

**OPINION UNDER SECTION 74A**

Patent	GB 2440109 B
Proprietor(s)	Dyson Technology Limited
Exclusive Licensee	
Requester	Killin IP Limited
Observer(s)	Dyson Technology Limited
Date Opinion issued	01 November 2016

**The request**

1. The comptroller has been requested to issue an opinion as to whether GB2440109 B (the patent) is infringed by a handheld cyclonic stick vacuum cleaner (product 1) as described in accompanying annex 1 and a modified handheld cyclonic stick vacuum cleaner (product 2) as described in accompanying annex 2.
2. The request also seeks an opinion on the “valid scope” of the patent in view of prior art documents GB2035787 A and USD298875.
3. The request also seeks an opinion on the scope of the term “flat surface” which appears in claim 1 of the patent. Since I must construe the scope of the claims in order to determine the questions of validity and infringement, this will necessarily include consideration of the scope of this term.

**Observations**

4. Observations were received from Dyson Technology Limited.

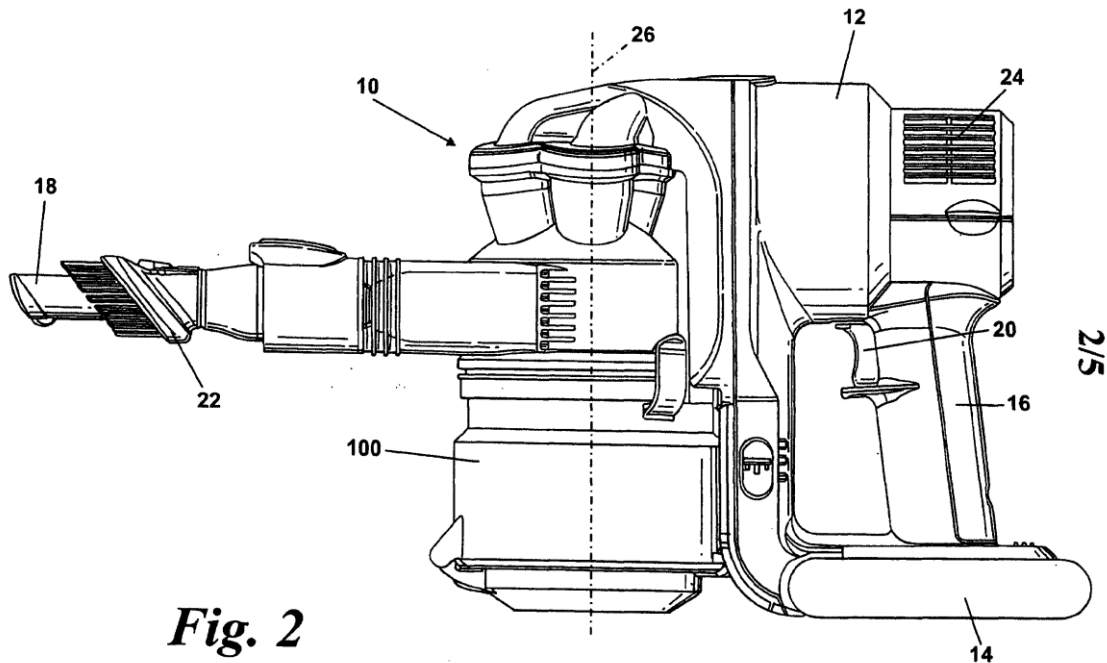
**Observations in reply**

5. Observations in reply were submitted by the requester.

**The patent**

6. The patent was filed on 20 September 2006 with a priority date of 18 August 2006. It

was granted on 13 April 2011 and is still in force. It relates to a handheld cleaning appliance as shown in figure 2 of the patent reproduced below.



**Fig. 2**

7. The patent has 6 claims, the first of which is independent as follows with numbering added to aid understanding:

*A handheld cleaning appliance comprising a main body (12), a dirty air inlet (18), a clean air outlet (24) and a cyclonic separator (100) for separating dirt and dust from an airflow located in an airflow path leading from the air inlet to the air outlet, the cyclonic separator having a longitudinal axis (26) that extends in a generally upright orientation when the appliance is supported on a surface in use, wherein a substantially planar base surface of the main body and a substantially planar base surface of the cyclonic separator together form a base surface of the appliance for supporting the appliance on a flat surface, wherein the base surface of the main body lies in the plane of the base surface of the cyclonic separator.*

8. The invention essentially incorporates a planar base surface into the appliance so that it is stable when placed on a flat surface.

## Claim construction

9. Before considering validity or infringement I will need to construe the claims of the patent following the well-known authority on claim construction which is *Kirin-Amgen and others v Hoechst Marion Roussel Limited and others* [2005] RPC 9. This

requires that I put a purposive construction on the claims, interpret it in the light of the description and drawings as instructed by Section 125(1) and take account of the Protocol to Article 69 of the EPC. Simply put, I must decide what a person skilled in the art would have understood the patentee to have used the language of the claim to mean.

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

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

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

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

12. The requester has submitted detailed arguments on how “supported on a surface, in use” and “flat surface” in claim 1 should be interpreted. According to the requester, the “surface” includes hard surfaces and also soft surfaces which the appliance may sink into such as a rug or deep pile carpet. The term “flat surface” is interpreted by the requester as meaning a hard and substantially planar surface such as concrete, wood, tiles or a hard shelf.
13. The observer argues that “flat” does not mean “hard and flat” and that, in any event, the requester’s construction covers a conventional domestic workbench comprising two flat pieces of wood separated by an adjustable gap as shown below. The observer relies upon this to show infringement, which I shall discuss later.



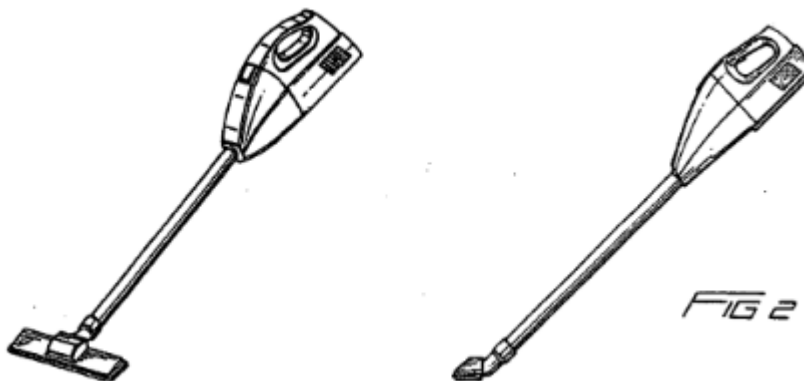
14. I think it is worth noting at this point that it is the features of the appliance itself which are most important. In particular the planar base surfaces of the main body and cyclonic separator must lie in the same plane to form a base surface of the appliance. This appears straightforward to construe. This base surface then must also be “suitable” for supporting the appliance on a flat surface. I think the skilled person would have no trouble in construing this as meaning the base surface must allow the appliance to rest on a flat surface without toppling over and that the flat surface would have to include a hard surface. Whether the appliance is “in use” or not does not affect the construction. I do not think the skilled person would construe “(supported on a) surface” and “flat surface” differently. It is clear that the longitudinal axis of the separator must extend in an upright orientation (vertically) when the appliance lies on a flat (horizontal) hard surface.

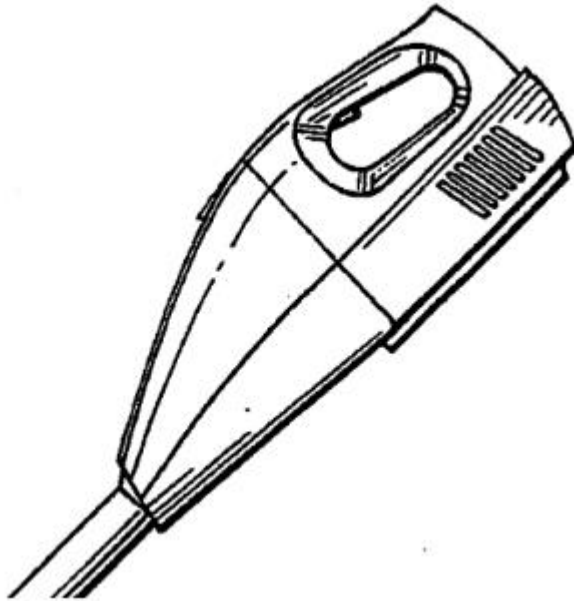
## Validity

15. The requester argues that claim 1 lacks an inventive step when the teachings of USD298878 (D1) and GB2035787 (D2) are combined.
16. To determine whether or not the invention defined in claim 1 is inventive in view of these disclosures, I will rely on the principles established in *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588, in which the well known Windsurfing steps were reformulated:
- (1)(a) Identify the notional “person skilled in the art”;*
  - (1)(b) Identify the relevant common general knowledge of that person;*
  - (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;*
  - (3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;*

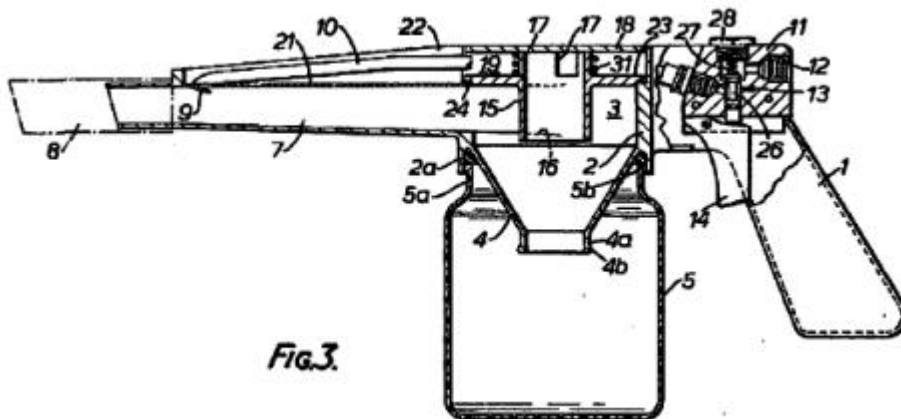
*(4) Viewed without any knowledge of the alleged invention as claimed, determine whether those differences constitute steps which would have been obvious to the person skilled in the art.*

17. The observer characterises the skilled person as a product designer with knowledge of conventional non-cyclonic handheld vacuum cleaners but with a much more limited knowledge of cyclonic handheld vacuum cleaners, since such cleaners were not widely available at the priority date of the invention.
18. The requester submits that the skilled person is a multidisciplinary team of persons with experience in vacuum cleaner design, electrical/electronics design, plastics moulding and mechanical engineering. Such persons would also have experience working on products other than vacuum cleaners.
19. I consider that the skilled person would be a designer or engineer in the field of vacuum cleaners with a knowledge of conventional handheld vacuum cleaners. Such knowledge will include a basic knowledge of electrical/electronics design, plastics moulding and mechanical engineering required for making routine non-inventive developments. He may be aware of cyclonic vacuum cleaners but not have a detailed knowledge of them. He could be considered a team if it is reasonable to expect that the skilled person would, in the circumstances, ask advice from a specialist in another field.
20. I consider the inventive concept of claim 1 to be a handheld cyclonic vacuum cleaner which has a cyclonic separator with longitudinal axis oriented substantially vertically with respect to a flat base surface formed from the base of the separator and base of the main body. The base surface must be large enough to allow the appliance to rest stably on a hard flat surface. Arguments by requester and observer have not differed significantly from this interpretation.
21. D1 describes a non-cyclonic stick vacuum cleaner as shown below:

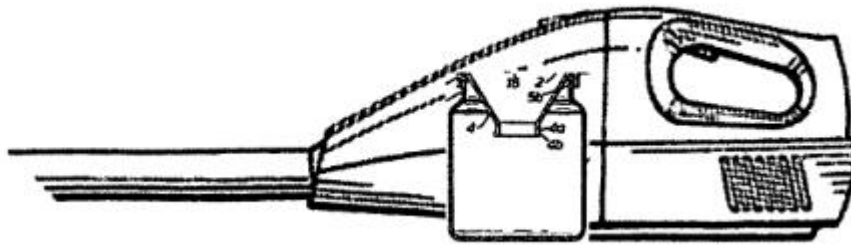




22. D2 discloses a handheld cyclonic vacuum cleaner with cyclonic separator 5 as shown below:



23. The requester argues that it would be an obvious step to incorporate the cyclonic separator of D2 into the appliance of D1 with the longitudinal axis of the separator generally upright when the appliance is laid flat on a supporting surface (as shown in the following diagram provided by the requester) to arrive at the invention.



24. The observer counters that D1 and D2 are inherently incompatible because D1 has an external casing housing all the components while D2 has an external visible and detachable dust collector.
25. In the observations in reply the requester states that vacuum cleaners in general with an upright axis cyclonic separator were common general knowledge at the priority date. He argues that the skilled person, motivated by the desire to improve the capacity and performance of the appliance of D1 would try to incorporate an upright axis cyclonic separator into D1, leading to a combination of D1 and D2. Routine experimentation with a computer aided design (CAD) tool would arrive at the invention.
26. In the observations in reply the requester also introduces the Black & Decker Dustbuster (RTM) and US2405625. Since these prior art references were not mentioned previously in the original request or observations I will not consider them further. Observations in reply must be strictly confined to issues raised in the observations.
27. I am not convinced by the requester's assertion that the use of upright axis cyclonic separators in vacuum cleaners was common general knowledge. Nevertheless, if the skilled addressee was aware of D1 and D2, would he be motivated to improve D1 by adding the cyclonic separator of D2? Quite possibly but I am not convinced that, doing so would arrive at the invention of claim 1. A cyclonic separator could be incorporated in a number of different orientations. More crucially I think D1 would lead the skilled person to put the separator inside the external casing. Without the benefit of hindsight, the requester has not convinced me that the skilled person would add a cyclonic separator (a) with an axis in a generally upright orientation, (b) with a planar base surface lying in the same plane as the base surface of the main body to form a base surface of the appliance.
28. Based on the evidence provided, I do not think that claim 1 is obvious in view of D1 and D2. It follows that dependent claims 2 to 6 are also not obvious.

## Infringement

29. Section 60 of the Act states that:

*(1) Subject to the provisions of this section, a person infringes a patent for an invention if, but only if, while the patent is in force he does any of the following things*

*in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say-*

- (a) Where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;*
- (b) Where the invention is a process, he uses the process or he offers it for use in the United Kingdom when he knows, or it is obvious to a reasonable person in the circumstances, that its use there without the consent of the proprietor would be an infringement of the patent;*
- (c) Where the invention is a process, he disposes of, offers to dispose of, uses or imports any product obtained directly by means of that process or keeps any such product whether for disposal or otherwise.*

*2) Subject to the following provisions of this section, a person (other than the proprietor of the patent) also infringes a patent for an invention if, while the patent is in force and without the consent of the proprietor, he supplies or offers to supply in the United Kingdom a person other than a licensee or other person entitled to work the invention with any of the means, relating to an essential element of the invention, for putting the invention into effect when he knows, or it is obvious to a reasonable person in the circumstances, that those means are suitable for putting, and are intended to put, the invention into effect in the United Kingdom.*

30. In order to determine whether product 1 or product 2 described in the request infringes the claims of the patent under section 60(1), I must determine whether each product has all the features of the claims as I have construed them.

31. Product 1 described in Annex 1 of the request is shown below:



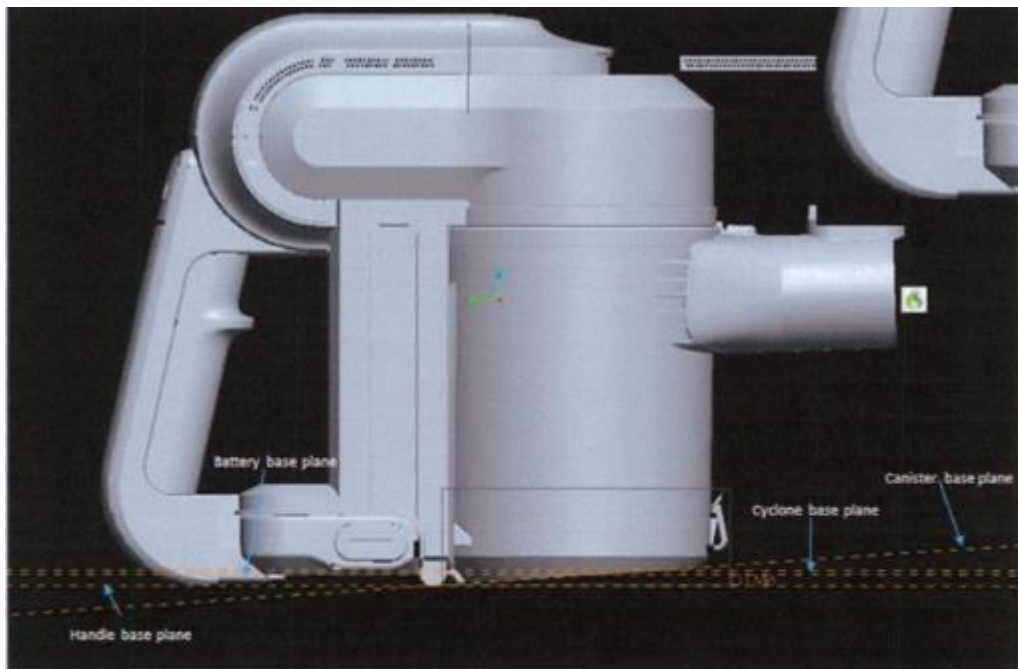




32. As can be seen from the photographs, product 1 has a base surface formed from a base surface of a cyclonic separator and base surface of a main body but rests on a flat surface supported by the brush head and the forward edge of the cyclonic separator. The base surface also has two protruding feet on the underside of the main body. If the wand and brush head are detached, the product rests on these feet and the underside of the handle part as shown below:



33. The requester argues that product 1 does not have the feature of a “*substantially planar base surface of the main body and a substantially planar base surface of the cyclonic separator together form(ing) a base surface of the appliance for supporting the appliance on a flat surface*” as required by claim 1.
34. The observer submits that if product 1 is placed on a workbench of the type shown above in paragraph 13, with the feet falling in the gap between the two pieces of wood forming the work surface, then claim 1 is infringed.
35. I am not persuaded by the observer’s argument since, because of the protruding feet, the main body does not have a substantially planar base surface for supporting the appliance on a flat surface. Furthermore, as the requester points out, the two pieces of wood of the workbench form two separate surfaces. I agree with the requester that product 1 does not infringe claim 1.
36. Product 2 described in Annex 2 of the request is shown below:



37. The requester states that product 2 is identical to product 1 except that the underside of the cyclonic separator is set at an angle other than 90 degrees to the main central rotational axis of the cyclonic separator. The main plane of the outer circular underside is angled with respect to the main plane of the underside of the handle.
38. The observer has not made any counter arguments relating to product 2.
39. I am satisfied that in addition to the missing feature of product 1, product 2 does not

have base surface of the main body lying in the plane of the base surface of the cyclonic separator as required by claim 1. Therefore it does not infringe claim 1.

## **Opinion**

- 40. Based on the evidence submitted, I consider the invention as defined in claim 1 of the patent to be novel and inventive over the cited documents.
- 41. It is also my opinion that products 1 and 2 of the request do not infringe the patent.

## **Application for review**

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

GARETH GRIFFITHS  
Examiner

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## **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.*