – the law

7. The Requester argues that the claims are either not novel or lack an inventive step in light of the provided documents. Section 1(1)(a) and (b) of the Act reads:

> *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;*

8. The relevant provisions in relation to novelty are found in section 2(1) and section 2(2) which 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.*

9. The provisions in relation to inventive step are found in section 3 which 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).*

10. The Court of Appeal in *Windsurfing*[1] formulated a four-step approach for assessing whether an invention is obvious to a person skilled in the art. This approach was restated and elaborated upon by the Court of Appeal in *Pozzoli*.[2] Here, Jacob LJ reformulated the *Windsurfing* approach as follows:

> *(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 that would have been obvious to the person skilled in the art or do they require any degree of invention?*

11. I will begin by determining whether claim 1 is novel. Throughout I will consider the cited documents where relevant and as proposed by the Requester.

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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

Construction of claim 1

12. When considering the validity of the claims of the Patent I will first need to construe them. That is to say I must interpret them in the light of the description and drawings as instructed by Section 125(1). 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.

13. The Requester identifies the skilled person as "a plastics or polymer technologist or scientist with specific knowledge and experience of moulding techniques (for example the techniques of injection moulding), masterbatches and of the use of antimicrobial agents. The skilled person knows that it is important to reduce the microbial burden in a hospital or other primary and secondary care environments to mitigate the spread of infections and/or diseases." I think this is a reasonable assessment.

14. Claim 1 is generally straightforward to construe. There are, however, a few terms that are worthy of consideration.

15. Claim 1 specifies "A door pull handle consisting of a pull bar and a substantially rectangular backplate". The use of the term 'consisting of' rather than say 'comprising of' limits the door pull handle exclusively to the two specified items. This interpretation is reinforced by paragraph [0032] which states that "No additional components were added or attached to the door handle once the door handle had been removed from the injection moulding process."

16. The term "integrally formed as a unitary item" is not explicitly explained in the Patent. However, the skilled person from paragraphs [0020] and [0032] would realise that this means that the door handle is formed in one piece rather than being assembled from different parts.

17. The term "thermoplastic polymer" is defined in paragraph [0008] of the Patent as "a polymer that becomes pliable or mouldable above a specific temperature, and returns to a solid state upon cooling". The skilled person would be familiar with such polymers and their ability to form moulded items.

18. The skilled person would understand the term "antimicrobial agent" as defined in paragraph [0012] as "a substance that kills or inhibits the growth of microorganisms, such as bacteria, fungi, or protozoans." The skilled person would also understand from paragraph [0018] that in the invention the antimicrobial agent is "dispersed" within the thermoplastic polymer. In other words the antimicrobial agent is evenly distributed within the polymer (paragraph [0032]). Paragraph [0018] explains that this has the advantage that "it fixes the agent in place and ensures that the entire polymer structure exhibits the desired antimicrobial properties".

19. Finally, claim 1 requires "radiused corners" where the pull bar meets the back plate. Paragraph [0019] states that "The pull bar and backing plate have smooth radius joins". The reason for this, as claim 1 goes on to state, is "to allow easy cleaning and to prevent the build-up of microbes". The skilled person would understand 'radiused' corners to mean simply that the interface between the pull bar and back plate is

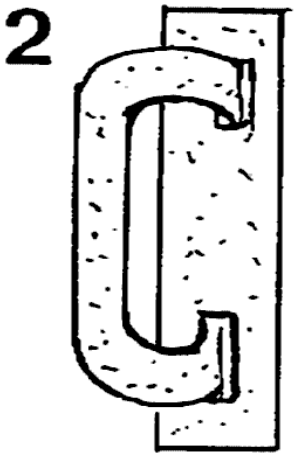
smooth rather than being abrupt.

Whether claim 1 is not novel in light of D6

20. The Requester argues that claim 1 is not novel in light of document D6. D6 is patent document DE1910898U. The Requester also provides D6T which is a machine-generated English translation of the German-language text. I will refer here to the English translation provided. D6 was published in 1965 well before the filing date of the Patent.

21. D6 discloses the fabrication of different types of door handle using a thermoplastic resin or plastic. Contained within the plastic is a fine dispersion of an antibacterial substance. The handles may be formed entirely of the plastic. Alternatively an existing wood or iron handle is coated with the plastic. The handles are for use in pharmacies, schools etc. to provide effective protection against the transfer of disease pathogens.

22. I will now refer to each of the features of claim 1 in turn. Features 1, 1i and 1ii of claim 1 require: “A door pull handle consisting of a pull bar and a substantially rectangular backplate”. The Requester draws my attention to Figure 2 of D6 reproduced below. The Figure is only referred to from claim 1 where it states “Antibacterial door fittings (1), handles, knobs (3, 6, 7, 8, 9, 10) and latches (2, 4, 5) …” where the numerals refer to the various figures. It is not clear what the distinction is between fittings, handles, knobs and latches and whether in any case this has been captured in the translation. Looking at Figure 2, although fairly schematic, it appears to show a door handle with the required pull bar and back plate and no other components. I am satisfied that it meets the terms of these features of claim 1.



23. Feature 1iii requires the door handle to be integrally formed as a unitary item. As discussed above this requires the handle to be formed in one piece rather than being assembled from different parts. It is not apparent from Figure 2 that the handle is formed in one piece. From this Figure, it is equally likely that the pull bar and back plate are formed separately and then joined together by some means. Page 3, paragraph 2 of D6 describes how the items may be made. It explains how the

thermoplastic artificial resin particles are mixed with the powder-form agent and the mixture given an appropriate shape at elevated temperature through a moulding process. Claim 1 of D6 states that the door fittings can have “any desired structural shape”. There is no mention, however, that the door handles are integrally formed in one piece.

24. The Requester argues that D6 teaches two ways of manufacturing articles, namely moulding from a mixture or applying successive coating layers. They assert further that claim 1 of D6 states that the two methods are equivalent and may be used for the door handles of the Figures. They conclude from this that D6 teaches the skilled person to manufacture a door handle by moulding from a thermoplastic polymer incorporating an antimicrobial agent. In response, I note that claim 1 of D6 is referring to either fabricating a solid plastic item incorporating the agent or simply coating an existing item with the plastic mixture (see Figures 11 and 12 and page 3). There is no disclosure in D6 that the door pull handle is integrally formed as a unitary item. It is equally possible from this disclosure that the process is employed to fabricate the solid-plastic pull bar and solid-plastic back plate separately. I therefore do not consider the disclosure in D6 sufficient to anticipate feature 1iii of claim 1.

25. Feature 1iv specifies that the pull bar and back plate comprise a thermoplastic polymer material. D6 discloses that the door components are made from “thermoplastic artificial resin particles” and also refers to “artificial resins or plastics” (see page 3, paragraph 2). It is implicit that this would be a thermoplastic polymer material therefore meeting the terms of this feature.

26. Feature 1v requires an antimicrobial agent dispersed within the thermoplastic polymer material. The agent used in D6 is “the chemical compound tetrachlorosalicylanilide, known under the trade name IRGASAN” (see page 3, paragraph 1.) This has antibacterial and therefore antimicrobial properties from the construction of this term above. Paragraph 2 on page 3 of D6 describes how after moulding, the “agent is distributed uniformly through the compound mass of the plastic or resin”. Therefore this meets the terms of feature 1v.

27. Finally, feature 1vi requires radiused corners where the pull bar meets the back plate to allow easy cleaning and to prevent the build-up of microbes. There is no mention in the description of D6 of the join between the pull bar and the back plate or of the joins between any of the elements of the various handles. The Requester asserts that this feature is apparent from Figure 2. Figure 2 is only a schematic representation. In any case the Figure does not show smooth joins particularly at the uppermost and lowermost interfaces; here, the pull bar appears to meet the back plate rather abruptly. The Requester also directs me to Figures 1, 6 and 8. However, these door handles also do not clearly exhibit this feature. Therefore I do not consider the disclosure in D6 sufficient to meet the terms of feature 1vi of claim 1.

28. I therefore consider claim 1 of the Patent to be novel in light of D6. The Requester has also asked me to consider whether claim 1 lacks an inventive step in light of D6. I will do this now by employing the Windsurfing/Pozzoli steps outlined above.

Whether claim 1 lacks an inventive step over D6 and common general knowledge

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

29. As discussed above, I agree with the Requester that the skilled person is a plastics or polymer technologist or scientist with specific knowledge and experience of moulding techniques (for example the techniques of injection moulding), masterbatches and of the use of antimicrobial agents. The skilled person knows that it is important to reduce the microbial burden in a hospital or other primary and secondary care environments to mitigate the spread of infections and/or diseases. I note that the contents of individual patent specifications and isolated documents do not normally form part of the relevant common general knowledge.

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

30. I consider the inventive concept of claim 1 to be as set out in claim 1 and as construed above.

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 claim as construed.

31. As detailed above, I consider that D6 does not disclose features 1iii and 1vi of claim 1.

Step (4): Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps that would have been obvious to the person skilled in the art or do they require any degree of invention?

32. Feature 1iii requires the pull bar and back plate of the door handle to be integrally formed as a unitary item i.e. fabricated in one piece rather than being assembled from different parts. As the Requester points out, D6 discloses a method of manufacture for door handles where the article is moulded from a mixture and given an appropriate shape at an elevated temperature (page 3, paragraph 2 of D6). Claim 1 of D6 states that door fittings of "any desired structural shape" can be formed. Figure 2 illustrates a door pull handle consisting of the required pull handle and back plate. It is not apparent from Figure 2 or the rest of the disclosure of D6 that the door handle is made as a unitary item. The Requester asserts that it would be part of the skilled person's general knowledge that "Thermoplastics materials can be moulded into a limitless array of shapes and articles". I agree that the skilled person would be aware that thermoplastics can be moulded into a wide variety of shapes and articles. Faced with the problem of manufacturing the door handle of Figure 2, the skilled person would consider making it using any current available technique within their common general knowledge. This in my view would include making it in one piece as a unitary item. The skilled person would realise that this would make the fabrication process easier and improve the strength of the item. Therefore by combining the disclosure in D6 with their common general knowledge the skilled person would arrive at this feature without exercising any inventive skill.

33. The other feature to consider is 1vi which requires radiused corners where the pull bar meets the back plate. The Requester refers to several sections of D1 “Injection Molding Handbook” 3rd Ed (Springer Science)”, published in 2000, before the filing date of the Patent. The Requester asserts that “D1 is the standard ‘Bible’ for those engaged in the injection moulding industry” and thus discloses the common general knowledge of the skilled addressee. The relevant parts of D1 highlighted by the Requester indicate that when making moulded items corners must be rounded primarily to reduce stress concentrations and improve flow. Radiused corners rather than sharp corners are emphasized in D1 as an important design feature (see for example Figure 8-5 on page 730). The Requester also provides D4 “Manual of Infection Control Procedures (GMM)”, second edition, published in 2003, which discloses that fixtures and fittings in health care premises should be designed to allow easy cleaning.

34. I am not convinced that the entire contents of D1 or D4 would constitute common general knowledge of the skilled person. However, I think it reasonable to assume that the skilled person would be aware of the desirability of having rounded corners when moulding a product not least for the reasons given in D1. Similarly, I agree with the Requester that the skilled person would be well aware that areas of hospitals and other health care facilities should be easy to clean. Therefore I consider the skilled person would consider fabricating the door pull handle of D6 with smooth corners without having to resort to any inventive ingenuity. Once such a structure is made the corners would allow easy cleaning and prevent the build-up of microbes as specified in the last part of claim 1. Therefore in light of D6 and the common general knowledge of the skilled person feature 1vi is not inventive.

35. Therefore I consider claim 1 to lack an inventive step in light of D6 and the common general knowledge of the skilled person.

Whether claim 1 lacks an inventive step over D7 and common general knowledge

36. The Requester asserts that claim 1 lacks an inventive step in light of D7 and common general knowledge. D7 is patent document WO 2015/035517, published 19 March 2015 before the filing date of the Patent. I will work though the Windsurfing/Pozzoli steps again for this document. Steps 1(a), 1(b) and 2 need not be repeated as they are the same as outlined above for the discussion of D6.

37. Regarding step 3, D7 discloses an antimicrobial material which is a mix between a thermoplastic polymer such as polypropylene and an antimicrobial metal (paragraphs [0008], [0024]). The material may be used in an injection mould process to form a final product in the field of medical products in which a sterile environment is typically required (paragraphs [0018], [0031]). A door knob is listed as a particular example of such a product (paragraph [0033]). The difference between this disclosure and claim 1 of the Patent is that D7 does not disclose a door pull handle consisting of a pull bar and rectangular back plate (features 1, 1i, 1ii); that the door handle is formed as a unitary item (feature 1iii) and; that the door handle includes radiused corners (feature 1vi).

38. Moving onto step 4, the Requester asserts that it would have been obvious to

manufacture a standard pull door handle using the teaching in D7. The Requester provides document D5, which is a webpage illustrating a brass door pull handle for sale which appears from the enclosed photograph to have been made in one piece. D5A is a Wayback Machine snapshot of D5 which confirms that the webpage was made available to the public before the filing date of the Patent. I am willing to concede that the brass door handle of D5 was made in one piece and therefore making a pull bar and back plate as a unitary item was known at the filing date of the Patent. Also as the Requester points out the product in D7 may be polished to give a high lustre impression (paragraph [0032]) in a similar way to a brass product. However, even if making a unitary brass door pull handle was part of the skilled person's common general knowledge at the required date, forming items from brass is a different process to forming items from a thermoplastic. I do not see how this would assist the skilled person to arrive at claim 1 from the document D7.

39. Moreover, as indicated there are many differences between this disclosure and that set out in claim 1. D7 only mentions the possibility of manufacturing a door knob in paragraph [0033] along with a string of other possible products such as chairs, toilet seats etc. There is no disclosure in D7 on what form the door knob should take or details on how it would be made apart from through an injection mould process. Using the arguments presented above, I consider the skilled person would consider forming an antimicrobial moulded product with radiused corners. However, there does not seem to be sufficient direction from this document to both form a door pull handle consisting only of a pull handle and back plate and then manufacture this as a unitary item. Therefore, I consider claim 1 to be inventive in light of document D7 and common general knowledge.

Whether claims 2-9 lack an inventive step in light of D6

40. I will now move on to consider whether the remaining dependant claims involve an inventive step in light of document D6. As is customary, while other claims are present, I will ignore the omnibus claim 10.

41. Claim 2 reads:

> *A door pull handle according to claim 1, wherein the thermoplastic polymer material comprises at least one polymer selected from acrylonitrile butadiene styrene (ABS), polyoxymethylene (POM), acrylate, ethylene vinyl acetate (EVA), general purpose polystyrene (GPPS), high impact polystyrene (HIPS), nylon, polyethylene (PE) polyether ether ketone (PEEK), polyethylene terephthalate (PET), polypropylene (PP), polyphenylene sulphide (PPS), polysulfone (PSU), polyurethane (PU), and polyvinyl chloride (PVC).*

42. D6 does not specify the thermoplastic material employed but just refers to 'thermoplastic artificial resin particles' or 'artificial resins or plastics'. As the Requester states claim 2 is a list of standard thermoplastic polymers. These polymers would be very familiar to the skilled person. They would readily choose such a polymer to fabricate the door pull handle of D6. Therefore claim 2 lacks the required inventive step in light of D6 and common general knowledge.

43. Claim 3 reads:

> *A door pull handle according to any preceding claim, wherein the antimicrobial is present at an amount of 0.5 to 15% by weight of the thermoplastic polymer material.*

44. D6 does not specify the weight ratio between the antimicrobial substance and the thermoplastic material only that the "thermoplastic artificial resin particles are mixed with a corresponding quantity of the powder-form agent in such a way that this is uniformly dispersed, …" (page 3, paragraph 2). The Requester asserts that it is common general knowledge that antimicrobials may be added to plastics to impart protection against microbial growth to finished articles. I think this is a reasonable assumption. The Requester refers to D2 "Additives for Polyolefins: Getting the Most out of Polypropylene, Polyethylene and TPO" (Plastics Design Library, Elsevier) to provide the required ratio. This is the second edition with a publication date provided as 2015. The filing date of the Patent is 10 August 2015 and so it is not clear whether the relevant material in D2 was published before the filing date of the Patent or not. I will therefore discount this document.

45. The Requester also refers to D3 which is patent document GB2505784 A, published in 2014, and by the same applicant as the Patent. Here an antimicrobial chair is fabricated with the same ratio of materials as now under consideration in claim 2. However, it is well established that individual patent specifications and their contents do not normally form part of the relevant common general knowledge unless they are very well known. There is no indication that this is the case here and therefore I will discount D3 as well. Similarly the Requester provides D9 a product leaflet by RTP Company entitled "Biosafe silane-based antimicrobial products" which according to a copyright footnote appears to have been produced in 2009. It seems reasonable to assume that it was made available to the public before the filing date of the Patent. It discloses that silver-based antimicrobials have a 1-3% concentration in finished products. However, there is no indication that this individual product leaflet would form part of the skilled person's common general knowledge.

46. The Requester provides document D10 "Plastics Technology Handbook", 4th Ed (CRC Press). This was published in 2007, before the filing date of the Patent. On page 1-120 it discloses that antimicrobial finished products are generally formulated with 2-5% active ingredient. Similarly, I am not convinced that all the contents of D10 would be part of the relevant common general knowledge. However, I agree with the Requester that the skilled person would select an appropriate amount of antimicrobial additive for the product to be effective. They would do this by consulting relevant sources and possibly by relying in part on trial and error. In this way they are likely to arrive at the ratio defined in claim 3. Therefore on balance I consider claim 3 to lack an inventive step.

47. Claim 4 reads:

> *A door pull handle according to any preceding claim, wherein the antimicrobial agent comprises silver ions.*

48. The antimicrobial agent disclosed in D6 is "the chemical compound tetrachlorosalicylanilide, known under the trade name IRGASAN" (see page 3,

paragraph 1.) There is no mention of using silver ions. The Requester submits that silver is a well-known antimicrobial agent and refers to D2. However, as discussed above I have discounted D2 because it is not clear whether the relevant disclosure was published before the filing date of the Patent. The Requester also refers to D11 "Thermoplastics and Thermoplastic Composites" (Plastic Design Library, Elsevier), published in 2013 before the filing date of the Patent. D11 discloses that silver ions are a well-known antimicrobial agent. As with the other cited books I am not convinced that all of the information in D11 would form part of the common general knowledge of the skilled person. However, on balance I consider that the use of silver ions as an antimicrobial agent would be known to the skilled person and they could employ such an agent to fabricate the door pull handle of D6 without exercising any inventive skill. Therefore I consider claim 4 to be obvious.

49. Claim 5 reads:

> *A door pull handle according to any preceding claim, which is devoid of fixing holes.*

50. There are no apparent fixing holes in the door pull handle of Figure 2 of D6. In any case I agree with the Requester that the skilled person would be aware of the use of adhesives rather than mechanical fixings to mount thermoplastic items. They would consider fabricating a door pull handle without fixing holes to be mounted in this way. Therefore claim 5 is obvious.

51. Claim 6 reads:

> *A door pull handle according to any preceding claim, wherein the pull bar comprises a solid body*

52. From Figure 12 of D6 it is clear that the disclosure in D6 envisages fabricating handle components as a solid body. This is supported by paragraph 2 on page 3 of D6 which describes how the thermoplastic plus antibacterial agent is given an appropriate shape at an elevated temperature through a moulding process. I therefore consider claim 6 to lack the required inventive step.

53. Claim 7 reads:

> *A door pull handle according to any preceding claim, which is devoid of coatings.*

54. As discussed above, D6 describes two ways of fabricating antimicrobial door handles: either by manufacturing them entirely of antibacterial thermoplastic, or by coating existing handles with such a plastic. There is no mention of applying a coating in the first method or mention of any incentive to do so. I think it likely that the skilled person would leave the fabricated door handle of D6 uncoated. Therefore claim 7 is obvious.

55. Claim 8 reads (with the features separated out using the same notation as used by the Requester):

> *8.A method of producing a door pull handle according to any preceding claim comprising the steps of:*

8i. combining a masterbatch or powder dispersion of a thermoplastic polymer material and an antimicrobial agent to form a mixture;
8ii. heating the mixture so as to form a melt;
8iii. introducing the melt into a mould of the desired shape; and
8iv.allowing the melt to cool.

56. As discussed above I consider the door pull handle of claim 1 to lack an inventive step in light of D6 and common general knowledge. The further steps of 8i and 8ii are disclosed on page 3, paragraph 2 as outlined previously. Regarding step 8iii, D6 states that the "mixture is then given an appropriate shape at elevated temperature." The paragraph then describes how the "moulding can take place by deformation" above the melting temperature of the mixture. And further "When the moulded body has solidified or hardened" the agent is distributed uniformly through the plastic. Although not mentioned explicitly, the skilled person would realise a mould of an appropriate shape would be a convenient way of carrying out this process. Also regarding step 8iv it is implicit that the melt would be allowed to cool. Therefore claim 8 lacks an inventive step.

57. Claim 9 reads:

A method according to claim 8, in which the melt is injection moulded.

58. As described in relation to claim 8, D6 states that the door handle structures may be moulded. D6 does not, however, specify injection moulding. Injection moulding is a process that would be very familiar to the skilled person. It is used to fabricate a wide range of items from thermoplastic materials. The skilled person would be able to fabricate the door pull handle of D6 using this process using only their common general knowledge. Therefore claim 9 is obvious.

Opinion

59. It is my opinion that independent claim 1 of the Patent is novel in light of document D6 (DE1910898U). However, it is my opinion that claim 1 of the Patent lacks an inventive step in light of D6 and common general knowledge. Similarly, none of the dependent claims 2-9 is inventive in light of this document. I consider the claims of the Patent to be both novel and inventive in light of document D7 (WO2015/035517).

Application for review

60. 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.

Susan Dewar
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.