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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

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Applicant	Dyson Limited
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the application of:

Dyson Limited

Mark:



Serial No.: 85/708,119

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**APPEAL BRIEF OF APPLICANT  
DYSON LIMITED**

**TABLE OF CONTENTS**

	<b>Page</b>
TABLE OF AUTHORITIES .....	ii
STATEMENT OF THE ISSUE .....	1
INTRODUCTION .....	1
PROSECUTION HISTORY .....	2
STANDARD OF REVIEW .....	2
ARGUMENT .....	2
I.    The Cited Utility Patents Do Not Disclose the Utilitarian Advantages of the Applied-For Trade Dress as a Whole, and the Design Patents Weigh Against a Finding of Functionality .....	4
II.   Dyson’s Advertising Does Not Tout the Utilitarian Advantages of the Applied-For Trade Dress as a Whole .....	9
III.  Numerous Alternative Designs for Bladeless Electric Fans Illustrate That the Applied-For Trade Dress Is Not Required to Ensure Competition .....	10
IV.  The Applied-For Trade Dress Does Not Result from a Comparatively Simple or Inexpensive Method of Manufacture .....	11
CONCLUSION .....	12

## TABLE OF AUTHORITIES

	<b>Page(s)</b>
<b>CASES</b>	
<i>Cornucopia Prods., LLC v. Dyson, Inc.</i> , Case No. CV 12-00924, 2012 U.S. Dist. LEXIS 104750 (D. Ariz. July 27, 2012) .....	5, 6, 8
<i>In re Bose Corp.</i> , 772 F.2d 866 (Fed. Cir. 1985) .....	2
<i>In re Morton-Norwich Prods., Inc.</i> , 671 F.2d 1332, 213 U.S.P.Q. 9 (C.C.P.A. 1982).....	<i>passim</i>
<i>In re Teledyne Indus. Inc.</i> , 696 F.2d 968, 217 U.S.P.Q. 9 (Fed. Cir. 1982).....	3, 4
<i>In re Weber-Stephen Prods. Co.</i> , 3 U.S.P.Q.2d 1659 (T.T.A.B. 1987).....	6
<i>Inwood Labs., Inc. v. Ives Labs., Inc.</i> , 456 U.S. 844, 214 U.S.P.Q. 1 (1982) .....	2
<b>STATUTES</b>	
15 U.S.C. § 1052(e)(5) .....	2, 3
§ 1070 .....	2
<b>OTHER AUTHORITIES</b>	
U.S. Patent No. 7,972,111 .....	5, 7, 8
U.S. Patent Nos. 8,308,445.....	4
U.S. Patent No. 8,308,445, col. 3, ll. 59-62.....	5
U.S. Patent No. 8,403,650 .....	4
U.S. Patent No. 8,403,650, col. 3, ll. 62-65.....	5
<b>T.E.M.P.</b>	
§ 1202.02(a)(iii)(A) .....	3
§ 1202.02(a)(v)(A).....	4, 7
§ 1202.02(a)(v)(C).....	11

## STATEMENT OF THE ISSUE

Is the mark that Dyson Limited seeks to register, described as a three-dimensional configuration of a circular ring on top of a column-shaped base with inlets and buttons, functional for the identified goods?

## INTRODUCTION

The Examining Attorney has refused registration of Dyson Limited's ("Applicant") trade dress mark, described as "a three-dimensional configuration of circular ring on top of a column-shaped base with inlets and buttons," for "electric fans; electric freestanding fans; electric fans for personal use; air cooling apparatus" in Class 11. Applicant is part of the Dyson group of companies ("Dyson"). The Examining Attorney has objected that the applied-for mark is functional and thus registration of the mark is barred under Section 2(e)(5) of the Lanham Act.

Applicant respectfully disagrees with the Examining Attorney's conclusion because the applied-for mark as a whole is not functional. In particular, the utility patents that the Applicant has applied for, and in some cases secured, do not disclose any utilitarian advantage of the overall design sought to be registered. Moreover, the existence of the Applicant's multiple design patents and registrations for designs, nearly visually indistinguishable from the applied-for design, indicate that the design is ornamental and non-functional. In addition, Applicant's advertising underscores the aesthetic appeal of the applied-for design; numerous alternative designs in the market illustrate that Applicant's design is simply one of many available designs for bladeless electric fans; and the applied-for trade dress does not result from a comparatively simple or inexpensive method of manufacture. Thus, the *Morton-Norwich* factors weigh against a finding of functionality, and for registration of the trade dress.

## PROSECUTION HISTORY

Applicant filed its application for its trade dress mark on August 20, 2012. On December 20, 2012, the Examining Attorney mailed an initial Office Action, refusing registration of Applicant's mark under Section 2(e)(5) of the Lanham Act on the grounds that the mark "appears to be a functional design." (Office Action at 1.) Applicant timely responded to this initial Office Action on June 20, 2013. On July 15, 2013, the Examining Attorney mailed a Final Office Action, continuing her refusal to register Applicant's mark under Section 2(e)(5). Applicant timely filed a request for reconsideration in response to this Final Office Action on January 15, 2014. Applicant concurrently filed a Notice of Appeal with the Trademark Trial and Appeal Board (the "Board") on January 15, 2014. The Examining Attorney denied Applicant's request for reconsideration on March 18, 2014.

This appeal followed.

## STANDARD OF REVIEW

This appeal to the Board arises from the Examining Attorney's final refusal to register Applicant's trade dress and is proper under 15 U.S.C. § 1070. The Board reviews the appealed decision of the Examining Attorney to determine "whether or not, based on the record before the examiner, the examiner's action was correct." *In re Bose Corp.*, 772 F.2d 866, 869 (Fed. Cir. 1985).

## ARGUMENT

Applicant respectfully disagrees with the Examining Attorney's conclusion that the applied-for trade dress is functional. Trade dress is functional "if it is essential to the use or purpose of the article or if it affects the cost or quality of the article." *Inwood Labs., Inc. v. Ives Labs., Inc.*, 456 U.S. 844, 850 n.10, 214 U.S.P.Q. 1, 4 n.10 (1982). Significantly, Section 2(e)(5) prohibits registration only of "matter that, *as a whole*, is functional." 15 U.S.C. § 1052(e)(5)

(emphasis added). Thus, in determining functionality, the asserted trade dress must be analyzed as a whole, and not by its individual elements. *See* 15 U.S.C. § 1052(e)(5);

T.M.E.P. § 1202.02(a)(v) (“Generally, dissecting the design into its individual features and analyzing the utility of each separate feature does not establish that the overall design is functional.”); *see also In re Teledyne Indus. Inc.*, 696 F.2d 968, 971, 217 U.S.P.Q. 9, 11 (Fed. Cir. 1982) (“Simply dissecting [the] alleged trademark into its design features and attributing to each a proven or commonly known utility is not, without more, conclusive that the design, considered as a whole, is de jure functional and not registrable.”).

As the *Teledyne* court explained, “merely labeling each design feature as ‘useful’ or as ‘serving a utilitarian purpose’ cannot, as a matter of law, render the entire configuration de jure functional.” *Teledyne*, 696 F.2d at 971, 217 U.S.P.Q. at 11. “Rather, the decisive consideration is whether the overall design of [the trade dress] is so superior in de facto function or economy of manufacture that recognition of that design as a trademark would hinder competition” in the specific field at hand. *Id.*; *see also* T.M.E.P. § 1202.02(a)(iii)(A).

In determining whether the applied-for mark is functional, the Federal Circuit considers the following factors:

- (1) the existence of a utility patent that discloses the utilitarian advantages of the design sought to be registered;
- (2) advertising by the applicant that touts the utilitarian advantages of the design;
- (3) facts pertaining to the availability of alternative designs; and
- (4) facts pertaining to whether the design results from a comparatively simple or inexpensive method of manufacture.

T.M.E.P. § 1202.02(a)(v), *citing In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332, 1340-41, 213 U.S.P.Q. 9, 15-16 (C.C.P.A. 1982). These factors are “commonly known as the ‘*Morton-Norwich* factors.’” T.M.E.P. § 1202.02(a)(v). When the *Morton-Norwich* factors are properly

considered, Applicant respectfully submits that its applied-for trade dress—as a whole—cannot be viewed as functional.

**I. The Cited Utility Patents Do Not Disclose the Utilitarian Advantages of the Applied-For Trade Dress as a Whole, and the Design Patents Weigh Against a Finding of Functionality**

The mere existence of utility patents that claim features similar to elements of the applied-for trade dress is not dispositive of the functionality of the design as a whole. Instead, “[i]t is important to read the patent to determine whether the patent actually claims the features presented in the proposed mark.” T.M.E.P. § 1202.02(a)(v)(A). “If it does not, or if the features are referenced in the patent, but only as arbitrary or incidental features, then the probative value of the patent as evidence of functionality is substantially diminished or negated entirely.” *Id.* Each of Applicant’s utility patents and patent applications cited by the Examining Attorney refer to some elements of the applied-for trade dress, but none claims all of the elements of the applied-for trade dress, and all of the patents claiming elements of the top part of the fan explicitly state that the opening through which air flows need not be circular. The utility patents make clear that a variety of designs are possible, and the applied-for trade dress as a whole is not functional. Further, Applicant owns multiple design patents and registrations for designs that are either identical to, or nearly indistinguishable from, the applied-for design. “A design patent is a factor that weighs against a finding of functionality, because design patents by definition protect only ornamental and nonfunctional features.” *Id.*

The disclosures in the written descriptions of the utility patents cited by the Examining Attorney make clear that the overall design of the applied-for trade dress is not required for the functioning of the fan. The Examining Attorney focused on the fact that U.S. Patent Nos. 8,308,445 and 8,403,650 repeatedly note the “annular” or “ring-shaped” shape of the top part of the fan. (*See* Final Office Action at 2.) But the written description of the invention

makes clear that the top part of the fan—called the “nozzle” in the utility patents—need not be a complete circle. Both the ’445 and the ’650 patents state one preferred embodiment is an “annular” nozzle, but “[i]n a further preferred embodiment, the nozzle is at least partially circular. This arrangement can provide a variety of design options for the fan, increasing the choice available to a user or customer.” (See U.S. Patent No. 8,308,445, col. 3, ll. 59-62, attached hereto as Exhibit 1; U.S. Patent No. 8,403,650, col. 3, ll. 62-65, attached hereto as Exhibit 2.) This language also appears in the Applicant’s U.S. patent application No. 2009/0060710, cited in the Examining Attorney’s initial Office Action. (See US 2009/0060710 at ¶20, attached hereto as Exhibit 3.)<sup>1</sup> The written descriptions of these patents and patent application then list examples of alternative nozzle designs:

Other shapes of nozzle are envisaged. For example, a nozzle comprising an oval, or “racetrack” shape, a single strip or line, or block shape could be used. The fan assembly provides access to the central part of the fan as there are no blades. This means that additional features such as lighting or a clock or LCD display could be provided in the opening defined by the nozzle.

(Ex. 1, col. 7, ll. 28-35; Ex. 2, col. 7, ll. 26-32; Ex. 3 ¶ 46.) These statements make clear that the ring shape is an incidental feature of the top part of the fan, not one required for the functionality of the claimed invention. This description is consistent with testimony in the record from Peter David Gammack, concept design director for Dyson, that Dyson itself developed alternate designs for the bladeless fan that functioned as well as the applied-for design. Gammack testified in *Cornucopia Prods., LLC v. Dyson, Inc.*, Case No. CV 12-00924 PHX-NVW, 2012 U.S. Dist. LEXIS 104750 (D. Ariz. July 27, 2012), that one alternate design included a nozzle that was oval-shaped on the inside but rectangular on the outside, and that the “outside doesn’t affect the function of the internal

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<sup>1</sup> A fourth patent cited by the Examining Attorney in the Office Action, U.S. Patent No. 7,972,111, relates only to the fan assembly inside the base, an internal feature of the product. This patent does not claim an annular ring or any aspect of the external appearance of the fan other than describing the base as cylindrical.

nozzle.” (See Transcript for the Preliminary Injunction Hearing held July 12, 2012 before Judge Neil V. Wake in *Cornucopia*, 2012 U.S. Dist. LEXIS 104750 (previously submitted with Request for Reconsideration after Final Action), attached hereto as Exhibit 4, at 17:2-6.)

The Board has previously found trade dresses nonfunctional when an applicant’s utility patent disclosing a similar design included similar language about a variety of design options. In *In re Weber-Stephen Prods. Co.*, 3 U.S.P.Q.2d 1659 (T.T.A.B. 1987), the applicant sought to register several designs for barbecue grills that included a kettle portion with a generally spherical shape, supported by three legs. *Id.* at \*1. Registration was refused because the designs were functional. On appeal, in analyzing this first *Morton-Norwich* factor, the Board considered two utility patents in the record. The Board noted that while the drawings in the patent showed a cooking grill with a round bowl, supported on a tripod leg arrangement, the patent specifically stated that the “invention is susceptible of embodiment in many different forms.” (*Id.* at \*5.) Although the drawing and the written description “described in detail a preferred embodiment of the invention,” that description was “not intended to limit the broad aspect of the invention to the embodiment illustrated.” *Id.* at \*4-5 (citing U.S. Patent No. 4,453,530). Relying on this language, the Board found that the patents did not disclose any particular utilitarian advantages to the configuration of elements sought to be registered.

Similarly, here, the utility patents’ language about there being a variety of design options makes clear that a ring-shaped nozzle does not have utilitarian advantage. Indeed, Applicant’s position is even stronger here because, in contrast with *In re Weber-Stephen*, the utility patents cited by the examining attorney are not limited to a single

preferred embodiment: they indicate that one preferred embodiment is “an annular nozzle” and that a second preferred embodiment is a “nozzle [that] is at least partially circular.” In other words, the utility patents themselves make it clear that the applied for trade dress does not have a utilitarian advantage over other designs, including the second preferred embodiment of a “partially circular nozzle” or the variety of other shapes that are described in the patent.

Furthermore, the correct inquiry is not whether each individual element of applied-for trade dress is functional, but rather whether the trade dress is functional as a whole. As noted above, “[i]t is important to read the patent to determine whether the patent actually *claims* the features presented in the proposed mark.” T.M.E.P.

§ 1202.02(a)(v)(A) (emphasis added). A comparison of the applied-for trade dress to each of Applicant’s utility patents illustrates that none of the utility patents claims a utilitarian advantage for the overall combination of elements that constitute Applicant’s trade dress. U.S. Patents Nos. 8,308,445 and 8,403,650 and U.S. patent application No. 2009/0060710 only claim features related to the nozzle element; none claims features related to the exterior appearance or shape of the base. U.S. Patent No. 7,972,111 claims features related to the base element only; it does not claim features related to the appearance or shape of the nozzle element. Nothing in any of these patents claims a combination of an annular ring mounted to a cylindrical base. Because they do not, none of the patents claims the distinctive dip that extends from the base of the annular nozzle across the top of the cylindrical base in Applicant’s applied-for trade dress. Moreover, none of the patents cited by the Examining Attorney claims the wave design or series of separated air inlets toward the lower portion of the base in the applied-for trade dress.

Indeed, the '111 patent shows a continuous air inlet around the entire circumference of the base, not the series of rectangular blocks in the applied-for trade dress. The design of those air inlets in a series of separated blocks is merely ornamental.

Recently, a U.S. District judge reached a similar conclusion in a design patent proceeding involving design patents nearly identical to the applied-for trade dress. In *Cornucopia*, Dyson sought a preliminary injunction against Cornucopia, alleging that Cornucopia's fan infringed Dyson's U.S. Design Patent Nos. D602,143 ("D143") and D605,748 ("D748"). (*See* Order, dated July 27, 2012, issued by Judge Neil V. Wake, United States District Judge for the District of Arizona (previously submitted with Request for Reconsideration after Final Action), attached hereto as Exhibit 5.) Cornucopia argued that the designs were functional. Although the standard for functionality of design patents is different than the standard for trade dress functionality, the court's analysis is illustrative here. The court compared features of the design to another utility patent owned by Applicant, U.S. 7,931,449, and found that while some of the individual features of the design had a functional purpose, the overall combination of the elements was ornamental, and thus protectable. Specifically, the court found that the "proportions of the various components in relation to each other is ornamental" and worthy of protection. *Id.* at 16. The same is true with respect to Applicant's trade dress.

Moreover, the existence of these nearly identical design patents is further evidence of the non-functionality of the applied-for trade dress. In addition to the two patents asserted in the *Cornucopia* case, Applicant owns multiple design patents and registrations for designs identical to, or virtually indistinguishable from, the applied-for design. The USPTO, as well as OHIM and governmental bodies in Australia, Canada,

China, the UK, Indian, Japan, Russia, and South Africa, have found that the applied-for trade dress is worthy of protection as a design.<sup>2</sup>

For these reasons, Applicant respectfully submits that when the patents are properly analyzed, the first *Morton-Norwich* factor does not support the Examining Attorney's conclusion that the applied-for trade dress is functional.

## **II. Dyson's Advertising Does Not Tout the Utilitarian Advantages of the Applied-For Trade Dress as a Whole**

Dyson's advertising highlights the aesthetic appeal of the applied-for trade dress, and does not tout the utilitarian advantages of the applied-for trade dress as a whole. In some advertisements, Dyson simply shows the product embodying the applied-for trade dress standing alongside other Dyson products, without any descriptive text about the products themselves. By placing the bladeless fan alongside other Dyson products, with minimal text, these ads emphasize the sleek, futuristic Dyson design aesthetic, of which the bladeless fan is one example. In these ads, there is no discussion of any of the utilitarian aspects of the product. (*See, e.g.*, advertisements run in *People* and *Time* magazines, attached hereto as Exhibits 6 and 7 (previously submitted with Applicant's Response to Office Action).)

In other advertisements, Dyson describes what the product does, but does not connect the function of the product to the applied-for design. In these ads, the function of the product is not described as a result of the design. For example, the smooth flow of air is not described as a result of the circular shape of the ring. (*See, e.g.*, advertisements run in *Architectural Digest*, *In Style*, *Elle Décor*, and *Surface* magazines, attached hereto as Exhibits 8-11 (previously submitted with Applicant's Response to Office Action).)

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<sup>2</sup> See Response to Office Action at 3-4 for a list of Applicant's patented and registered designs.

In the Final Office Action, the Examining Attorney relied on descriptions of the product that did not come from Applicant's own advertising. For example, the Examining Attorney cites to a "product review" which, in the Examining Attorney's view, discusses the functional advantages of Applicant's design. (Final Office Action at 2.) But the second *Morton-Norwich* factor requires analysis of the Applicant's *own* advertising, not statements by third parties about any perceived connection between the product's function and design. *See Morton-Norwich*, 671 F.2d 1332, 1341 ("It may also be significant that the *originator of the design* touts its utilitarian advantages.") (emphasis added). The Examining Attorney has submitted no evidence that Applicant has touted the utilitarian advantages of the product design. Accordingly, the second *Morton-Norwich* factor does not support the Examining Attorney's conclusion that the applied-for trade dress is functional.

### **III. Numerous Alternative Designs for Bladeless Electric Fans Illustrate That the Applied-For Trade Dress Is Not Required to Ensure Competition**

The third *Morton-Norwich* factor, whether there are alternative designs available on the market, relates to whether or not competitors need the applicant's design to effectively compete. "[T]he effect upon competition is really the crux of the matter." *Id.* (internal citation and quotation omitted). Here, the plethora of alternative designs on the market make clear that Applicant's applied-for trade dress is far from the only viable design for a bladeless electric fan.

These alternative designs for bladeless electric fans embody a variety of different shapes. For example, some fans are in the shapes of hearts, apples, ovals, triangles, racetracks, inverted triangles, vases, heptagons, and even bears. (*See* results of Google image search (previously submitted with Applicant's Response to Office Action) attached hereto as Exhibit 12 at 1, 3-4, 6-9, 11, 13-14.) Others have features on the outside surface of the fan that resemble headphones or ears, such that the fan as a whole resembles a person or animal. (*Id.* at 2, 5, 9.) The bases of

these alternative fan designs also vary significantly. Some have bases in the shape of human-like or even bear bodies (*id.* at 2, 5, 9-10); others have rounded, flared bases (*id.* at 4) or bases that widen as they approach the bottom of the fan (*id.* at 8); some have bases that fluidly merge into the upper portion of the fan itself (*id.* at 11, 13); and others have bases with fins that resemble rocket ships (*id.* at 6).

The variety of shapes of bladeless electric fans on the market demonstrates that competitors and consumers alike have diverse choices for the appearance of their bladeless electric fans. There is thus no competitive need for the applied-for trade dress as applied to bladeless electric fans. “If evidence shows the existence of a number of functionally equivalent alternative designs that work ‘equally well,’ such that competitors do not need applicant’s design to compete effectively, this factor may not support functionality.” T.M.E.P. § 1202.02(a)(v)(C) (citing *In re Dietrich*, 91 U.S.P.Q.2d 1622, 1636 (T.T.A.B. 2009)). In light of these alternative designs, the third *Morton-Norwich* factor cuts against a finding of functionality.

#### **IV. The Applied-For Trade Dress Does Not Result from a Comparatively Simple or Inexpensive Method of Manufacture**

Applicant’s applied-for trade dress does not result from a comparatively simple or inexpensive method of manufacture of electric fans. (*See* Declaration of Gillian Ruth Smith (previously submitted with Response to Office Action) attached hereto as Exhibit 13, at ¶ 9.) Dyson invests significant amounts of time, effort, and money into the research and development of its designs. (*Id.*) Moreover, Dyson’s electric fans are “specially manufactured from customized parts.” (*Id.*) As a result, these fans are not cheaper or easier to manufacture compared to other products. (*Id.*) Thus, the final *Morton-Norwich* factor does not weigh in favor of a finding of functionality.

## CONCLUSION

Because Applicant's applied-for trade dress is not functional, Section 2(e)(5) of the Lanham Act does not prohibit registration of the mark.

Respectfully submitted,

Dated: May 27, 2014

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# Exhibit 1



US008308445B2

(12) **United States Patent**  
**Gammack et al.**

(10) **Patent No.:** **US 8,308,445 B2**

(45) **Date of Patent:** **Nov. 13, 2012**

(54) **FAN**

(75) Inventors: **Peter David Gammack**, Malmesbury (GB); **Frederic Nicolas**, Malmesbury (GB); **Kevin John Simmonds**, Malmesbury (GB)

(73) Assignee: **Dyson Technology Limited**, Malmesbury, Wiltshire (GB)

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 411 days.

(21) Appl. No.: **12/203,698**

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Sep. 4, 2007	(GB)	0717151.5
Sep. 4, 2007	(GB)	0717154.9
Sep. 4, 2007	(GB)	0717155.6
Aug. 14, 2008	(GB)	0814835.5

(51) **Int. Cl.**

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<b>B05B 7/04</b>	(2006.01)
<b>B05B 1/06</b>	(2006.01)

(52) **U.S. Cl.** ..... 417/177; 239/434.5; 239/568

(58) **Field of Classification Search** ..... 239/265.17, 239/434.5, 561, 568, DIG. 7; 417/76, 84, 417/155, 177, 198

See application file for complete search history.

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*Primary Examiner* — Devon Kramer

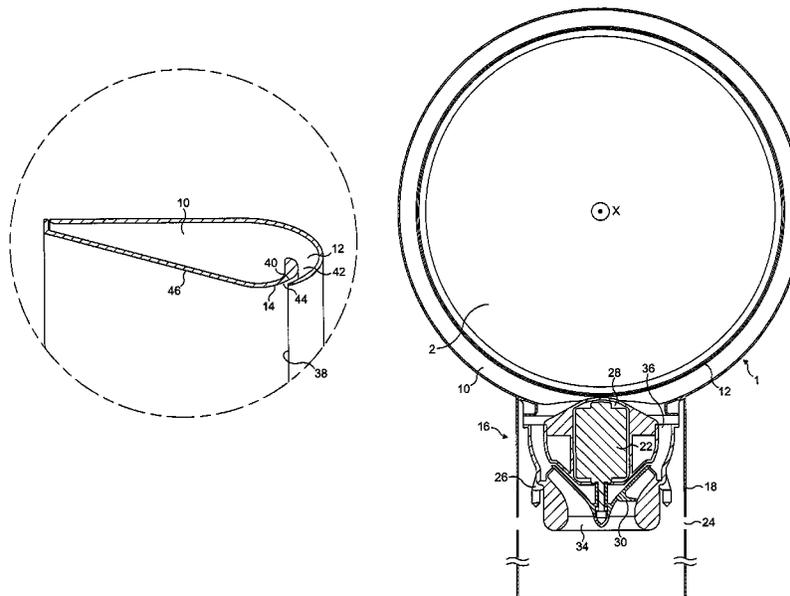
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(74) *Attorney, Agent, or Firm* — Morrison & Foerster LLP

(57) **ABSTRACT**

A fan assembly for creating an air current includes a bladeless fan assembly including a nozzle and a device for creating an air flow through the nozzle. The nozzle includes an interior passage and a mouth receiving the air flow from the interior passage. A Coanda surface located adjacent the mouth and over which the mouth is arranged to direct the air flow. The fan provides an arrangement producing an air current and a flow of cooling air created without requiring a bladed fan, that is, the air flow is created by a bladeless fan.

**18 Claims, 5 Drawing Sheets**



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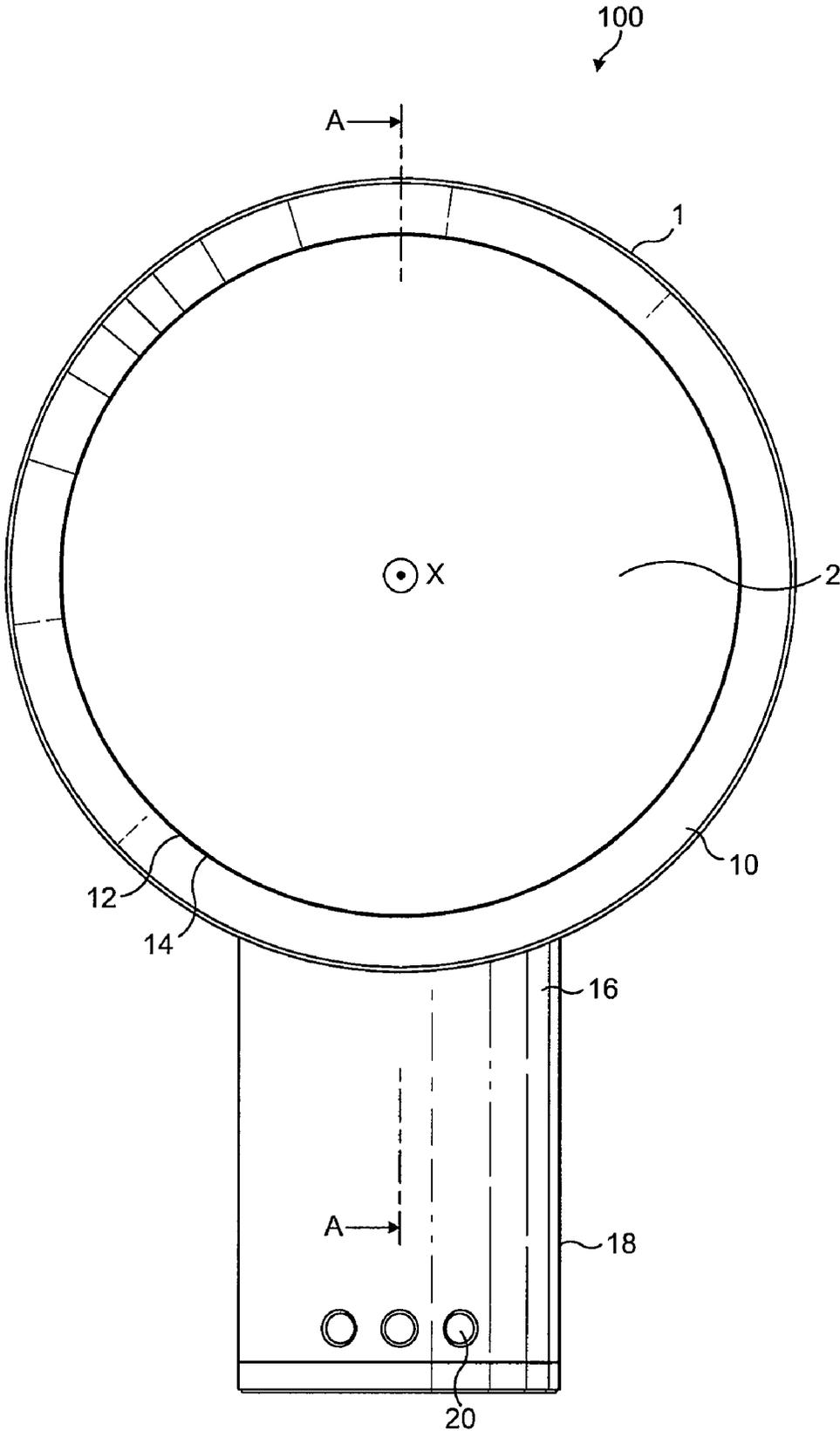


FIG. 1

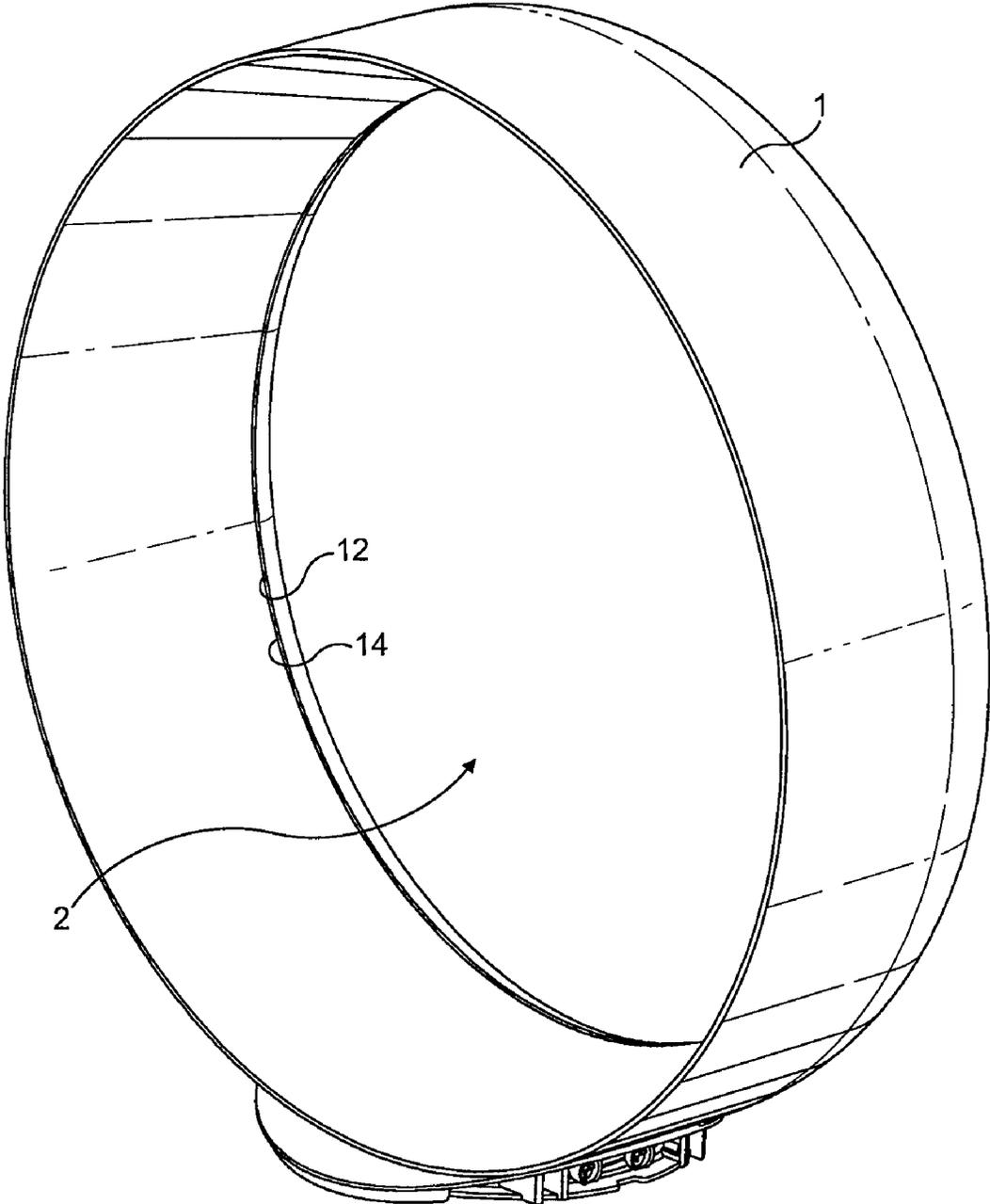


FIG. 2

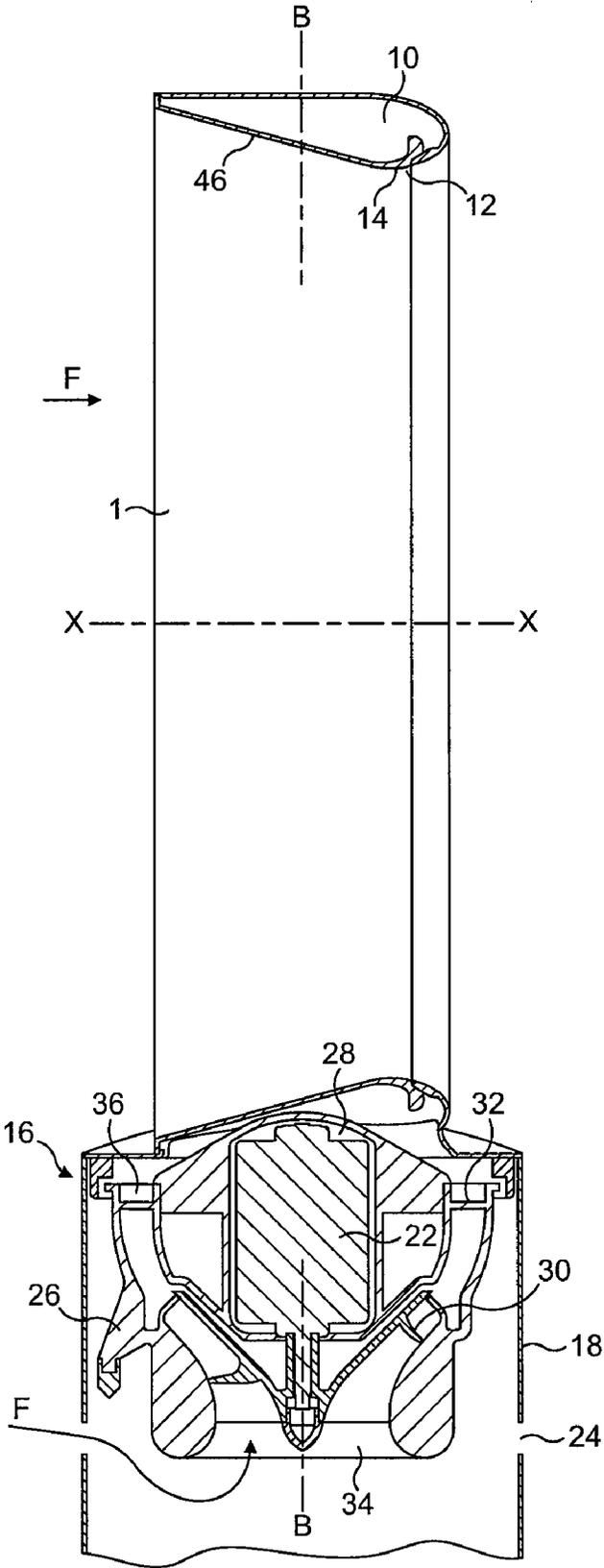


FIG. 3

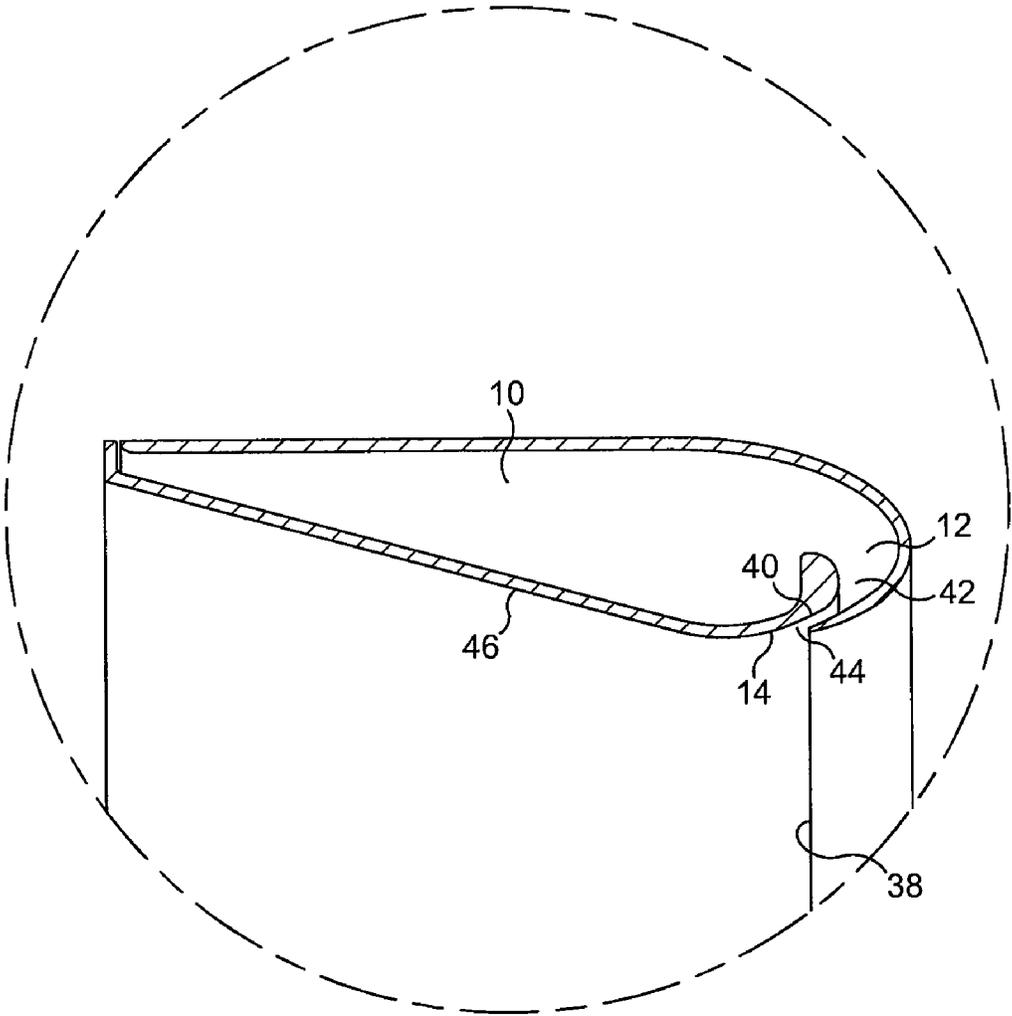


FIG. 4

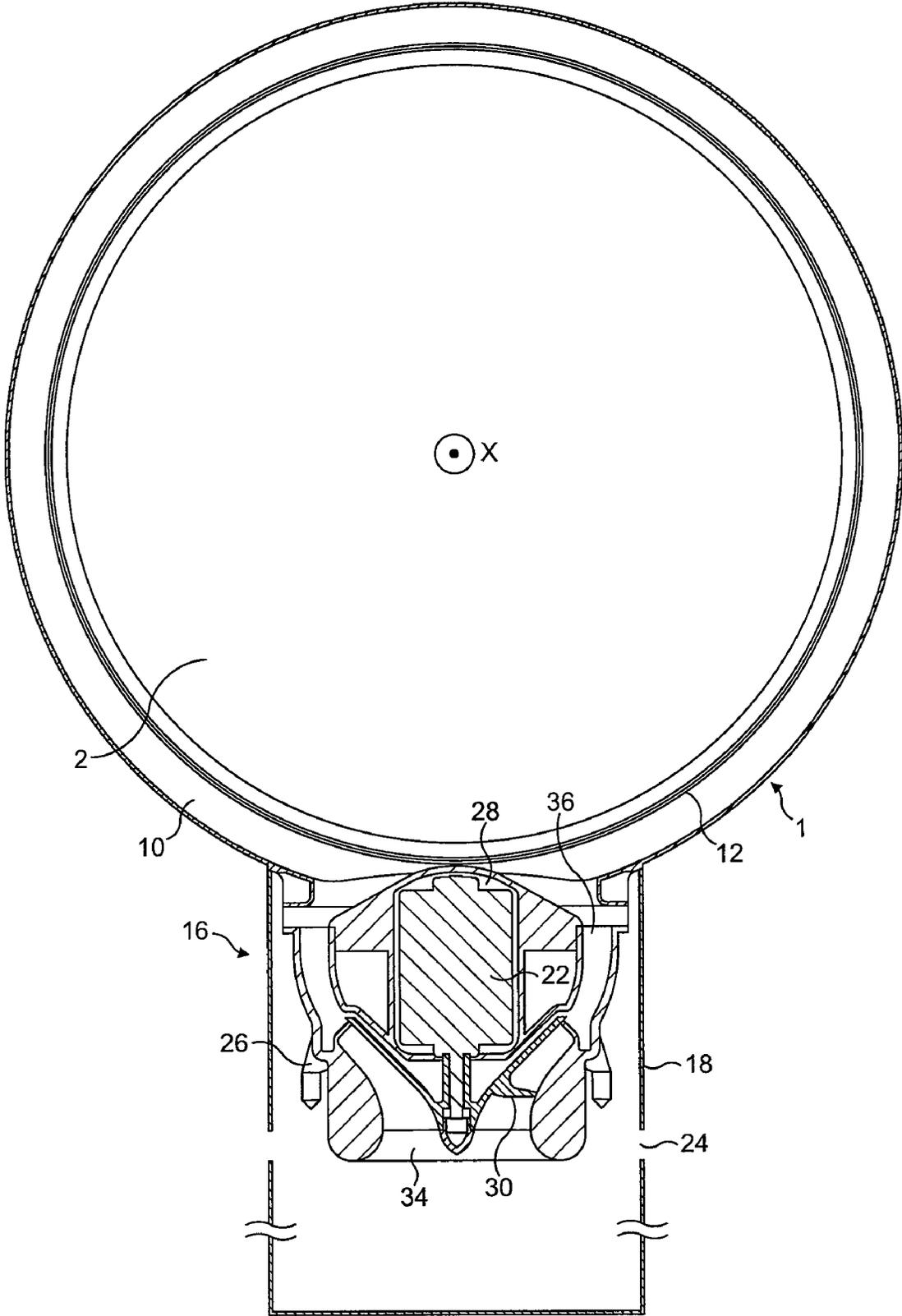


FIG. 5

# 1

## FAN

### REFERENCE TO RELATED APPLICATIONS

This application claims the priority of United Kingdom Application Nos. 0717155.6, 0717148.1, 0717151.5 and 0717154.9, all filed Sep. 4, 2007, and No. 0814835.5 filed on Aug. 14, 2008, the contents of which prior applications are incorporated herein by reference.

### FIELD OF THE INVENTION

The present invention relates to a fan appliance. Particularly, but not exclusively, the present invention relates to a domestic fan, such as a desk fan, for creating air circulation and air current in a room, in an office or other domestic environment.

### BACKGROUND OF THE INVENTION

A number of types of domestic fan are known. It is common for a conventional fan to include a single set of blades or vanes mounted for rotation about an axis, and driving apparatus mounted about the axis for rotating the set of blades. Domestic fans are available in a variety of sizes and diameters, for example, a ceiling fan can be at least 1 m in diameter and is usually mounted in a suspended manner from the ceiling and positioned to provide a downward flow of air and cooling throughout a room.

Desk fans, on the other hand, are often around 30 cm in diameter and are usually free standing and portable. In standard desk fan arrangements the single set of blades is positioned close to the user and the rotation of the fan blades provides a forward flow of air current in a room or into a part of a room, and towards the user. Other types of fan can be attached to the floor or mounted on a wall. The movement and circulation of the air creates a so called "wind chill" or breeze and, as a result, the user experiences a cooling effect as heat is dissipated through convection and evaporation. Fans such as that disclosed in USD 103,476 are suitable for standing on a desk or a table. U.S. Pat. No. 2,620,127 discloses a dual purpose fan suitable for use either mounted in a window or as a portable desk fan.

In a domestic environment it is desirable for appliances to be as small and compact as possible. U.S. Pat. No. 1,767,060 describes a desk fan with an oscillating function that aims to provide an air circulation equivalent to two or more prior art fans. In a domestic environment it is undesirable for parts to project from the appliance, or for the user to be able to touch any moving parts of the fan, such as the blades. USD 103,476 includes a cage around the blades. Other types of fan or circulator are described in U.S. Pat. No. 2,488,467, U.S. Pat. No. 2,433,795 and JP 56-167897. The fan of U.S. Pat. No. 2,433,795 has spiral slots in a rotating shroud instead of fan blades.

Some of the above prior art arrangements have safety features such as a cage or shroud around the blades to protect a user from injuring himself on the moving parts of the fan. However, caged blade parts can be difficult to clean and the movement of blades through air can be noisy and disruptive in a home or office environment.

A disadvantage of certain of the prior art arrangements is that the air flow produced by the fan is not felt uniformly by the user due to variations across the blade surface or across the outward facing surface of the fan. Uneven or "choppy" air flow can be felt as a series of pulses or blasts of air. A further disadvantage is that the cooling effect created by the fan

# 2

diminishes with distance from the user. This means the fan must be placed in close proximity to the user in order for the user to receive the benefit of the fan.

Locating fans such as those described above close to a user is not always possible as the bulky shape and structure mean that the fan occupies a significant amount of the user's work space area. In the particular case of a fan placed on, or close to, a desk the fan body reduces the area available for paperwork, a computer or other office equipment.

The shape and structure of a fan at a desk not only reduces the working area available to a user but can block natural light (or light from artificial sources) from reaching the desk area. A well lit desk area is desirable for close work and for reading. In addition, a well lit area can reduce eye strain and the related health problems that may result from prolonged periods working in reduced light levels.

### SUMMARY OF THE INVENTION

The present invention seeks to provide an improved fan assembly which obviates disadvantages of the prior art. It is an object of the present invention to provide a fan assembly which, in use, generates air flow at an even rate over the emission output area of the fan. It is another object to provide an improved fan assembly whereby a user at a distance from the fan feels an improved air flow and cooling effect in comparison to prior art fans.

According to the invention, there is provided a bladeless fan assembly for creating an air current, the fan assembly comprising a nozzle and means for creating an air flow through the nozzle, the nozzle comprising an interior passage, a mouth for receiving the air flow from the interior passage, and a Coanda surface located adjacent the mouth and over which the mouth is arranged to direct the air flow.

Advantageously, by this arrangement an air current is generated and a cooling effect is created without requiring a bladed fan. The bladeless arrangement leads to lower noise emissions due to the absence of the sound of a fan blade moving through the air, and a reduction in moving parts and complexity.

In the following description of fans and, in particular a fan of the preferred embodiment, the term "bladeless" is used to describe apparatus in which air flow is emitted or projected forwards from the fan assembly without the use of blades. By this definition a bladeless fan assembly can be considered to have an output area or emission zone absent blades or vanes from which the air flow is released or emitted in a direction appropriate for the user. A bladeless fan assembly may be supplied with a primary source of air from a variety of sources or generating means such as pumps, generators, motors or other fluid transfer devices, which include rotating devices such as a motor rotor and a bladed impeller for generating air flow. The supply of air generated by the motor causes a flow of air to pass from the room space or environment outside the fan assembly through the interior passage to the nozzle and then out through the mouth.

Hence, the description of a fan assembly as bladeless is not intended to extend to the description of the power source and components such as motors that are required for secondary fan functions. Examples of secondary fan functions can include lighting, adjustment and oscillation of the fan.

The bladeless fan assembly achieves the output and cooling effect described above with a nozzle which includes a Coanda surface to provide an amplifying region utilising the Coanda effect. A Coanda surface is a known type of surface over which fluid flow exiting an output orifice close to the surface exhibits the Coanda effect. The fluid tends to flow

over the surface closely, almost 'clinging to' or 'hugging' the surface. The Coanda effect is already a proven, well documented method of entrainment whereby a primary air flow is directed over the Coanda surface. A description of the features of a Coanda surface, and the effect of fluid flow over a Coanda surface, can be found in articles such as Reba, Scientific American, Volume 214, June 1963 pages 84 to 92.

Preferably the nozzle defines an opening through which air from outside the fan assembly is drawn by the air flow directed over the Coanda surface. Air from the external environment is drawn through the opening by the air flow directed over the Coanda surface. Advantageously, by this arrangement the assembly can be produced and manufactured with a reduced number of parts than those required in prior art fans. This reduces manufacturing cost and complexity.

In the present invention an air flow is created through the nozzle of the fan assembly. In the following description this air flow will be referred to as primary air flow. The primary air flow exits the nozzle via the mouth and passes over the Coanda surface. The primary air flow entrains the air surrounding the mouth of the nozzle, which acts as an air amplifier to supply both the primary air flow and the entrained air to the user. The entrained air will be referred to here as a secondary air flow. The secondary air flow is drawn from the room space, region or external environment surrounding the mouth of the nozzle and, by displacement, from other regions around the fan assembly. The primary air flow directed over the Coanda surface combined with the secondary air flow entrained by the air amplifier gives a total air flow emitted or projected forward to a user from the opening defined by the nozzle. The total air flow is sufficient for the fan assembly to create an air current suitable for cooling.

The air current delivered by the fan assembly to the user has the benefit of being an air flow with low turbulence and with a more linear air flow profile than that provided by other prior art devices. Linear air flow with low turbulence travels efficiently out from the point of emission and loses less energy and less velocity to turbulence than the air flow generated by prior art fans. An advantage for a user is that the cooling effect can be felt even at a distance and the overall efficiency of the fan increases. This means that the user can choose to site the fan some distance from a work area or desk and still be able to feel the cooling benefit of the fan.

Advantageously, the assembly results in the entrainment of air surrounding the mouth of the nozzle such that the primary air flow is amplified by at least 15%, whilst a smooth overall output is maintained. The entrainment and amplification features of the fan assembly result in a fan with a higher efficiency than prior art devices. The air current emitted from the opening defined by the nozzle has an approximately flat velocity profile across the diameter of the nozzle. Overall the flow rate and profile can be described as plug flow with some regions having a laminar or partial laminar flow.

Preferably the nozzle comprises a loop. The shape of the nozzle is not constrained by the requirement to include space for a bladed fan. In a preferred embodiment the nozzle is annular. By providing an annular nozzle the fan can potentially reach a broad area. In a further preferred embodiment the nozzle is at least partially circular. This arrangement can provide a variety of design options for the fan, increasing the choice available to a user or customer.

Preferably, the interior passage is continuous. This allows smooth, unimpeded air flow within the nozzle and reduces frictional losses and noise. In this arrangement the nozzle can be manufactured as a single piece, reducing the complexity of the fan assembly and thereby reducing manufacturing costs.

It is preferred that the mouth is substantially annular. By providing a substantially annular mouth the total air flow can be emitted towards a user over a broad area. Advantageously, an illumination source in the room or at the desk fan location or natural light can reach the user through the central opening.

Preferably, the mouth is concentric with the interior passage. This arrangement will be visually appealing and the concentric location of the mouth with the passage facilitates manufacture. Preferably, the Coanda surface extends symmetrically about an axis. More preferably, the angle subtended between the Coanda surface and the axis is in the range from 7° to 20°, preferably around 15°. This provides an efficient primary air flow over the Coanda surface and leads to maximum air entrainment and secondary air flow.

Preferably the nozzle extends by a distance of at least 5 cm in the direction of the axis. Preferably the nozzle extends about the axis in the shape of a loop and preferably by a distance in the range from 30 cm to 180 cm. This provides options for emission of air over a range of different output areas and opening sizes, such as may be suitable for cooling the upper body and face of a user when working at a desk, for example. In the preferred embodiment the nozzle comprises a diffuser located downstream of the Coanda surface. An angular arrangement of the diffuser surface and an aerofoil-type shaping of the nozzle and diffuser surface can enhance the amplification properties of the fan assembly whilst minimising noise and frictional losses.

In a preferred arrangement the nozzle comprises at least one wall defining the interior passage and the mouth, and the at least one wall comprises opposing surfaces defining the mouth. Preferably, the mouth has an outlet, and the spacing between the opposing surfaces at the outlet of the mouth is in the range from 1 mm to 5 mm, more preferably around 1.3 mm. By this arrangement a nozzle can be provided with the desired flow properties to guide the primary air flow over the Coanda surface and provide a relatively uniform, or close to uniform, total air flow reaching the user.

In the preferred fan arrangement the means for creating an air flow through the nozzle comprises an impeller driven by a motor. This arrangement provides a fan with efficient air flow generation. More preferably the means for creating an air flow comprises a DC brushless motor and a mixed flow impeller. This arrangement reduces frictional losses from motor brushes and also reduces carbon debris from the brushes in a traditional motor. Reducing carbon debris and emissions is advantageous in a clean or pollutant sensitive environment such as a hospital or around those with allergies.

The nozzle may be rotatable or pivotable relative to a base portion, or other portion, of the fan assembly. This enables the nozzle to be directed towards or away from a user as required. The fan assembly may be desk, floor, wall or ceiling mountable. This can increase the portion of a room over which the user experiences cooling.

#### BRIEF DESCRIPTION OF THE DRAWINGS

An embodiment of the invention will now be described with reference to the accompanying drawings, in which:

FIG. 1 is a front view of a fan assembly;

FIG. 2 is a perspective view of a portion of the fan assembly of FIG. 1;

FIG. 3 is a side sectional view through a portion of the fan assembly of FIG. 1 taken at line A-A;

FIG. 4 is an enlarged side sectional detail of a portion of the fan assembly of FIG. 1; and

FIG. 5 is a sectional view of the fan assembly taken along line B-B of FIG. 3 and viewed from direction F of FIG. 3.

#### DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 shows an example of a fan assembly 100 viewed from the front of the device. The fan assembly 100 comprises an annular nozzle 1 defining a central opening 2. With reference also to FIGS. 2 and 3, nozzle 1 comprises an interior passage 10, a mouth 12 and a Coanda surface 14 adjacent the mouth 12. The Coanda surface 14 is arranged so that a primary air flow exiting the mouth 12 and directed over the Coanda surface 14 is amplified by the Coanda effect. The nozzle 1 is connected to, and supported by, a base 16 having an outer casing 18. The base 16 includes a plurality of selection buttons 20 accessible through the outer casing 18 and through which the fan assembly 100 can be operated.

FIGS. 3, 4 and 5 show further specific details of the fan assembly 100. A motor 22 for creating an air flow through the nozzle 1 is located inside the base 16. The base 16 further comprises an air inlet 24 formed in the outer casing 18. A motor housing 26 is located inside the base 16. The motor 22 is supported by the motor housing 26 and held in a secure position by a rubber mount or seal member 28.

In the illustrated embodiment, the motor 22 is a DC brushless motor. An impeller 30 is connected to a rotary shaft extending outwardly from the motor 22, and a diffuser 32 is positioned downstream of the impeller 30. The diffuser 32 comprises a fixed, stationary disc having spiral blades.

An inlet 34 to the impeller 30 communicates with the air inlet 24 formed in the outer casing 18 of the base 16. The outlet 36 of the diffuser 32 and the exhaust from the impeller 30 communicate with hollow passageway portions or ducts located inside the base 16 in order to establish air flow from the impeller 30 to the interior passage 10 of the nozzle 1. The motor 22 is connected to an electrical connection and power supply and is controlled by a controller (not shown). Communication between the controller and the plurality of selection buttons 20 enable a user to operate the fan assembly 100.

The features of the nozzle 1 will now be described with reference to FIGS. 3 and 4. The shape of the nozzle 1 is annular. In this embodiment the nozzle 1 has a diameter of around 350 mm, but the nozzle may have any desired diameter, for example around 300 mm. The interior passage 10 is annular and is formed as a continuous loop or duct within the nozzle 1. The nozzle 1 is formed from at least one wall defining the interior passage 10 and the mouth 12. In this embodiment the nozzle 1 comprises an inner wall 38 and an outer wall 40. In the illustrated embodiment the walls 38, 40 are arranged in a looped or folded shape such that the inner wall 38 and outer wall 40 approach one another. The inner wall 38 and the outer wall 40 together define the mouth 12, and the mouth 12 extends about the axis X. The mouth 12 comprises a tapered region 42 narrowing to an outlet 44. The outlet 44 comprises a gap or spacing formed between the inner wall 38 of the nozzle 1 and the outer wall 40 of the nozzle 1. The spacing between the opposing surfaces of the walls 38, 40 at the outlet 44 of the mouth 12 is chosen to be in the range from 1 mm to 5 mm. The choice of spacing will depend on the desired performance characteristics of the fan. In this embodiment the outlet 44 is around 1.3 mm wide, and the mouth 12 and the outlet 44 are concentric with the interior passage 10.

The mouth 12 is adjacent the Coanda surface 14. The nozzle 1 further comprises a diffuser portion located downstream of the Coanda surface. The diffuser portion includes a diffuser surface 46 to further assist the flow of air current

delivered or output from the fan assembly 100. In the example illustrated in FIG. 3 the mouth 12 and the overall arrangement of the nozzle 1 is such that the angle subtended between the Coanda surface 14 and the axis X is around 15°. The angle is chosen for efficient air flow over the Coanda surface 14. The base 16 and the nozzle 1 have a depth in the direction of the axis X. The nozzle 1 extends by a distance of around 5 cm in the direction of the axis. The diffuser surface 46 and the overall profile of the nozzle 1 are based on an aerofoil shape, and in the example shown the diffuser portion extends by a distance of around two thirds the overall depth of the nozzle 1.

The fan assembly 100 described above operates in the following manner. When a user makes a suitable selection from the plurality of buttons 20 to operate or activate the fan assembly 100, a signal or other communication is sent to drive the motor 22. The motor 22 is thus activated and air is drawn into the fan assembly 100 via the air inlet 24. In the preferred embodiment air is drawn in at a rate of approximately 20 to 30 liters per second, preferably around 27 l/s (liters per second). The air passes through the outer casing 18 and along the route illustrated by arrow F of FIG. 3 to the inlet 34 of the impeller 30. The air flow leaving the outlet 36 of the diffuser 32 and the exhaust of the impeller 30 is divided into two air flows that proceed in opposite directions through the interior passage 10. The air flow is constricted as it enters the mouth 12 and is further constricted at the outlet 44 of the mouth 12. The air flow exits through the outlet 44 as a primary air flow.

The output and emission of the primary air flow creates a low pressure area at the air inlet 24 with the effect of drawing additional air into the fan assembly 100. The operation of the fan assembly 100 induces high air flow through the nozzle 1 and out through the opening 2. The primary air flow is directed over the Coanda surface 14 and the diffuser surface 46, and is amplified by the Coanda effect. A secondary air flow is generated by entrainment of air from the external environment, specifically from the region around the outlet 44 and from around the outer edge of the nozzle 1. A portion of the secondary air flow entrained by the primary air flow may also be guided over the diffuser surface 46. This secondary air flow passes through the opening 2, where it combines with the primary air flow to produce a total air flow projected forward from the fan assembly 100 in the region of 500 to 700 l/s.

The combination of entrainment and amplification results in a total air flow from the opening 2 of the fan assembly 100 that is greater than the air flow output from a fan assembly without such a Coanda or amplification surface adjacent the emission area.

The amplification and laminar type of air flow produced results in a sustained flow of air being directed towards a user from the nozzle 1. The flow rate at a distance of up to 3 nozzle diameters (i.e. around 1000 to 1200 mm) from a user is around 400 to 500 l/s. The total air flow has a velocity of around 3 to 4 m/s (meters per second). Higher velocities are achievable by reducing the angle subtended between the Coanda surface 14 and the axis X. A smaller angle results in the total air flow being emitted in a more focussed and directed manner. This type of air flow tends to be emitted at a higher velocity but with a reduced mass flow rate. Conversely, greater mass flow can be achieved by increasing the angle between the Coanda surface and the axis. In this case the velocity of the emitted air flow is reduced but the mass flow generated increases. Thus the performance of the fan assembly can be altered by altering the angle subtended between the Coanda surface and the axis X.

The invention is not limited to the detailed description given above. Variations will be apparent to the person skilled in the art. For example, the fan could be of a different height or diameter. The fan need not be located on a desk, but could be free standing, wall mounted or ceiling mounted. The fan shape could be adapted to suit any kind of situation or location where a cooling flow of air is desired. A portable fan could have a smaller nozzle, say 5 cm in diameter. The means for creating an air flow through the nozzle can be a motor or other air emitting device, such as any air blower or vacuum source that can be used so that the fan assembly can create an air current in a room. Examples include a motor such as an AC induction motor or types of DC brushless motor, but may also comprise any suitable air movement or air transport device such as a pump or other means of providing directed fluid flow to generate and create an air flow. Features of a motor may include a diffuser or a secondary diffuser located downstream of the motor to recover some of the static pressure lost in the motor housing and through the motor.

The outlet of the mouth may be modified. The outlet of the mouth may be widened or narrowed to a variety of spacings to maximise air flow. The Coanda effect may be made to occur over a number of different surfaces, or a number of internal or external designs may be used in combination to achieve the flow and entrainment required.

Other shapes of nozzle are envisaged. For example, a nozzle comprising an oval, or ‘racetrack’ shape, a single strip or line, or block shape could be used. The fan assembly provides access to the central part of the fan as there are no blades. This means that additional features such as lighting or a clock or LCD display could be provided in the opening defined by the nozzle.

Other features could include a pivotable or tiltable base for ease of movement and adjustment of the position of the nozzle for the user.

The invention claimed is:

1. A bladeless fan assembly for creating an air current, the fan assembly comprising:
  - a nozzle, and
  - a device creating an air flow through the nozzle, the nozzle comprising an interior passage, formed between a first wall and a second wall, wherein a distal end of the first wall overlaps a distal end of the second wall to form, near the distal ends of the first and second walls, a mouth for receiving the air flow from the interior passage,
  - a tapered region, located downstream from the mouth, and
  - an outlet, located downstream of the tapered region, for releasing the air flow from the nozzle, wherein a dis-

tance between the first wall and the second wall is greater at the mouth than at the outlet, and a Coanda surface located adjacent the outlet, wherein the first wall is curved proximate to its distal end to direct the air flow over the Coanda surface, and wherein a thickness of the first wall decreases near the distal end, and a thickness of the second wall increases near the distal end.

2. The fan assembly as claimed in claim 1, wherein the nozzle defines an opening through which air from outside the fan assembly is drawn by the air flow directed over the Coanda surface.

3. The fan assembly as claimed in claim 1 or 2, wherein the nozzle comprises a loop.

4. The fan assembly as claimed in claim 1 or 2, wherein the nozzle is annular.

5. The fan assembly as claimed in claim 1 or 2, wherein the nozzle is at least partially circular.

6. The fan assembly as claimed in claim 1 or 2, wherein the interior passage is continuous.

7. The fan assembly as claimed in claim 1 or 2, wherein the interior passage is annular.

8. The fan assembly as claimed in claim 1 or 2, wherein the mouth is annular.

9. The fan assembly as claimed in claim 1 or 2, wherein the mouth is concentric with the interior passage.

10. The fan assembly as claimed in claim 1 or 2, wherein the nozzle comprises a diffuser located downstream of the Coanda surface.

11. The fan assembly as claimed in claim 1 or 2, wherein a spacing between the first and second walls at the mouth is in a range from 1 mm to 5 mm.

12. The fan assembly as claimed in claim 1 or 2, wherein the Coanda surface extends symmetrically about an axis.

13. The fan assembly as claimed in claim 12, wherein an angle subtended between the Coanda surface and the axis is in a range from 7° to 20°.

14. The fan assembly as claimed in claim 12, wherein the nozzle extends by a distance of at least 5 cm in the direction of the axis.

15. The fan assembly as claimed in claim 12, wherein the nozzle extends about the axis by a distance in a range from 30 cm to 180 cm.

16. The fan assembly as claimed in claim 12, wherein an angle subtended between the Coanda surface and the axis is 15°.

17. The fan assembly as claimed in claim 1 or 2, wherein the device creating the air flow through the nozzle comprises an impeller driven by a motor.

18. The fan assembly as claimed in claim 17, wherein the device creating the air flow comprises a DC brushless motor and a mixed flow impeller.

\* \* \* \* \*

# Exhibit 2



(12) **United States Patent**  
**Gammack et al.**

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(45) **Date of Patent:** **\*Mar. 26, 2013**

(54) **FAN**

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This patent is subject to a terminal disclaimer.

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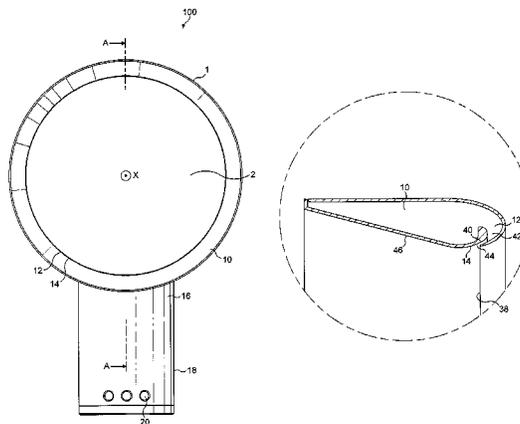
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(57) **ABSTRACT**

A fan assembly for creating an air current includes a bladeless fan assembly including a nozzle and a device for creating an air flow through the nozzle. The nozzle includes an interior passage and a mouth receiving the air flow from the interior passage. A Coanda surface located adjacent the mouth and over which the mouth is arranged to direct the air flow. The fan provides an arrangement producing an air current and a flow of cooling air created without requiring a bladed fan, that is, the air flow is created by a bladeless fan.

**19 Claims, 5 Drawing Sheets**



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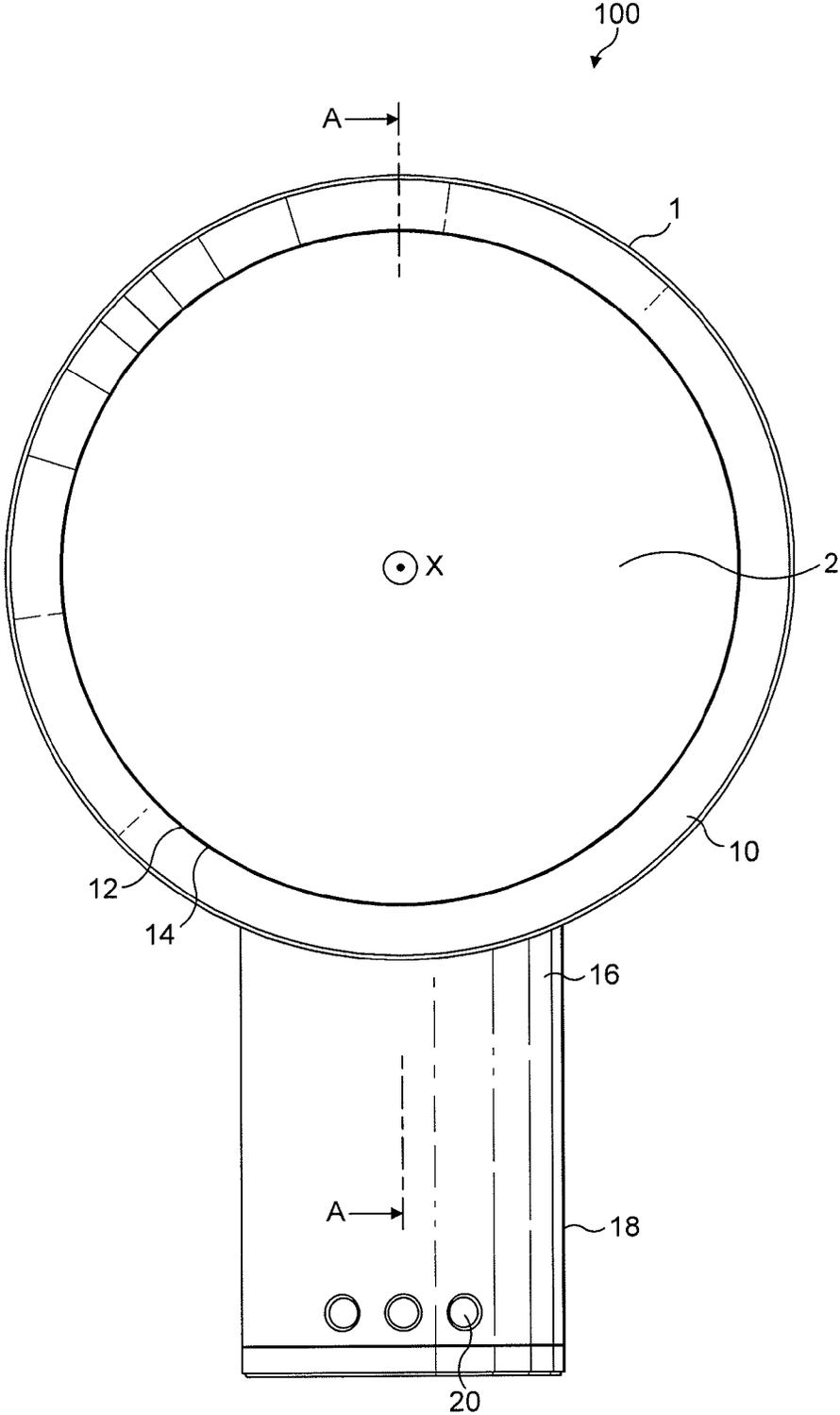


FIG. 1

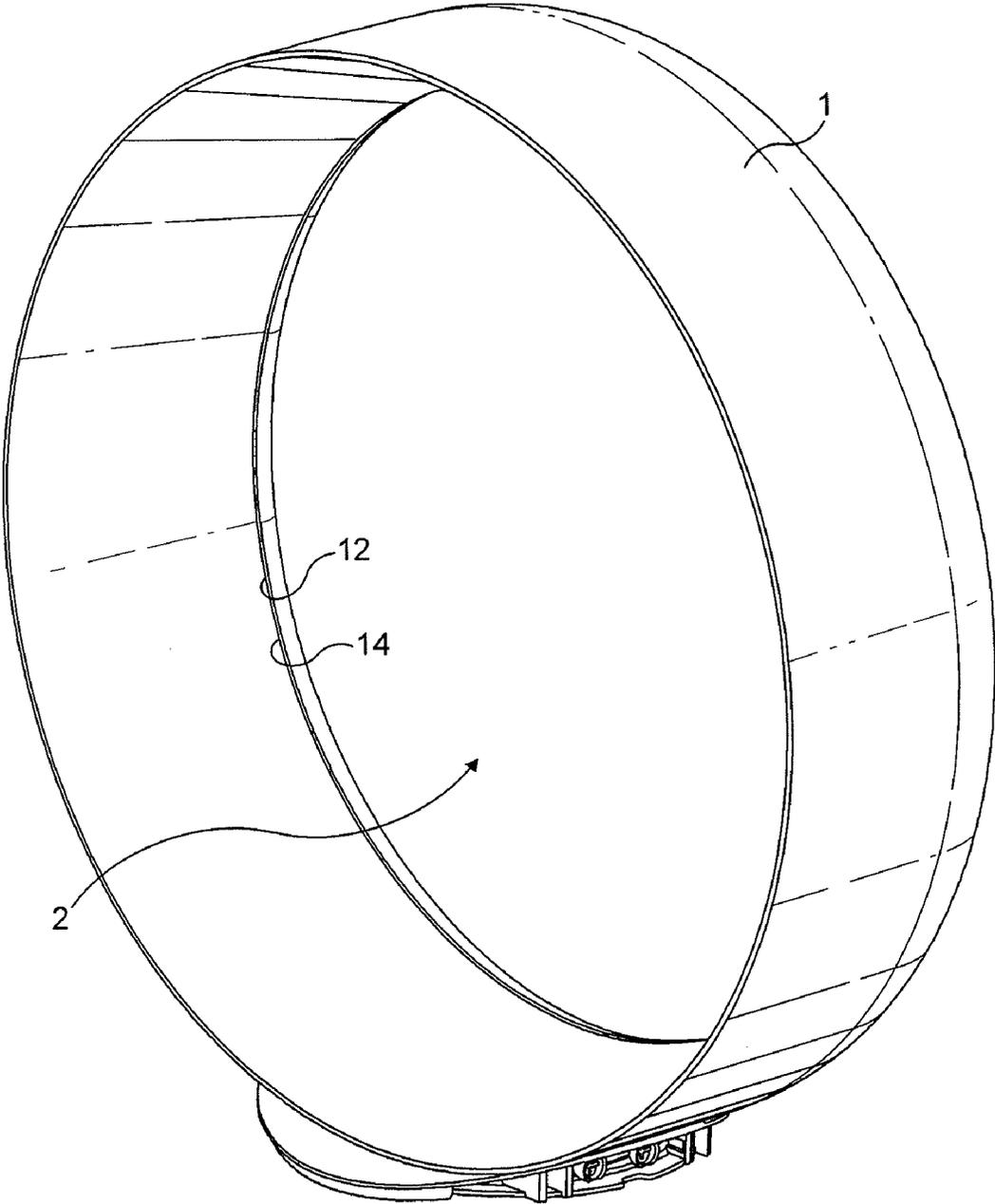


FIG. 2

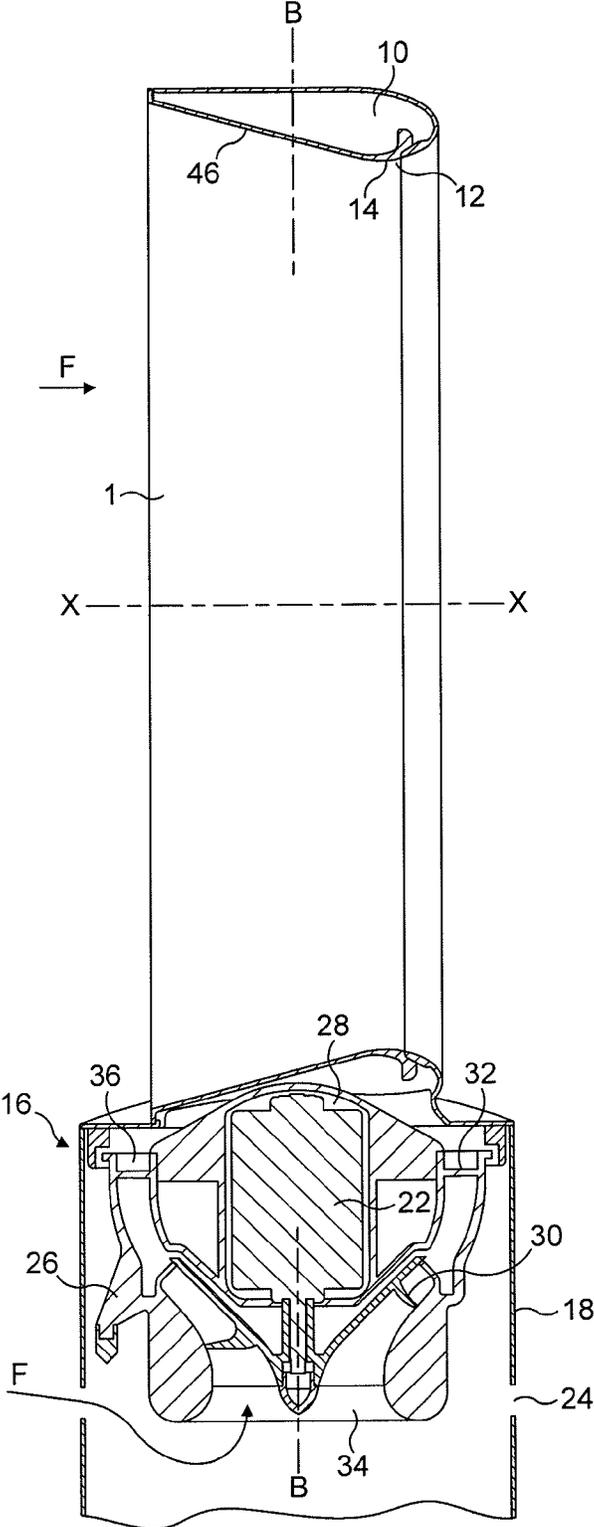


FIG. 3

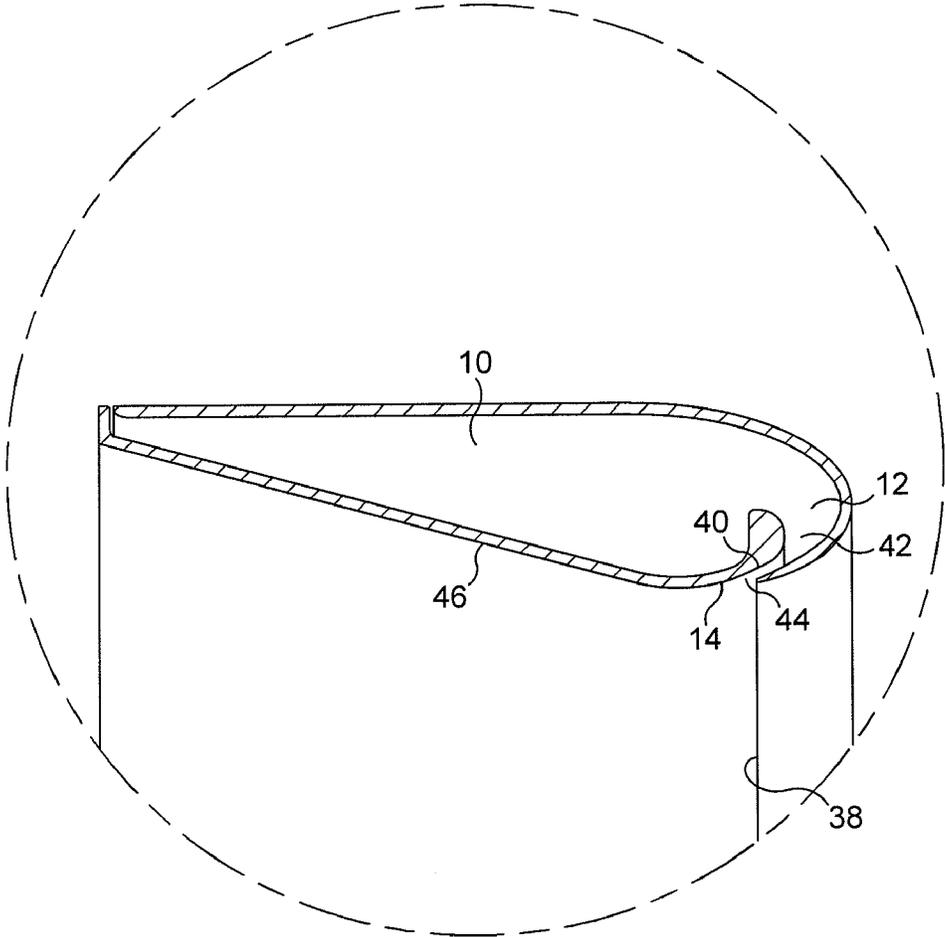


FIG. 4

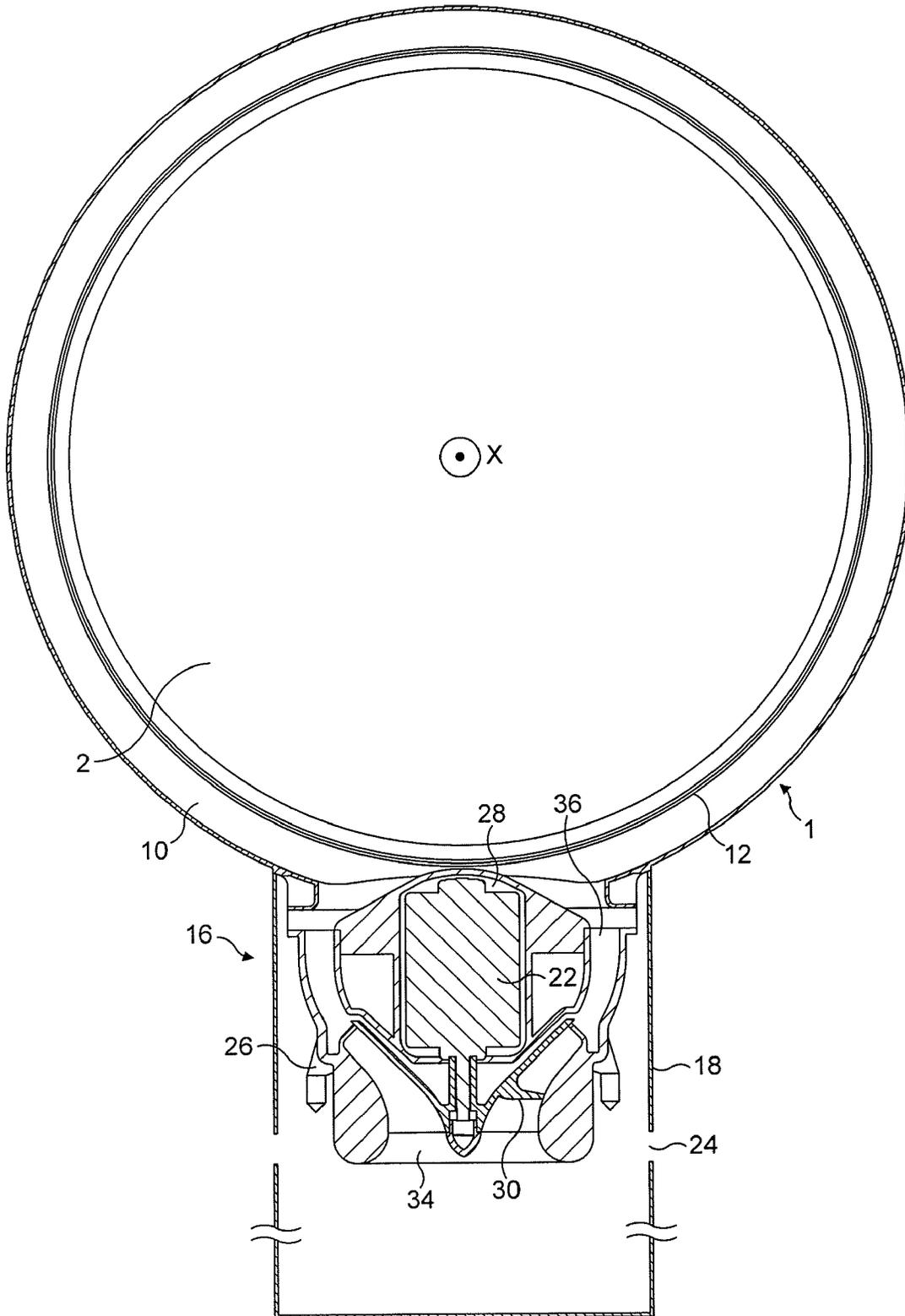


FIG. 5

**1**  
**FAN**

REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 12/203,698, filed Sep. 3, 2008, which claims the priority of United Kingdom Application Nos. 0717155.6, 0717148.1, 0717151.5 and 0717154.9, all filed Sep. 4, 2007, and United Kingdom Application No. 0814835.5, filed Aug. 14, 2008, the contents of which prior applications are incorporated herein by reference.

FIELD OF THE INVENTION

The present invention relates to a fan appliance. Particularly, but not exclusively, the present invention relates to a domestic fan, such as a desk fan, for creating air circulation and air current in a room, in an office or other domestic environment.

BACKGROUND OF THE INVENTION

A number of types of domestic fan are known. It is common for a conventional fan to include a single set of blades or vanes mounted for rotation about an axis, and driving apparatus mounted about the axis for rotating the set of blades. Domestic fans are available in a variety of sizes and diameters, for example, a ceiling fan can be at least 1 m in diameter and is usually mounted in a suspended manner from the ceiling and positioned to provide a downward flow of air and cooling throughout a room.

Desk fans, on the other hand, are often around 30 cm in diameter and are usually free standing and portable. In standard desk fan arrangements the single set of blades is positioned close to the user and the rotation of the fan blades provides a forward flow of air current in a room or into a part of a room, and towards the user. Other types of fan can be attached to the floor or mounted on a wall. The movement and circulation of the air creates a so called 'wind chill' or breeze and, as a result, the user experiences a cooling effect as heat is dissipated through convection and evaporation. Fans such as that disclosed in U.S. D 103,476 are suitable for standing on a desk or a table.

U.S. Pat. No. 2,620,127 discloses a dual purpose fan suitable for use either mounted in a window or as a portable desk fan.

In a domestic environment it is desirable for appliances to be as small and compact as possible. U.S. Pat. No. 1,767,060 describes a desk fan with an oscillating function that aims to provide an air circulation equivalent to two or more prior art fans. In a domestic environment it is undesirable for parts to project from the appliance, or for the user to be able to touch any moving parts of the fan, such as the blades. U.S. D 103,476 includes a cage around the blades. Other types of fan or circulator are described in U.S. Pat. No. 2,488,467, U.S. Pat. No. 2,433,795 and JP 56-167897. The fan of U.S. Pat. No. 2,433,795 has spiral slots in a rotating shroud instead of fan blades.

Some of the above prior art arrangements have safety features such as a cage or shroud around the blades to protect a user from injuring himself on the moving parts of the fan. However, caged blade parts can be difficult to clean and the movement of blades through air can be noisy and disruptive in a home or office environment.

A disadvantage of certain of the prior art arrangements is that the air flow produced by the fan is not felt uniformly by the user due to variations across the blade surface or across the

**2**

outward facing surface of the fan. Uneven or 'choppy' air flow can be felt as a series of pulses or blasts of air. A further disadvantage is that the cooling effect created by the fan diminishes with distance from the user. This means the fan must be placed in close proximity to the user in order for the user to receive the benefit of the fan.

Locating fans such as those described above close to a user is not always possible as the bulky shape and structure mean that the fan occupies a significant amount of the user's work space area. In the particular case of a fan placed on, or close to, a desk the fan body reduces the area available for paperwork, a computer or other office equipment.

The shape and structure of a fan at a desk not only reduces the working area available to a user but can block natural light (or light from artificial sources) from reaching the desk area. A well lit desk area is desirable for close work and for reading. In addition, a well lit area can reduce eye strain and the related health problems that may result from prolonged periods working in reduced light levels.

SUMMARY OF THE INVENTION

The present invention seeks to provide an improved fan assembly which obviates disadvantages of the prior art. It is an object of the present invention to provide a fan assembly which, in use, generates air flow at an even rate over the emission output area of the fan. It is another object to provide an improved fan assembly whereby a user at a distance from the fan feels an improved air flow and cooling effect in comparison to prior art fans.

According to the invention, there is provided a bladeless fan assembly for creating an air current, the fan assembly comprising a nozzle and means for creating an air flow through the nozzle, the nozzle comprising an interior passage, a mouth for receiving the air flow from the interior passage, and a Coanda surface located adjacent the mouth and over which the mouth is arranged to direct the air flow.

Advantageously, by this arrangement an air current is generated and a cooling effect is created without requiring a bladed fan. The bladeless arrangement leads to lower noise emissions due to the absence of the sound of a fan blade moving through the air, and a reduction in moving parts and complexity.

In the following description of fans and, in particular a fan of the preferred embodiment, the term 'bladeless' is used to describe apparatus in which air flow is emitted or projected forwards from the fan assembly without the use of blades. By this definition a bladeless fan assembly can be considered to have an output area or emission zone absent blades or vanes from which the air flow is released or emitted in a direction appropriate for the user. A bladeless fan assembly may be supplied with a primary source of air from a variety of sources or generating means such as pumps, generators, motors or other fluid transfer devices, which include rotating devices such as a motor rotor and a bladed impeller for generating air flow. The supply of air generated by the motor causes a flow of air to pass from the room space or environment outside the fan assembly through the interior passage to the nozzle and then out through the mouth.

Hence, the description of a fan assembly as bladeless is not intended to extend to the description of the power source and components such as motors that are required for secondary fan functions. Examples of secondary fan functions can include lighting, adjustment and oscillation of the fan.

The bladeless fan assembly achieves the output and cooling effect described above with a nozzle which includes a Coanda surface to provide an amplifying region utilising the

Coanda effect. A Coanda surface is a known type of surface over which fluid flow exiting an output orifice close to the surface exhibits the Coanda effect. The fluid tends to flow over the surface closely, almost 'clinging to' or 'hugging' the surface. The Coanda effect is already a proven, well documented method of entrainment whereby a primary air flow is directed over the Coanda surface. A description of the features of a Coanda surface, and the effect of fluid flow over a Coanda surface, can be found in articles such as Reba, Scientific American, Volume 214, June 1963 pages 84 to 92.

Preferably the nozzle defines an opening through which air from outside the fan assembly is drawn by the air flow directed over the Coanda surface. Air from the external environment is drawn through the opening by the air flow directed over the Coanda surface. Advantageously, by this arrangement the assembly can be produced and manufactured with a reduced number of parts than those required in prior art fans. This reduces manufacturing cost and complexity.

In the present invention an air flow is created through the nozzle of the fan assembly. In the following description this air flow will be referred to as primary air flow. The primary air flow exits the nozzle via the mouth and passes over the Coanda surface.

The primary air flow entrains the air surrounding the mouth of the nozzle, which acts as an air amplifier to supply both the primary air flow and the entrained air to the user. The entrained air will be referred to here as a secondary air flow. The secondary air flow is drawn from the room space, region or external environment surrounding the mouth of the nozzle and, by displacement, from other regions around the fan assembly. The primary air flow directed over the Coanda surface combined with the secondary air flow entrained by the air amplifier gives a total air flow emitted or projected forward to a user from the opening defined by the nozzle. The total air flow is sufficient for the fan assembly to create an air current suitable for cooling.

The air current delivered by the fan assembly to the user has the benefit of being an air flow with low turbulence and with a more linear air flow profile than that provided by other prior art devices. Linear air flow with low turbulence travels efficiently out from the point of emission and loses less energy and less velocity to turbulence than the air flow generated by prior art fans. An advantage for a user is that the cooling effect can be felt even at a distance and the overall efficiency of the fan increases. This means that the user can choose to site the fan some distance from a work area or desk and still be able to feel the cooling benefit of the fan.

Advantageously, the assembly results in the entrainment of air surrounding the mouth of the nozzle such that the primary air flow is amplified by at least 15%, whilst a smooth overall output is maintained. The entrainment and amplification features of the fan assembly result in a fan with a higher efficiency than prior art devices. The air current emitted from the opening defined by the nozzle has an approximately flat velocity profile across the diameter of the nozzle. Overall the flow rate and profile can be described as plug flow with some regions having a laminar or partial laminar flow.

Preferably the nozzle comprises a loop. The shape of the nozzle is not constrained by the requirement to include space for a bladed fan. In a preferred embodiment the nozzle is annular. By providing an annular nozzle the fan can potentially reach a broad area. In a further preferred embodiment the nozzle is at least partially circular. This arrangement can provide a variety of design options for the fan, increasing the choice available to a user or customer.

Preferably, the interior passage is continuous. This allows smooth, unimpeded air flow within the nozzle and reduces

frictional losses and noise. In this arrangement the nozzle can be manufactured as a single piece, reducing the complexity of the fan assembly and thereby reducing manufacturing costs.

It is preferred that the mouth is substantially annular. By providing a substantially annular mouth the total air flow can be emitted towards a user over a broad area. Advantageously, an illumination source in the room or at the desk fan location or natural light can reach the user through the central opening.

Preferably, the mouth is concentric with the interior passage. This arrangement will be visually appealing and the concentric location of the mouth with the passage facilitates manufacture. Preferably, the Coanda surface extends symmetrically about an axis. More preferably, the angle subtended between the Coanda surface and the axis is in the range from 7° to 20°, preferably around 15°. This provides an efficient primary air flow over the Coanda surface and leads to maximum air entrainment and secondary air flow.

Preferably the nozzle extends by a distance of at least 5 cm in the direction of the axis. Preferably the nozzle extends about the axis in the shape of a loop and preferably by a distance in the range from 30 cm to 180 cm. This provides options for emission of air over a range of different output areas and opening sizes, such as may be suitable for cooling the upper body and face of a user when working at a desk, for example. In the preferred embodiment the nozzle comprises a diffuser located downstream of the Coanda surface. An angular arrangement of the diffuser surface and an aerofoil-type shaping of the nozzle and diffuser surface can enhance the amplification properties of the fan assembly whilst minimising noise and frictional losses.

In a preferred arrangement the nozzle comprises at least one wall defining the interior passage and the mouth, and the at least one wall comprises opposing surfaces defining the mouth. Preferably, the mouth has an outlet, and the spacing between the opposing surfaces at the outlet of the mouth is in the range from 1 mm to 5 mm, more preferably around 1.3 mm. By this arrangement a nozzle can be provided with the desired flow properties to guide the primary air flow over the Coanda surface and provide a relatively uniform, or close to uniform, total air flow reaching the user.

In the preferred fan arrangement the means for creating an air flow through the nozzle comprises an impeller driven by a motor. This arrangement provides a fan with efficient air flow generation. More preferably the means for creating an air flow comprises a DC brushless motor and a mixed flow impeller. This arrangement reduces frictional losses from motor brushes and also reduces carbon debris from the brushes in a traditional motor. Reducing carbon debris and emissions is advantageous in a clean or pollutant sensitive environment such as a hospital or around those with allergies.

The nozzle may be rotatable or pivotable relative to a base portion, or other portion, of the fan assembly. This enables the nozzle to be directed towards or away from a user as required. The fan assembly may be desk, floor, wall or ceiling mountable. This can increase the portion of a room over which the user experiences cooling.

#### BRIEF DESCRIPTION OF THE DRAWINGS

An embodiment of the invention will now be described with reference to the accompanying drawings, in which:

FIG. 1 is a front view of a fan assembly;

FIG. 2 is a perspective view of a portion of the fan assembly of FIG. 1;

FIG. 3 is a side sectional view through a portion of the fan assembly of FIG. 1 taken at line A-A;

5

FIG. 4 is an enlarged side sectional detail of a portion of the fan assembly of FIG. 1; and

FIG. 5 is a sectional view of the fan assembly taken along line B-B of FIG. 3 and viewed from direction F of FIG. 3.

#### DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 shows an example of a fan assembly 100 viewed from the front of the device. The fan assembly 100 comprises an annular nozzle 1 defining a central opening 2. With reference also to FIGS. 2 and 3, nozzle 1 comprises an interior passage 10, a mouth 12 and a Coanda surface 14 adjacent the mouth 12. The Coanda surface 14 is arranged so that a primary air flow exiting the mouth 12 and directed over the Coanda surface 14 is amplified by the Coanda effect. The nozzle 1 is connected to, and supported by, a base 16 having an outer casing 18. The base 16 includes a plurality of selection buttons 20 accessible through the outer casing 18 and through which the fan assembly 100 can be operated.

FIGS. 3, 4 and 5 show further specific details of the fan assembly 100. A motor 22 for creating an air flow through the nozzle 1 is located inside the base 16. The base 16 further comprises an air inlet 24 formed in the outer casing 18. A motor housing 26 is located inside the base 16. The motor 22 is supported by the motor housing 26 and held in a secure position by a rubber mount or seal member 28.

In the illustrated embodiment, the motor 22 is a DC brushless motor. An impeller 30 is connected to a rotary shaft extending outwardly from the motor 22, and a diffuser 32 is positioned downstream of the impeller 30. The diffuser 32 comprises a fixed, stationary disc having spiral blades.

An inlet 34 to the impeller 30 communicates with the air inlet 24 formed in the outer casing 18 of the base 16. The outlet 36 of the diffuser 32 and the exhaust from the impeller 30 communicate with hollow passageway portions or ducts located inside the base 16 in order to establish air flow from the impeller 30 to the interior passage 10 of the nozzle 1. The motor 22 is connected to an electrical connection and power supply and is controlled by a controller (not shown). Communication between the controller and the plurality of selection buttons 20 enable a user to operate the fan assembly 100.

The features of the nozzle 1 will now be described with reference to FIGS. 3 and 4. The shape of the nozzle 1 is annular. In this embodiment the nozzle 1 has a diameter of around 350 mm, but the nozzle may have any desired diameter, for example around 300 mm. The interior passage 10 is annular and is formed as a continuous loop or duct within the nozzle 1. The nozzle 1 is formed from at least one wall defining the interior passage 10 and the mouth 12. In this embodiment the nozzle 1 comprises an inner wall 38 and an outer wall 40. In the illustrated embodiment the walls 38, 40 are arranged in a looped or folded shape such that the inner wall 38 and outer wall 40 approach one another. The inner wall 38 and the outer wall 40 together define the mouth 12, and the mouth 12 extends about the axis X. The mouth 12 comprises a tapered region 42 narrowing to an outlet 44. The outlet 44 comprises a gap or spacing formed between the inner wall 38 of the nozzle 1 and the outer wall 40 of the nozzle 1. The spacing between the opposing surfaces of the walls 38, 40 at the outlet 44 of the mouth 12 is chosen to be in the range from 1 mm to 5 mm. The choice of spacing will depend on the desired performance characteristics of the fan. In this embodiment the outlet 44 is around 1.3 mm wide, and the mouth 12 and the outlet 44 are concentric with the interior passage 10.

The mouth 12 is adjacent the Coanda surface 14. The nozzle 1 further comprises a diffuser portion located down-

6

stream of the Coanda surface. The diffuser portion includes a diffuser surface 46 to further assist the flow of air current delivered or output from the fan assembly 100. In the example illustrated in FIG. 3 the mouth 12 and the overall arrangement of the nozzle 1 is such that the angle subtended between the Coanda surface 14 and the axis X is around 15°. The angle is chosen for efficient air flow over the Coanda surface 14. The base 16 and the nozzle 1 have a depth in the direction of the axis X. The nozzle 1 extends by a distance of around 5 cm in the direction of the axis. The diffuser surface 46 and the overall profile of the nozzle 1 are based on an aerofoil shape, and in the example shown the diffuser portion extends by a distance of around two thirds the overall depth of the nozzle 1.

The fan assembly 100 described above operates in the following manner. When a user makes a suitable selection from the plurality of buttons 20 to operate or activate the fan assembly 100, a signal or other communication is sent to drive the motor 22. The motor 22 is thus activated and air is drawn into the fan assembly 100 via the air inlet 24. In the preferred embodiment air is drawn in at a rate of approximately 20 to 30 litres per second, preferably around 27 l/s (litres per second). The air passes through the outer casing 18 and along the route illustrated by arrow F of FIG. 3 to the inlet 34 of the impeller 30. The air flow leaving the outlet 36 of the diffuser 32 and the exhaust of the impeller 30 is divided into two air flows that proceed in opposite directions through the interior passage 10. The air flow is constricted as it enters the mouth 12 and is further constricted at the outlet 44 of the mouth 12. The air flow exits through the outlet 44 as a primary air flow.

The output and emission of the primary air flow creates a low pressure area at the air inlet 24 with the effect of drawing additional air into the fan assembly 100. The operation of the fan assembly 100 induces high air flow through the nozzle 1 and out through the opening 2. The primary air flow is directed over the Coanda surface 14 and the diffuser surface 46, and is amplified by the Coanda effect. A secondary air flow is generated by entrainment of air from the external environment, specifically from the region around the outlet 44 and from around the outer edge of the nozzle 1. A portion of the secondary air flow entrained by the primary air flow may also be guided over the diffuser surface 46. This secondary air flow passes through the opening 2, where it combines with the primary air flow to produce a total air flow projected forward from the fan assembly 100 in the region of 500 to 700 l/s.

The combination of entrainment and amplification results in a total air flow from the opening 2 of the fan assembly 100 that is greater than the air flow output from a fan assembly without such a Coanda or amplification surface adjacent the emission area.

The amplification and laminar type of air flow produced results in a sustained flow of air being directed towards a user from the nozzle 1. The flow rate at a distance of up to 3 nozzle diameters (i.e. around 1000 to 1200 mm) from a user is around 400 to 500 l/s. The total air flow has a velocity of around 3 to 4 m/s (metres per second). Higher velocities are achievable by reducing the angle subtended between the Coanda surface 14 and the axis X. A smaller angle results in the total air flow being emitted in a more focussed and directed manner. This type of air flow tends to be emitted at a higher velocity but with a reduced mass flow rate. Conversely, greater mass flow can be achieved by increasing the angle between the Coanda surface and the axis. In this case the velocity of the emitted air flow is reduced but the mass flow generated increases. Thus the performance of the fan assembly can be altered by altering the angle subtended between the Coanda surface and the axis X.

The invention is not limited to the detailed description given above. Variations will be apparent to the person skilled in the art. For example, the fan could be of a different height or diameter. The fan need not be located on a desk, but could be free standing, wall mounted or ceiling mounted. The fan shape could be adapted to suit any kind of situation or location where a cooling flow of air is desired. A portable fan could have a smaller nozzle, say 5 cm in diameter. The means for creating an air flow through the nozzle can be a motor or other air emitting device, such as any air blower or vacuum source that can be used so that the fan assembly can create an air current in a room. Examples include a motor such as an AC induction motor or types of DC brushless motor, but may also comprise any suitable air movement or air transport device such as a pump or other means of providing directed fluid flow to generate and create an air flow. Features of a motor may include a diffuser or a secondary diffuser located downstream of the motor to recover some of the static pressure lost in the motor housing and through the motor.

The outlet of the mouth may be modified. The outlet of the mouth may be widened or narrowed to a variety of spacings to maximise air flow. The Coanda effect may be made to occur over a number of different surfaces, or a number of internal or external designs may be used in combination to achieve the flow and entrainment required.

Other shapes of nozzle are envisaged. For example, a nozzle comprising an oval, or ‘racetrack’ shape, a single strip or line, or block shape could be used. The fan assembly provides access to the central part of the fan as there are no blades. This means that additional features such as lighting or a clock or LCD display could be provided in the opening defined by the nozzle.

Other features could include a pivotable or tiltable base for ease of movement and adjustment of the position of the nozzle for the user.

The invention claimed is:

1. A bladeless fan assembly for creating an air current, the fan assembly comprising:
  - a nozzle, and
  - a device for creating an air flow through the nozzle, the nozzle comprising an interior passage, located between a first wall and a second wall, wherein a distal end of the first wall overlaps a distal end of the second wall to form, near the distal ends of the first and second walls, a mouth for receiving the air flow from the interior passage,
  - a tapered region, located downstream from the mouth, and
  - an outlet, located downstream of the tapered region, for releasing the air flow from the nozzle, wherein a distance between the first wall and the second wall is greater at the mouth than at the outlet, and a Coanda surface located adjacent the outlet, wherein the first wall is curved proximate to its distal end to direct the air flow over the Coanda surface, and wherein the nozzle comprises a diffuser located downstream of the Coanda surface.
2. A fan assembly as claimed in claim 1, wherein the nozzle defines an opening through which air from outside the fan assembly is drawn by the air flow directed over the Coanda surface.

3. A fan assembly as claimed in claim 1 or 2, wherein the nozzle comprises a loop.

4. A fan assembly as claimed in claim 1 or 2, wherein the nozzle is substantially annular.

5. A fan assembly as claimed in claim 1 or 2, wherein the nozzle is at least partially circular.

6. A fan assembly as claimed in claim 1 or 2, wherein the interior passage is continuous.

7. A fan assembly as claimed in claim 1 or 2, wherein the interior passage is substantially annular.

8. A fan assembly as claimed in claim 1 or 2, wherein the mouth is substantially annular.

9. A fan assembly as claimed in claim 1 or 2, wherein the mouth is concentric with the interior passage.

10. A fan assembly as claimed in claim 1 or 2, wherein the Coanda surface extends symmetrically about an axis.

11. A fan assembly as claimed in claim 10, wherein an angle subtended between the Coanda surface and the axis is in a range from 7° to 20°.

12. A fan assembly as claimed in claim 10, wherein the nozzle extends by a distance of at least 5 cm in a direction of the axis.

13. A fan assembly as claimed in claim 10, wherein the nozzle extends about the axis by a distance in the range from 30 cm to 180 cm.

14. A fan assembly as claimed in claim 10, wherein an angle subtended between the Coanda surface and the axis is 15°.

15. A fan assembly as claimed in claim 1 or 2, wherein a spacing between opposing surfaces of the first wall and the second wall at the outlet is in a range from 1 mm to 5 mm.

16. A fan assembly as claimed in claim 1 or 2, wherein the device for creating the air flow through the nozzle comprises an impeller driven by a motor.

17. A fan assembly as claimed in claim 16, wherein the motor is a DC brushless motor and the impeller is a mixed flow impeller.

18. A nozzle for a bladeless fan assembly for creating an air current, the nozzle comprising:

- an interior passage, located between a first wall and a second wall, wherein a distal end of the first wall overlaps a distal end of the second wall to form, near the distal ends of the first and second walls, a mouth for receiving an air flow from the interior passage,
- a tapered region, located downstream from the mouth, and
- an outlet, located downstream of the tapered region, for releasing the air flow from the nozzle, wherein a distance between the first wall and the second wall is greater at the mouth than at the outlet, and a Coanda surface located adjacent the outlet, wherein the first wall is curved proximate to its distal end to direct the air flow over the Coanda surface, and wherein the nozzle comprises a diffuser located downstream of the Coanda surface.

19. A nozzle as claimed in claim 18, wherein the nozzle defines an opening through which air from outside the fan assembly is drawn by the air flow directed over the Coanda surface.

# Exhibit 3



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(57) **ABSTRACT**

(21) Appl. No.: **12/203,698**

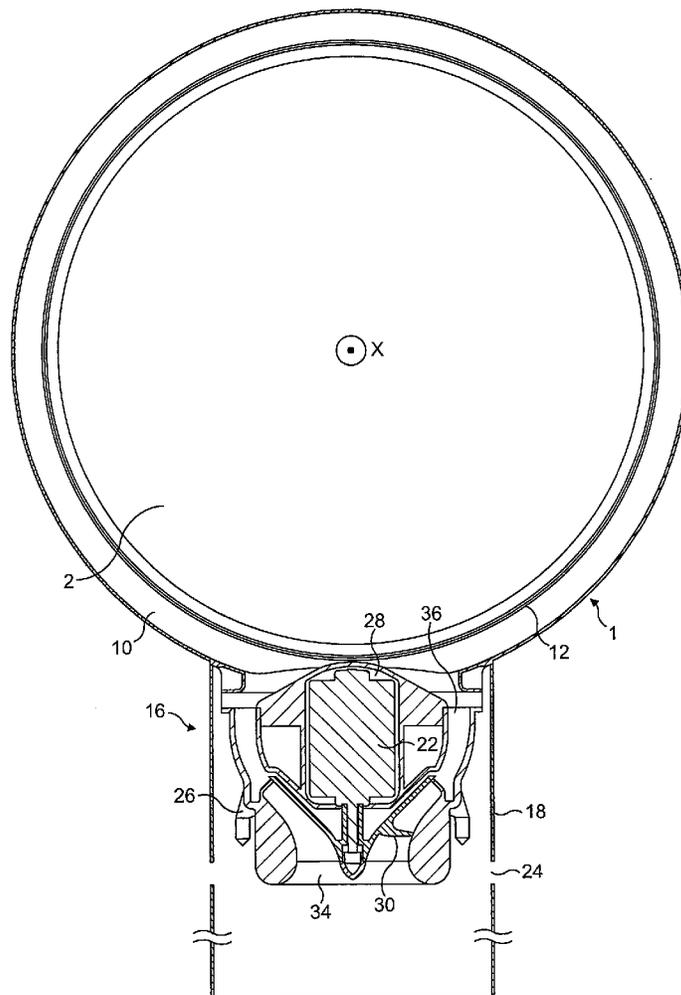
A fan assembly for creating an air current includes a bladeless fan assembly including a nozzle and a device for creating an air flow through the nozzle. The nozzle includes an interior passage and a mouth receiving the air flow from the interior passage. A Coanda surface located adjacent the mouth and over which the mouth is arranged to direct the air flow. The fan provides an arrangement producing an air current and a flow of cooling air created without requiring a bladed fan, that is, the air flow is created by a bladeless fan.

(22) Filed: **Sep. 3, 2008**

(30) **Foreign Application Priority Data**

Sep. 4, 2007 (GB) ..... 0717148.1

Sep. 4, 2007 (GB) ..... 0717151.5



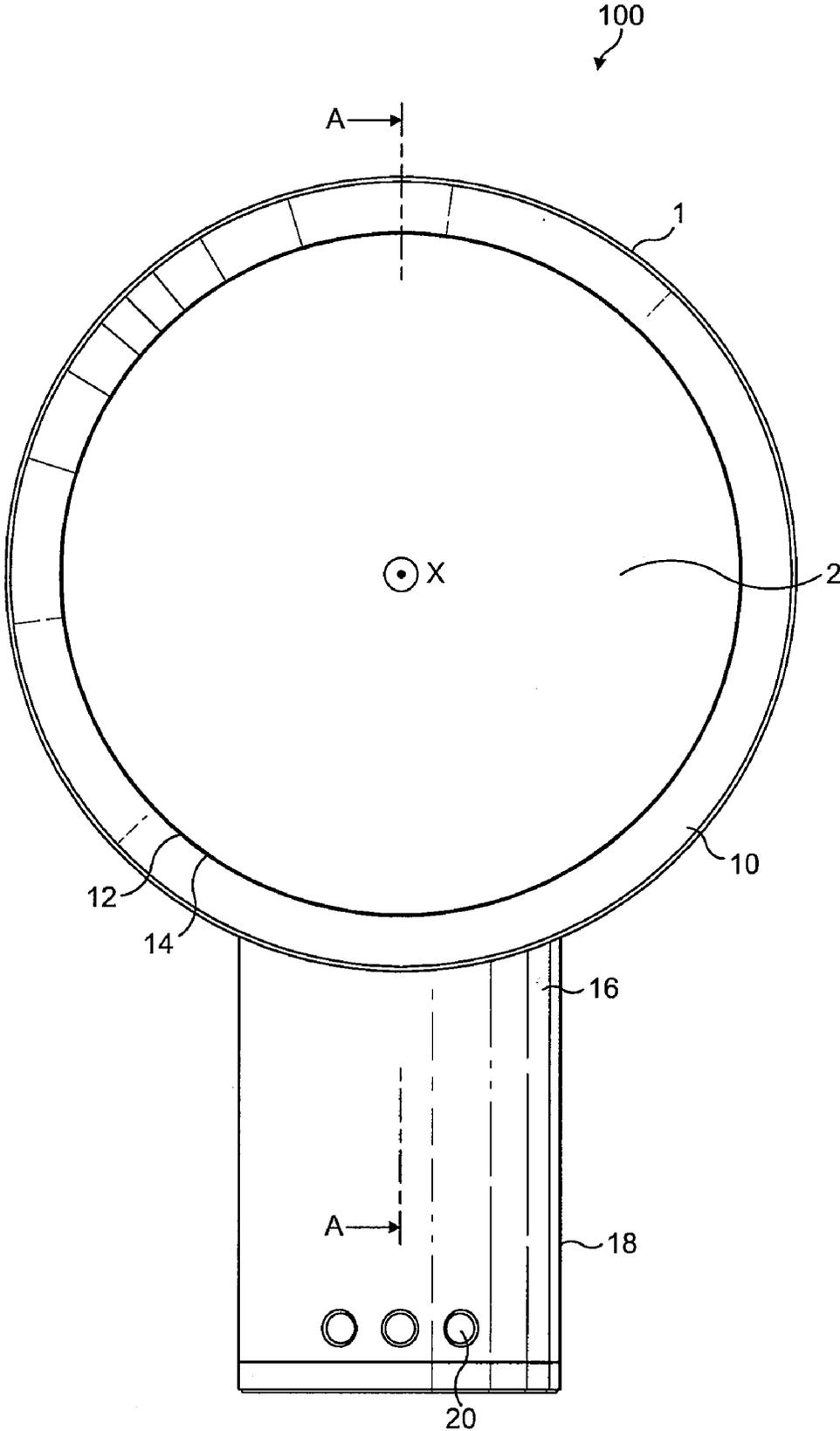


FIG. 1

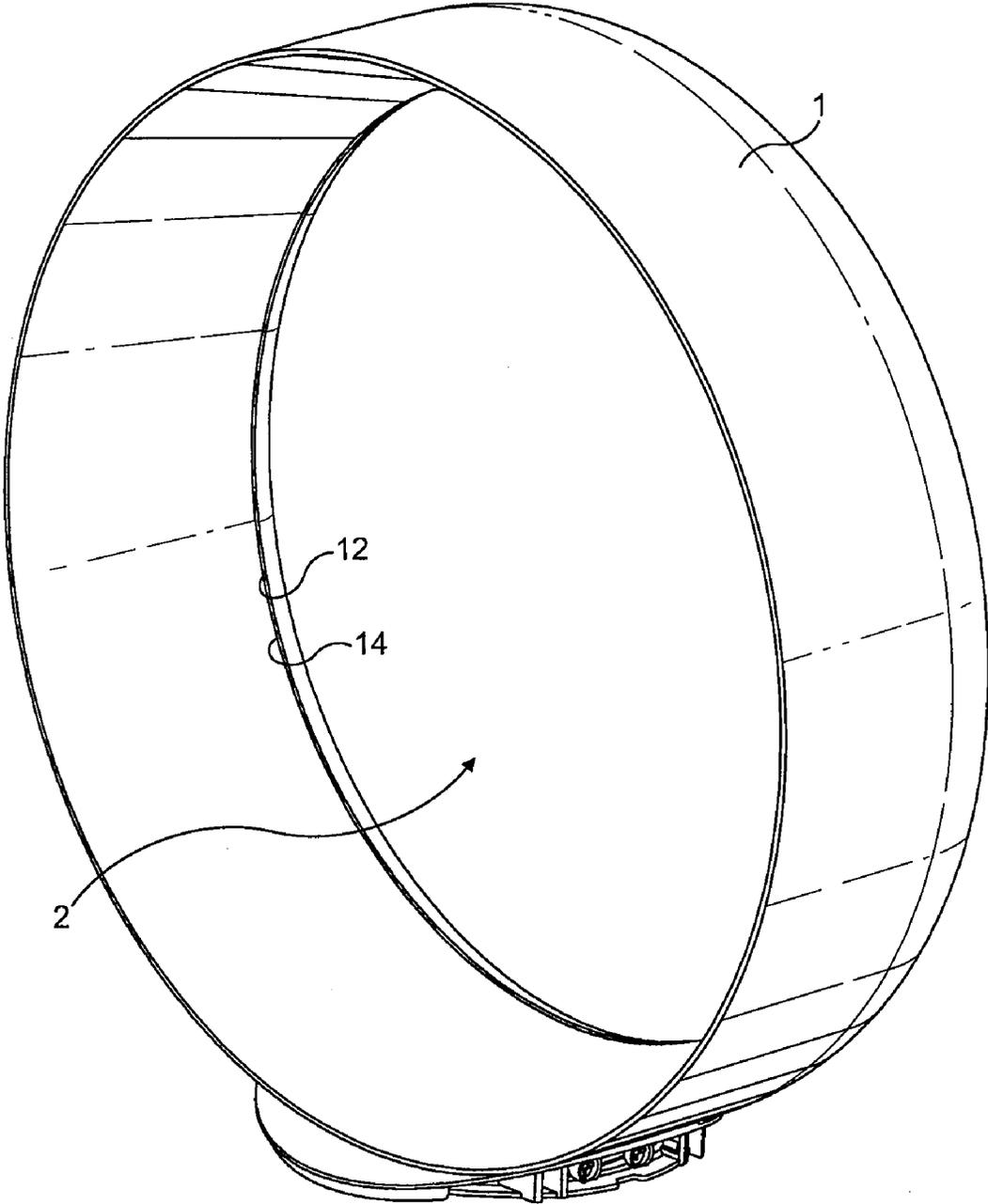


FIG. 2

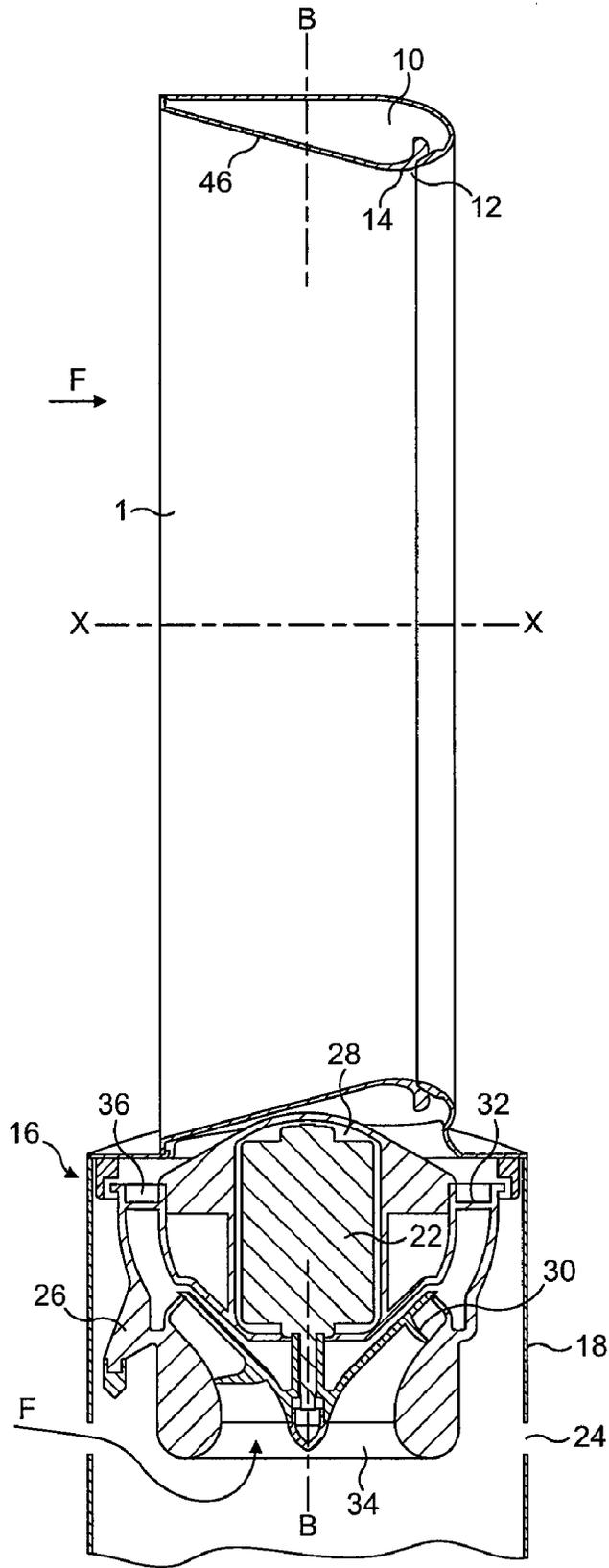


FIG. 3

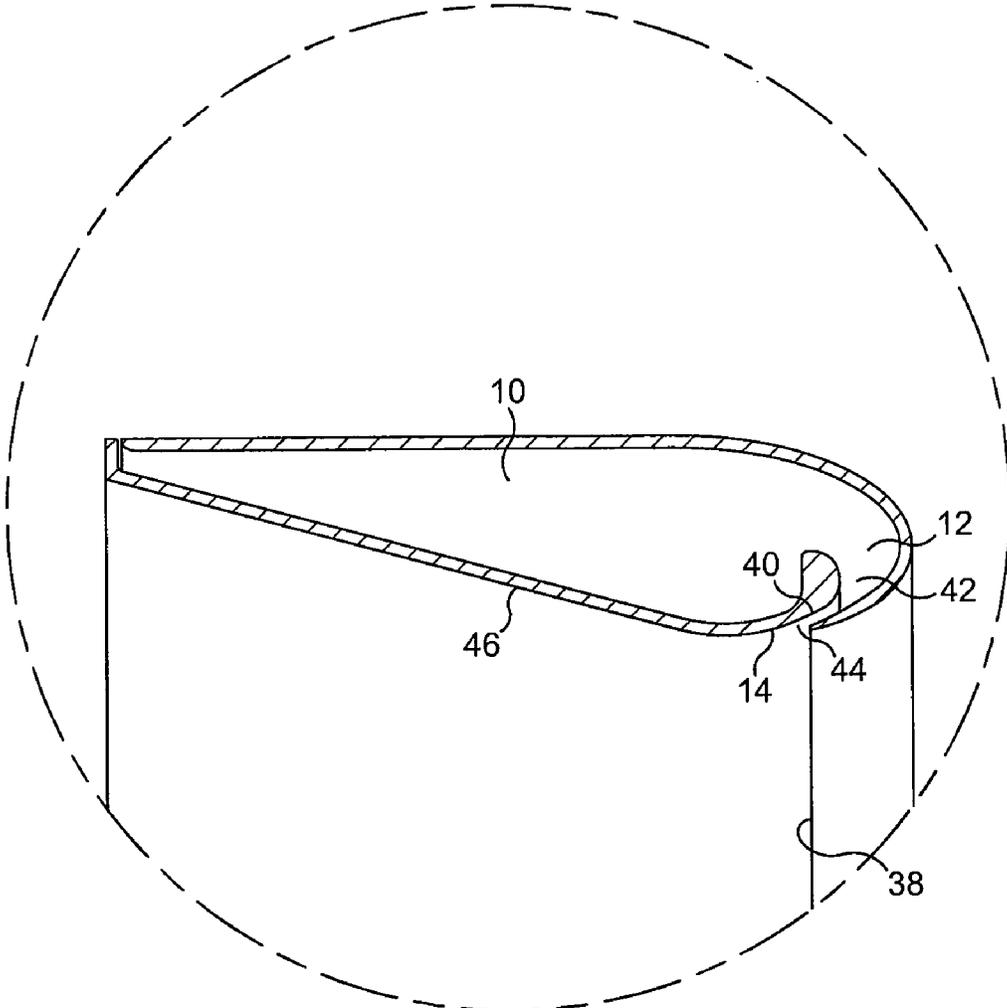


FIG. 4

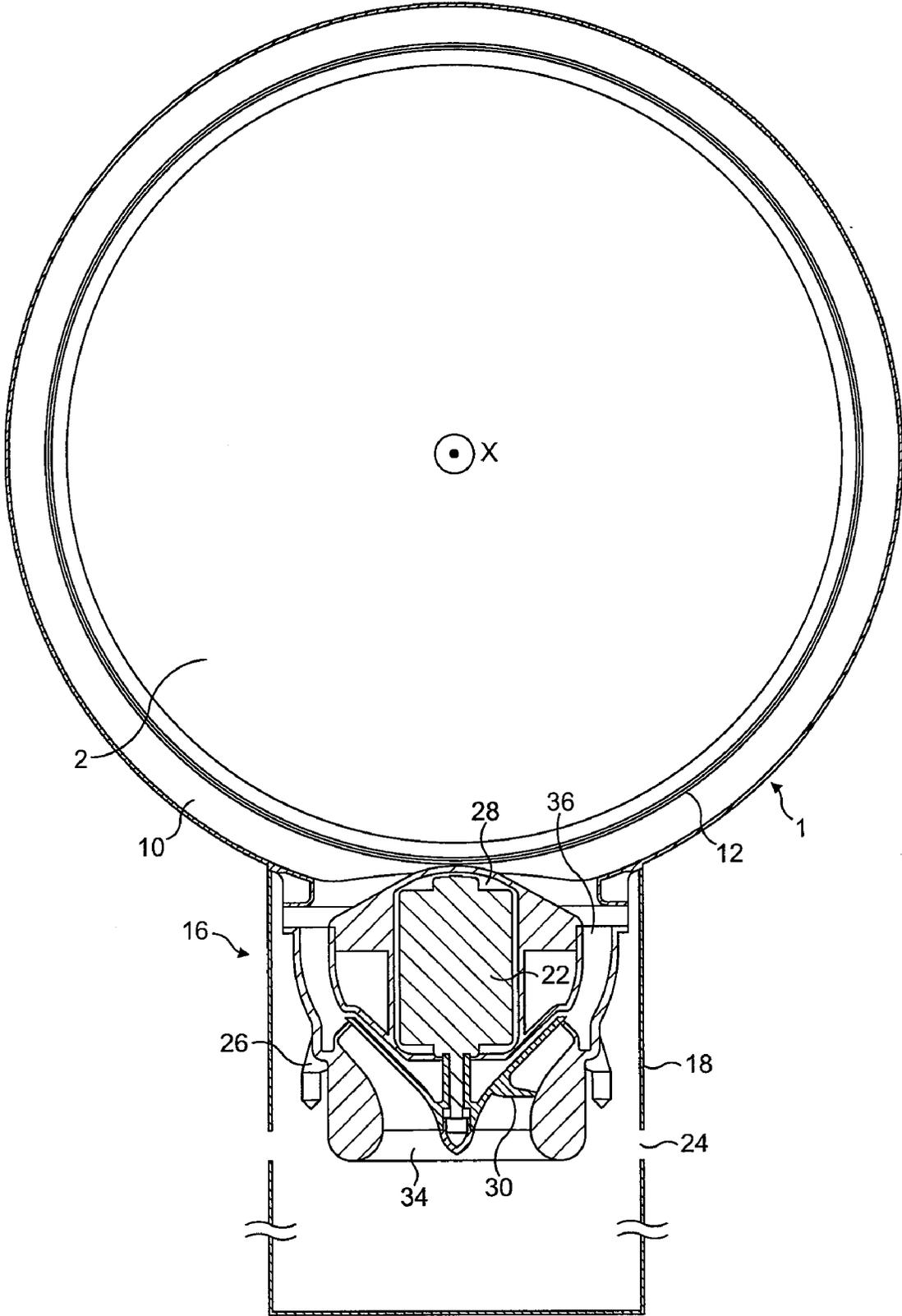


FIG. 5

## FAN

### REFERENCE TO RELATED APPLICATIONS

**[0001]** This application claims the priority of United Kingdom Application Nos. 0717155.6, 0717148.1, 0717151.5 and 0717154.9, all filed Sep. 4, 2007, the contents of which prior applications are incorporated herein by reference.

### FIELD OF THE INVENTION

**[0002]** The present invention relates to a fan appliance. Particularly, but not exclusively, the present invention relates to a domestic fan, such as a desk fan, for creating air circulation and air current in a room, in an office or other domestic environment.

### BACKGROUND OF THE INVENTION

**[0003]** A number of types of domestic fan are known. It is common for a conventional fan to include a single set of blades or vanes mounted for rotation about an axis, and driving apparatus mounted about the axis for rotating the set of blades. Domestic fans are available in a variety of sizes and diameters, for example, a ceiling fan can be at least 1 m in diameter and is usually mounted in a suspended manner from the ceiling and positioned to provide a downward flow of air and cooling throughout a room.

**[0004]** Desk fans, on the other hand, are often around 30 cm in diameter and are usually free standing and portable. In standard desk fan arrangements the single set of blades is positioned close to the user and the rotation of the fan blades provides a forward flow of air current in a room or into a part of a room, and towards the user. Other types of fan can be attached to the floor or mounted on a wall. The movement and circulation of the air creates a so called 'wind chill' or breeze and, as a result, the user experiences a cooling effect as heat is dissipated through convection and evaporation. Fans such as that disclosed in USD 103,476 are suitable for standing on a desk or a table. U.S. Pat. No. 2,620,127 discloses a dual purpose fan suitable for use either mounted in a window or as a portable desk fan.

**[0005]** In a domestic environment it is desirable for appliances to be as small and compact as possible. U.S. Pat. No. 1,767,060 describes a desk fan with an oscillating function that aims to provide an air circulation equivalent to two or more prior art fans. In a domestic environment it is undesirable for parts to project from the appliance, or for the user to be able to touch any moving parts of the fan, such as the blades. USD 103,476 includes a cage around the blades. Other types of fan or circulator are described in U.S. Pat. No. 2,488,467, U.S. Pat. No. 2,433,795 and JP 56-167897. The fan of U.S. Pat. No. 2,433,795 has spiral slots in a rotating shroud instead of fan blades.

**[0006]** Some of the above prior art arrangements have safety features such as a cage or shroud around the blades to protect a user from injuring himself on the moving parts of the fan. However, caged blade parts can be difficult to clean and the movement of blades through air can be noisy and disruptive in a home or office environment.

**[0007]** A disadvantage of certain of the prior art arrangements is that the air flow produced by the fan is not felt uniformly by the user due to variations across the blade surface or across the outward facing surface of the fan. Uneven or 'choppy' air flow can be felt as a series of pulses or blasts of air. A further disadvantage is that the cooling effect created by

the fan diminishes with distance from the user. This means the fan must be placed in close proximity to the user in order for the user to receive the benefit of the fan.

**[0008]** Locating fans such as those described above close to a user is not always possible as the bulky shape and structure mean that the fan occupies a significant amount of the user's work space area. In the particular case of a fan placed on, or close to, a desk the fan body reduces the area available for paperwork, a computer or other office equipment.

**[0009]** The shape and structure of a fan at a desk not only reduces the working area available to a user but can block natural light (or light from artificial sources) from reaching the desk area. A well lit desk area is desirable for close work and for reading. In addition, a well lit area can reduce eye strain and the related health problems that may result from prolonged periods working in reduced light levels.

### SUMMARY OF THE INVENTION

**[0010]** The present invention seeks to provide an improved fan assembly which obviates disadvantages of the prior art. It is an object of the present invention to provide a fan assembly which, in use, generates air flow at an even rate over the emission output area of the fan. It is another object to provide an improved fan assembly whereby a user at a distance from the fan feels an improved air flow and cooling effect in comparison to prior art fans.

**[0011]** According to the invention, there is provided a bladeless fan assembly for creating an air current, the fan assembly comprising a nozzle and means for creating an air flow through the nozzle, the nozzle comprising an interior passage, a mouth for receiving the air flow from the interior passage, and a Coanda surface located adjacent the mouth and over which the mouth is arranged to direct the air flow.

**[0012]** Advantageously, by this arrangement an air current is generated and a cooling effect is created without requiring a bladed fan. The bladeless arrangement leads to lower noise emissions due to the absence of the sound of a fan blade moving through the air, and a reduction in moving parts and complexity.

**[0013]** In the following description of fans and, in particular a fan of the preferred embodiment, the term 'bladeless' is used to describe apparatus in which air flow is emitted or projected forwards from the fan assembly without the use of blades. By this definition a bladeless fan assembly can be considered to have an output area or emission zone absent blades or vanes from which the air flow is released or emitted in a direction appropriate for the user. A bladeless fan assembly may be supplied with a primary source of air from a variety of sources or generating means such as pumps, generators, motors or other fluid transfer devices, which include rotating devices such as a motor rotor and a bladed impeller for generating air flow. The supply of air generated by the motor causes a flow of air to pass from the room space or environment outside the fan assembly through the interior passage to the nozzle and then out through the mouth.

**[0014]** Hence, the description of a fan assembly as bladeless is not intended to extend to the description of the power source and components such as motors that are required for secondary fan functions. Examples of secondary fan functions can include lighting, adjustment and oscillation of the fan.

**[0015]** The bladeless fan assembly achieves the output and cooling effect described above with a nozzle which includes a Coanda surface to provide an amplifying region utilising the

Coanda effect. A Coanda surface is a known type of surface over which fluid flow exiting an output orifice close to the surface exhibits the Coanda effect. The fluid tends to flow over the surface closely, almost 'clinging to' or 'hugging' the surface. The Coanda effect is already a proven, well documented method of entrainment whereby a primary air flow is directed over the Coanda surface. A description of the features of a Coanda surface, and the effect of fluid flow over a Coanda surface, can be found in articles such as Reba, Scientific American, Volume 214, June 1963 pages 84 to 92.

**[0016]** Preferably the nozzle defines an opening through which air from outside the fan assembly is drawn by the air flow directed over the Coanda surface. Air from the external environment is drawn through the opening by the air flow directed over the Coanda surface. Advantageously, by this arrangement the assembly can be produced and manufactured with a reduced number of parts than those required in prior art fans. This reduces manufacturing cost and complexity.

**[0017]** In the present invention an air flow is created through the nozzle of the fan assembly. In the following description this air flow will be referred to as primary air flow. The primary air flow exits the nozzle via the mouth and passes over the Coanda surface. The primary air flow entrains the air surrounding the mouth of the nozzle, which acts as an air amplifier to supply both the primary air flow and the entrained air to the user. The entrained air will be referred to here as a secondary air flow. The secondary air flow is drawn from the room space, region or external environment surrounding the mouth of the nozzle and, by displacement, from other regions around the fan assembly. The primary air flow directed over the Coanda surface combined with the secondary air flow entrained by the air amplifier gives a total air flow emitted or projected forward to a user from the opening defined by the nozzle. The total air flow is sufficient for the fan assembly to create an air current suitable for cooling.

**[0018]** The air current delivered by the fan assembly to the user has the benefit of being an air flow with low turbulence and with a more linear air flow profile than that provided by other prior art devices. Linear air flow with low turbulence travels efficiently out from the point of emission and loses less energy and less velocity to turbulence than the air flow generated by prior art fans. An advantage for a user is that the cooling effect can be felt even at a distance and the overall efficiency of the fan increases. This means that the user can choose to site the fan some distance from a work area or desk and still be able to feel the cooling benefit of the fan.

**[0019]** Advantageously, the assembly results in the entrainment of air surrounding the mouth of the nozzle such that the primary air flow is amplified by at least 15%, whilst a smooth overall output is maintained. The entrainment and amplification features of the fan assembly result in a fan with a higher efficiency than prior art devices. The air current emitted from the opening defined by the nozzle has an approximately flat velocity profile across the diameter of the nozzle. Overall the flow rate and profile can be described as plug flow with some regions having a laminar or partial laminar flow.

**[0020]** Preferably the nozzle comprises a loop. The shape of the nozzle is not constrained by the requirement to include space for a bladed fan. In a preferred embodiment the nozzle is annular. By providing an annular nozzle the fan can potentially reach a broad area. In a further preferred embodiment the nozzle is at least partially circular. This arrangement can provide a variety of design options for the fan, increasing the choice available to a user or customer.

**[0021]** Preferably, the interior passage is continuous. This allows smooth, unimpeded air flow within the nozzle and reduces frictional losses and noise. In this arrangement the nozzle can be manufactured as a single piece, reducing the complexity of the fan assembly and thereby reducing manufacturing costs.

**[0022]** It is preferred that the mouth is substantially annular. By providing a substantially annular mouth the total air flow can be emitted towards a user over a broad area. Advantageously, an illumination source in the room or at the desk fan location or natural light can reach the user through the central opening.

**[0023]** Preferably, the mouth is concentric with the interior passage. This arrangement will be visually appealing and the concentric location of the mouth with the passage facilitates manufacture. Preferably, the Coanda surface extends symmetrically about an axis. More preferably, the angle subtended between the Coanda surface and the axis is in the range from 7° to 20°, preferably around 15°. This provides an efficient primary air flow over the Coanda surface and leads to maximum air entrainment and secondary air flow.

**[0024]** Preferably the nozzle extends by a distance of at least 5 cm in the direction of the axis. Preferably the nozzle extends about the axis in the shape of a loop and preferably by a distance in the range from 30 cm to 180 cm. This provides options for emission of air over a range of different output areas and opening sizes, such as may be suitable for cooling the upper body and face of a user when working at a desk, for example. In the preferred embodiment the nozzle comprises a diffuser located downstream of the Coanda surface. An angular arrangement of the diffuser surface and an aerofoil-type shaping of the nozzle and diffuser surface can enhance the amplification properties of the fan assembly whilst minimising noise and frictional losses.

**[0025]** In a preferred arrangement the nozzle comprises at least one wall defining the interior passage and the mouth, and the at least one wall comprises opposing surfaces defining the mouth. Preferably, the mouth has an outlet, and the spacing between the opposing surfaces at the outlet of the mouth is in the range from 1 mm to 5 mm, more preferably around 1.3 mm. By this arrangement a nozzle can be provided with the desired flow properties to guide the primary air flow over the Coanda surface and provide a relatively uniform, or close to uniform, total air flow reaching the user.

**[0026]** In the preferred fan arrangement the means for creating an air flow through the nozzle comprises an impeller driven by a motor. This arrangement provides a fan with efficient air flow generation. More preferably the means for creating an air flow comprises a DC brushless motor and a mixed flow impeller. This arrangement reduces frictional losses from motor brushes and also reduces carbon debris from the brushes in a traditional motor. Reducing carbon debris and emissions is advantageous in a clean or pollutant sensitive environment such as a hospital or around those with allergies.

**[0027]** The nozzle may be rotatable or pivotable relative to a base portion, or other portion, of the fan assembly. This enables the nozzle to be directed towards or away from a user as required. The fan assembly may be desk, floor, wall or ceiling mountable. This can increase the portion of a room over which the user experiences cooling.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0028]** An embodiment of the invention will now be described with reference to the accompanying drawings, in which:

[0029] FIG. 1 is a front view of a fan assembly;

[0030] FIG. 2 is a perspective view of a portion of the fan assembly of FIG. 1;

[0031] FIG. 3 is a side sectional view through a portion of the fan assembly of FIG. 1 taken at line A-A;

[0032] FIG. 4 is an enlarged side sectional detail of a portion of the fan assembly of FIG. 1; and

[0033] FIG. 5 is a sectional view of the fan assembly taken along line B-B of FIG. 3 and viewed from direction F of FIG. 3.

#### DETAILED DESCRIPTION OF THE INVENTION

[0034] FIG. 1 shows an example of a fan assembly 100 viewed from the front of the device. The fan assembly 100 comprises an annular nozzle 1 defining a central opening 2. With reference also to FIGS. 2 and 3, nozzle 1 comprises an interior passage 10, a mouth 12 and a Coanda surface 14 adjacent the mouth 12. The Coanda surface 14 is arranged so that a primary air flow exiting the mouth 12 and directed over the Coanda surface 14 is amplified by the Coanda effect. The nozzle 1 is connected to, and supported by, a base 16 having an outer casing 18. The base 16 includes a plurality of selection buttons 20 accessible through the outer casing 18 and through which the fan assembly 100 can be operated.

[0035] FIGS. 3, 4 and 5 show further specific details of the fan assembly 100. A motor 22 for creating an air flow through the nozzle 1 is located inside the base 16. The base 16 further comprises an air inlet 24 formed in the outer casing 18. A motor housing 26 is located inside the base 16. The motor 22 is supported by the motor housing 26 and held in a secure position by a rubber mount or seal member 28.

[0036] In the illustrated embodiment, the motor 22 is a DC brushless motor. An impeller 30 is connected to a rotary shaft extending outwardly from the motor 22, and a diffuser 32 is positioned downstream of the impeller 30. The diffuser 32 comprises a fixed, stationary disc having spiral blades.

[0037] An inlet 34 to the impeller 30 communicates with the air inlet 24 formed in the outer casing 18 of the base 16. The outlet 36 of the diffuser 32 and the exhaust from the impeller 30 communicate with hollow passageway portions or ducts located inside the base 16 in order to establish air flow from the impeller 30 to the interior passage 10 of the nozzle 1. The motor 22 is connected to an electrical connection and power supply and is controlled by a controller (not shown). Communication between the controller and the plurality of selection buttons 20 enable a user to operate the fan assembly 100.

[0038] The features of the nozzle 1 will now be described with reference to FIGS. 3 and 4. The shape of the nozzle 1 is annular. In this embodiment the nozzle 1 has a diameter of around 350 mm, but the nozzle may have any desired diameter, for example around 300 mm. The interior passage 10 is annular and is formed as a continuous loop or duct within the nozzle 1. The nozzle 1 is formed from at least one wall defining the interior passage 10 and the mouth 12. In this embodiment the nozzle 1 comprises an inner wall 38 and an outer wall 40. In the illustrated embodiment the walls 38, 40 are arranged in a looped or folded shape such that the inner wall 38 and outer wall 40 approach one another. The inner wall 38 and the outer wall 40 together define the mouth 12, and the mouth 12 extends about the axis X. The mouth 12 comprises a tapered region 42 narrowing to an outlet 44. The outlet 44 comprises a gap or spacing formed between the inner wall 38 of the nozzle 1 and the outer wall 40 of the

nozzle 1. The spacing between the opposing surfaces of the walls 38, 40 at the outlet 44 of the mouth 12 is chosen to be in the range from 1 mm to 5 mm. The choice of spacing will depend on the desired performance characteristics of the fan. In this embodiment the outlet 44 is around 1.3 mm wide, and the mouth 12 and the outlet 44 are concentric with the interior passage 10.

[0039] The mouth 12 is adjacent the Coanda surface 14. The nozzle 1 further comprises a diffuser portion located downstream of the Coanda surface. The diffuser portion includes a diffuser surface 46 to further assist the flow of air current delivered or output from the fan assembly 100. In the example illustrated in FIG. 3 the mouth 12 and the overall arrangement of the nozzle 1 is such that the angle subtended between the Coanda surface 14 and the axis X is around 15°. The angle is chosen for efficient air flow over the Coanda surface 14. The base 16 and the nozzle 1 have a depth in the direction of the axis X. The nozzle 1 extends by a distance of around 5 cm in the direction of the axis. The diffuser surface 46 and the overall profile of the nozzle 1 are based on an aerofoil shape, and in the example shown the diffuser portion extends by a distance of around two thirds the overall depth of the nozzle 1.

[0040] The fan assembly 100 described above operates in the following manner. When a user makes a suitable selection from the plurality of buttons 20 to operate or activate the fan assembly 100, a signal or other communication is sent to drive the motor 22. The motor 22 is thus activated and air is drawn into the fan assembly 100 via the air inlet 24. In the preferred embodiment air is drawn in at a rate of approximately 20 to 30 litres per second, preferably around 27 l/s (litres per second). The air passes through the outer casing 18 and along the route illustrated by arrow F of FIG. 3 to the inlet 34 of the impeller 30. The air flow leaving the outlet 36 of the diffuser 32 and the exhaust of the impeller 30 is divided into two air flows that proceed in opposite directions through the interior passage 10. The air flow is constricted as it enters the mouth 12 and is further constricted at the outlet 44 of the mouth 12. The air flow exits through the outlet 44 as a primary air flow.

[0041] The output and emission of the primary air flow creates a low pressure area at the air inlet 24 with the effect of drawing additional air into the fan assembly 100. The operation of the fan assembly 100 induces high air flow through the nozzle 1 and out through the opening 2. The primary air flow is directed over the Coanda surface 14 and the diffuser surface 46, and is amplified by the Coanda effect. A secondary air flow is generated by entrainment of air from the external environment, specifically from the region around the outlet 44 and from around the outer edge of the nozzle 1. A portion of the secondary air flow entrained by the primary air flow may also be guided over the diffuser surface 46. This secondary air flow passes through the opening 2, where it combines with the primary air flow to produce a total air flow projected forward from the fan assembly 100 in the region of 500 to 700 l/s.

[0042] The combination of entrainment and amplification results in a total air flow from the opening 2 of the fan assembly 100 that is greater than the air flow output from a fan assembly without such a Coanda or amplification surface adjacent the emission area.

[0043] The amplification and laminar type of air flow produced results in a sustained flow of air being directed towards a user from the nozzle 1. The flow rate at a distance of up to 3 nozzle diameters (i.e. around 1000 to 1200 mm) from a user is around 400 to 500 l/s. The total air flow has a velocity of

around 3 to 4 m/s (metres per second). Higher velocities are achievable by reducing the angle subtended between the Coanda surface **14** and the axis X. A smaller angle results in the total air flow being emitted in a more focussed and directed manner. This type of air flow tends to be emitted at a higher velocity but with a reduced mass flow rate. Conversely, greater mass flow can be achieved by increasing the angle between the Coanda surface and the axis. In this case the velocity of the emitted air flow is reduced but the mass flow generated increases. Thus the performance of the fan assembly can be altered by altering the angle subtended between the Coanda surface and the axis X.

**[0044]** The invention is not limited to the detailed description given above. Variations will be apparent to the person skilled in the art. For example, the fan could be of a different height or diameter. The fan need not be located on a desk, but could be free standing, wall mounted or ceiling mounted. The fan shape could be adapted to suit any kind of situation or location where a cooling flow of air is desired. A portable fan could have a smaller nozzle, say 5 cm in diameter. The means for creating an air flow through the nozzle can be a motor or other air emitting device, such as any air blower or vacuum source that can be used so that the fan assembly can create an air current in a room. Examples include a motor such as an AC induction motor or types of DC brushless motor, but may also comprise any suitable air movement or air transport device such as a pump or other means of providing directed fluid flow to generate and create an air flow. Features of a motor may include a diffuser or a secondary diffuser located downstream of the motor to recover some of the static pressure lost in the motor housing and through the motor.

**[0045]** The outlet of the mouth may be modified. The outlet of the mouth may be widened or narrowed to a variety of spacings to maximise air flow. The Coanda effect may be made to occur over a number of different surfaces, or a number of internal or external designs may be used in combination to achieve the flow and entrainment required.

**[0046]** Other shapes of nozzle are envisaged. For example, a nozzle comprising an oval, or 'racetrack' shape, a single strip or line, or block shape could be used. The fan assembly provides access to the central part of the fan as there are no blades. This means that additional features such as lighting or a clock or LCD display could be provided in the opening defined by the nozzle.

**[0047]** Other features could include a pivotable or tiltable base for ease of movement and adjustment of the position of the nozzle for the user.

**1.** A bladeless fan assembly for creating an air current, the fan assembly comprising a nozzle and a device creating an air flow through the nozzle, the nozzle comprising an interior passage, a mouth for receiving the air flow from the interior passage, and a Coanda surface located adjacent the mouth and over which the mouth is arranged to direct the air flow.

**2.** A fan assembly as claimed in claim **1**, wherein the nozzle defines an opening through which air from outside the fan assembly is drawn by the air flow directed over the Coanda surface.

**3.** A fan assembly as claimed in claim **1** or **2**, wherein the nozzle comprises a loop.

**4.** A fan assembly as claimed in claim **1** or **2**, wherein the nozzle is substantially annular.

**5.** A fan assembly as claimed in claim **1** or **2**, wherein the nozzle is at least partially circular.

**6.** A fan assembly as claimed in claim **1** or **2**, wherein the interior passage is continuous.

**7.** A fan assembly as claimed in claim **1** or **2**, wherein the interior passage is substantially annular.

**8.** A fan assembly as claimed in claim **1** or **2**, wherein the mouth is substantially annular.

**9.** A fan assembly as claimed in claim **1** or **2**, wherein the mouth is concentric with the interior passage.

**10.** A fan assembly as claimed in claim **1** or **2**, wherein the Coanda surface extends symmetrically about an axis.

**11.** A fan assembly as claimed in claim **10**, wherein the angle subtended between the Coanda surface and the axis is in a range from 7° to 20°.

**12.** A fan assembly as claimed in claim **10**, wherein the nozzle extends by a distance of at least 5 cm in the direction of the axis.

**13.** A fan assembly as claimed in claim **10**, wherein the nozzle extends about the axis by a distance in the range from 30 cm to 180 cm.

**14.** A fan assembly as claimed in claim **1** or **2**, wherein the nozzle comprises a diffuser located downstream of the Coanda surface.

**15.** A fan assembly as claimed in claim **1** or **2**, wherein the nozzle comprises at least one wall defining the interior passage and the mouth, and wherein said at least one wall comprises opposing surfaces defining the mouth.

**16.** A fan assembly as claimed in claim **1** or **2**, wherein the mouth has an outlet, and the spacing between the opposing surfaces at the outlet of the mouth is in a range from 1 mm to 5 mm.

**17.** A fan assembly as claimed in claim **1** or **2**, wherein the device creating an air flow through the nozzle comprises an impeller driven by a motor.

**18.** A fan assembly as claimed in claim **17**, wherein the device creating the air flow comprises a DC brushless motor and a mixed flow impeller.

**19.** (canceled)

**20.** A fan assembly as claimed in claim **10**, wherein the angle subtended between the Coanda surface and the axis is about 15°.

\* \* \* \* \*

# Exhibit 4

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF ARIZONA

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Cornucopia Products, LLC, )  
 ) No. CV 12-0234-PHX-NVW  
 Plaintiff, ) (Consolidated with:  
 ) CV 12-0924-PHX-NVW  
 vs. )  
 )  
 Dyson Technology Limited, )  
 )  
 Defendant. )

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Dyson Technology Limited; ) Phoenix, Arizona  
 Dyson, Inc., ) July 11, 2012  
 ) 9:40 a.m.  
 )  
 Plaintiff, )  
 vs. )  
 )  
 Cornucopia Products, LLC, )  
 )  
 Defendant. )

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BEFORE: THE HONORABLE NEIL V. WAKE, JUDGE

REPORTER'S TRANSCRIPT OF PROCEEDINGS

*(Preliminary Injunction Hearing)*  
*(Motion to Dismiss)*

Official Court Reporter:  
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Proceedings Reported by Stenographic Court Reporter  
Transcript Prepared by Computer-Aided Transcription

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July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 P R O C E E D I N G S

2 THE COURTROOM DEPUTY: This is Civil Case 2012-234 and  
3 consolidated with Civil Case 2012-924, Cornucopia Products,  
4 LLC, versus Dyson Incorporated, et al.

5 This is the time set for preliminary injunction  
6 hearing. Counsel, please announce for the record.

7 MR. SHWARTS: Good morning, Your Honor. Robert  
8 Shwartz, Orrick, Herrington & Sutcliffe, on behalf of Dyson.

9 MR. MARTINELLI: Good morning, Your Honor. Richard  
10 Martinelli of Orrick, Herrington & Sutcliffe, on behalf of  
11 Dyson.

12 MR. FRASER: Good morning, Your Honor. Eric Fraser,  
13 Osborn Maledon, for the Dyson Companies.

14 MR. RICKER: Keith Ricker on behalf of Cornucopia  
15 Products LLC. With me today is Dylan McGurk, who is a law  
16 student clerking with me through the summer.

17 MR. LAHSER: Good morning, Your Honor. Andrew Lahser,  
18 of the Law Office of Andrew P. Lahser, for Cornucopia.

19 THE COURT: All right. Good morning, counsel. Let me  
20 ask, I will proceed first with the motion for preliminary  
21 injunction. Let me ask counsel how much time you would like to  
22 have.

23 Let me start with the plaintiff.

24 MR. SHWARTS: Thank you, Your Honor. We're calling  
25 three witnesses this morning. I imagine we'll have some brief

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 argument. I think we can put on our witnesses this morning,  
2 depending on the length of cross-examination, within the next  
3 hour, hour and a half.

4 THE COURT: All right. And how about the defendant?

5 MR. RICKER: After reviewing the briefs, Your Honor, I  
6 think that should be fine, an hour, hour and a half.

7 THE COURT: I mean how much additional evidence and  
8 time do you want?

9 MR. RICKER: Depending on what they put on, if it's  
10 cumulative of the materials in our briefs I anticipate putting  
11 on one witness at the most. We may have some direct  
12 examination of their folks as well. But we'll see about that  
13 as we go.

14 THE COURT: Very well. We'll hear this motion and  
15 then we'll argue the motion to dismiss. And I have some other  
16 matter this afternoon that no matter what happens we will be  
17 done at a certain hour. I'm not going to tell you what that is  
18 so that you don't attempt to use all of the time.

19 So all right. Then let us proceed. This is really  
20 the counter defendant's motion. Do you wish to make an opening  
21 -- I read the briefs. Do you wish to make an opening statement  
22 or just proceed with your witnesses?

23 MR. SHWARTS: No, Your Honor. We'll do argument at  
24 the end, if that pleases Your Honor. We'll proceed with  
25 calling our witnesses.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE COURT: Very well. You can call your first  
2 witness.

3 MR. SHWARTS: Mr. Martinelli will take the first  
4 witness, Your Honor.

5 MR. MARTINELLI: We call Mr. Gammack.

6 THE COURT: Just come up and the clerk will swear you  
7 in.

8 THE COURTROOM DEPUTY: Would you state your full name  
9 for the record?

10 THE WITNESS: Peter David Gammack.

11 THE COURTROOM DEPUTY: Spell your last name.

12 THE WITNESS: G-a-m-m-a-c-k.

13 (The witness was sworn.)

14 THE COURT: You may proceed.

15 PETER GAMMACK,

16 a witness herein, having been first duly sworn by the clerk to  
17 speak the truth and nothing but the truth, was examined and  
18 testified as follows:

19 DIRECT EXAMINATION

20 BY MR. MARTINELLI:

21 Q. Good morning, Mr. Gammack. Can you please state your full  
22 name for the record?

23 A. My name is Peter David Gammack.

24 Q. Where do you reside, sir?

25 A. I reside in the united Kingdom near Bath.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. I'm going to mark as Exhibit 1 your declaration.

2 Do you have that in front of you, sir?

3 A. Yes, I do.

4 Q. Is that the declaration that you submitted on behalf of  
5 Dyson's preliminary injunction?

6 A. Yes, it is.

7 Q. So where are you currently employed, Mr. Gammack?

8 A. I'm currently employed with Dyson Technology Limited.

9 Q. And what is your position at Dyson Technology?

10 A. I'm concept design director.

11 Q. And what are your responsibilities as a concept design  
12 director?

13 A. My responsibilities are to bring new innovation and design  
14 for Dyson.

15 Q. And do you have a staff that reports to you?

16 A. I have a team working on concepts, yes.

17 Q. And how many people report directly to you?

18 A. About 50.

19 Q. Now, did you study design at university?

20 A. Yes, I did.

21 Q. And can you describe your university education, please?

22 A. My first degree was between 1984 and 1987 at Imperial  
23 College, London, in mechanical engineering. And my second  
24 degree was between 1987 and 1989 at the Royal College of Art in  
25 industrial design engineering.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. And can you briefly describe what subjects you studied as  
2 part of your mechanical engineering degree?

3 A. It would be quite a range of subjects covering mathematics,  
4 applied mathematics, fluid dynamics, mechanics, thermodynamics,  
5 and many others. But that's the general gist of it, yes.

6 Q. And how did your master's studies differ from that?

7 A. The master's was more design focused, of course, where I  
8 studied more product visual design as well as how the product  
9 worked. So it was a more design orientated course.

10 Q. And when did you begin working for Dyson?

11 A. I began in 1989.

12 Q. And was that right after you left school?

13 A. Yes. I was recruited directly by James Dyson from the  
14 Royal College of Art.

15 Q. What was your first job with Dyson in 1989?

16 A. My first job was a design engineer, and I worked on  
17 designing vacuum cleaners.

18 Q. So an R&D position?

19 A. Yes. That's correct.

20 Q. And have you done R&D work throughout your term at Dyson?

21 A. Yes, I have.

22 Q. And can you describe some of the products that you have  
23 worked on over the years?

24 A. During my time I have worked on a lot of vacuum cleaner  
25 products, probably 30 or 40 different vacuum cleaners. I have

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 worked on white goods, for example, washing machine and other  
2 white goods that haven't come to market. I have worked on  
3 small appliances that haven't come to market. I have worked on  
4 air blade hand dry products. I have worked on fans. And I  
5 have worked on some other products that, again, haven't come to  
6 market.

7 Q. And when did you start working on fans at Dyson?

8 A. I first started working on fans in 2005.

9 Q. And what were you investigating at that time?

10 A. At that time, I was working a lot on air flow to do with  
11 other products we work on. During my investigation to do air  
12 flow I was studying how air sticks to surfaces by an effect  
13 called the Coanda Effect. And this led me on to working on air  
14 movement devices.

15 Q. And so how did the research and development process for the  
16 fans progress from 2005 onwards?

17 A. From 2005 we started fairly small with two or three people  
18 working for a bit of time. And then as the project gained  
19 momentum and as we started to find we had something very good  
20 the team built up to a large team.

21 Q. And when was the first product released?

22 A. The first product was in 2009.

23 Q. And what was that product?

24 A. That would be the Air Multiplier fan.

25 Q. And did it have a particular product designation?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 A. AM01.

2 Q. Now, I'm going to mark Exhibit 2.

3 MR. MARTINELLI: Might as well bring Exhibit 3.

4 THE COURT: You know, Mr. Martinelli, I should have  
5 said this at the beginning. And I don't want to discourage any  
6 presentation you want to make, but it occurs to me that it  
7 might make sense for the Court to deem the affidavit submitted  
8 on the motions as before the Court so they don't need to be  
9 repeated.

10 And Mr. Ricker, I think under the -- I can do that.  
11 Mr. Ricker, would you have any objection to that?

12 MR. RICKER: To deeming them, I'm sorry?

13 THE COURT: The motion papers -- deeming the  
14 affidavits on Dyson's motion to be before the Court so they  
15 don't have to be repeated, although they can be examined and  
16 cross-examined. I mean, that's what we usually do on  
17 preliminary injunction motions.

18 Mr. Ricker, do you have any objection to that? I'm  
19 not sure that you --

20 MR. RICKER: I don't have any objection to that, as  
21 long as they are not admitted as evidence.

22 THE COURT: They are. That's exactly what I'm saying,  
23 Mr. Ricker, that they are deemed admitted as evidence for such  
24 weight as they carry subject to cross-examination or rebuttal.  
25 Frankly, most of the -- well, most of the affidavits are really

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 of -- they go to issues of claimed harm and irreparable harm  
2 rather than the design patent infringement directly.

3 MR. MARTINELLI: Mr. Gammack is the one that goes  
4 closest to the actual designs.

5 THE COURT: Mr. Ricker, I'm trying to think through  
6 whether there is any unfair prejudice to your side if I deem  
7 the affidavits that have been submitted on the motion to be  
8 submitted before the Court in this hearing and to, therefore,  
9 avoid the need to repeat them. Again, I'm not -- I don't want  
10 to discourage anyone from presenting or emphasizing anything  
11 they want, but --

12 MR. RICKER: In terms of unfair prejudice, I  
13 understand that several of the declarants aren't here to  
14 testify today or to be subject to cross-examination so  
15 certainly I would view that as --

16 THE COURT: What do you dispute -- well, here I go  
17 ruining your presentation, Mr. Martinelli.

18 MR. MARTINELLI: I'm flexible.

19 MR. RICKER: Do we just want to deal with Gammack's  
20 declaration now and say that I'm fine with that?

21 THE COURT: Tell you what. We can discuss -- you can  
22 think about this at the break. I'm disposed to avoid the  
23 necessity for undisputed presentations that are otherwise made  
24 on the affidavits. But I am going to withhold making any  
25 judgment on that.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 So go ahead and proceed.

2 MR. MARTINELLI: I will try and move quickly so we  
3 don't --

4 THE COURT: I'm not discouraging you from making your  
5 presentation. It's just that there is a lot of stuff that  
6 is -- does not go directly to the design patent infringement  
7 claim that I understand you want to make and you need to make  
8 and the other side will dispute various parts of it. But most  
9 of it is -- it really goes to the irreparable harm contentions.

10 MR. MARTINELLI: Right.

11 THE COURT: Go ahead, Mr. Martinelli.

12 BY MR. MARTINELLI:

13 Q. Okay. So I believe Exhibit 2 is the fan in front of you.  
14 Have you seen that before?

15 A. Yes, it is. Yes.

16 Q. And can you tell me what that is?

17 A. This is an AM01 fan.

18 Q. And the box behind you, or to your right there, is Exhibit  
19 3. Can you tell me what that is?

20 A. Yes. That is the box for an AM01 fan.

21 Q. So why don't we look at the fan itself and maybe walk  
22 through the parts of the fan so we can understand how it  
23 operates.

24 What's the circular portion at the top of the fan?

25 A. This is the nozzle or air amplifier on the top here.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. Go on, please.

2 A. The air comes out of this annular slot, goes all the way  
3 around, around here, crosses over the surface on the inside of  
4 the nozzle and then comes out forwards.

5 Q. And how does the air get up into the nozzle?

6 A. The air enters the product through the grill around the  
7 base. It goes up through the impeller motor and then it comes  
8 out through and into the nozzle. And then as it passes out  
9 through the annular slot, it's amplified and induced air comes  
10 in the back to amplify the air flow.

11 Q. And can you show us where the motor is while you have it  
12 apart?

13 A. The motor is inside the main base here.

14 Q. And does that move, the motor part?

15 A. This tilts to and fro, and it oscillates side to side as  
16 well.

17 Q. So how did Dyson arrive at the particular look of the AM01  
18 fan?

19 A. We have quite a long process of design development where we  
20 go through developing the technology to make the technology  
21 work, getting the right air flow, getting the right geometry,  
22 designing the motor impeller unit, the airways. But at the  
23 same time, we consider the overall product design to make it  
24 visually what we want and function as we want, for example,  
25 with the tilt and oscillation.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. And there were some notebook pages attached to your  
2 declaration, is that correct?

3 A. Yes. That's correct.

4 Q. And how did you select those particular notebook pages?

5 A. These are just a brief selection through my notebooks. So  
6 I carry a hard bound notebook, or notebooks, which I use  
7 day-to-day at work. And this is a selection of sketches from  
8 the pages between the 2005 to 2008 period.

9 Q. And what do these sketches show? And perhaps we can look  
10 at some of them. So this is the first page?

11 A. Right. This is just -- this is an early sketch, an early  
12 sketch showing some of the beginnings of the concept where I  
13 was looking at air flow and amplifying it through a nozzle.

14 Q. And so on this first page here, this is one possible design  
15 for the fan?

16 A. Yeah. That is one possible design, yes.

17 Q. And then if we turn the page, the next fan looks like it's  
18 from the 2nd of April, 2007. Can you describe what this design  
19 shows?

20 A. Yes. It's another variational design where the base is  
21 more cubic and the nozzle is tapered, but based on the same  
22 principle.

23 Q. And so here on the next page, there's a couple other  
24 alternatives?

25 A. Yeah. This is just another configuration with a bigger

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 base on it. And on the right it is illustrating the case that  
2 I was considering possible other geometries or shapes for the  
3 nozzle other than just round.

4 Q. Is that these?

5 A. Yeah. They were all possible shapes that could be used  
6 which is for the nozzle, yes, which is one of the things that  
7 we were considering. This shows a long, tall version which we  
8 actually did manufacture. And the one above it actually shows  
9 the motor orientated in the different direction, horizontally  
10 rather than vertically.

11 Again, that's another one with the motor horizontal in  
12 the base so the base is a different shape.

13 Q. So that's this part over here?

14 A. Yes. That's the motor and impeller unit placed  
15 horizontally.

16 Q. And then the actual fan is placed --

17 A. But the actual fan, actual design we selected, or we  
18 progressed, we had a vertical motor fan assembly. Again, these  
19 are other examples, for example, this one has the motor in the  
20 center of the nozzle and then the air is fed to it radially  
21 through ducts. That would have been another possible  
22 configuration.

23 Q. For the record, that's the fan on the upper right-hand  
24 side?

25 A. Yes. That's correct.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE COURT: Do you want to offer this exhibit in  
2 evidence?

3 MR. MARTINELLI: It's part of his declaration. It's  
4 Exhibit A to his declaration.

5 THE COURT: All right.

6 THE WITNESS: Another layout, this is back with the  
7 motor impeller unit in the vertical access again closer to the  
8 former design.

9 BY MR. MARTINELLI:

10 Q. But there's a little bit of a --

11 A. Yeah. There's a step halfway down. At this point, we were  
12 looking, at that point, having a larger fan and having a step.

13 Q. Let's skip the next page. What is this?

14 A. Those were a number of configurations we were looking at  
15 for the tilt mechanism, some sort of pivoting tilt design.

16 Q. And that was on the right-hand side of this?

17 A. That's right. Yes.

18 Q. And then?

19 A. That's a sort of a square shaped nozzle.

20 Q. That's on the left-hand side?

21 A. That's correct.

22 Q. And this one is dated July 2nd, 2007?

23 A. Yes. That's correct.

24 Q. This one is similar.

25 I have moved on a bit towards the back. Unfortunately

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 this is an undated page.

2 So this is an undated page. There's a rectangular  
3 looking fan?

4 A. Yes. This one's got the nozzle surface on the inside in an  
5 oval shape. The outside is a rectangular shape. The outside  
6 doesn't affect the function of the internal nozzle.

7 Q. So the functional part of the fan is the internal surface  
8 that has the aerodynamic features?

9 A. Yes. That's correct.

10 Q. Okay. I think there's more of those, but we'll stop that  
11 for now.

12 So with all those alternatives, why did you choose  
13 the -- or why did Dyson choose the version that became the AM01  
14 product?

15 A. Well, we -- after considering a lot of alternatives we  
16 chose this as what we considered to be the purest form that we  
17 thought looked the most elegant and pure.

18 Q. Now, has Dyson sought intellectual property protection for  
19 that design?

20 A. Yes, it has.

21 Q. And I'd like to give you Exhibits 4 and 5.

22 A. Yes. I have them.

23 Q. So what is Exhibit 4?

24 A. Exhibit 4 is the patent for the design of the fan.

25 Q. And for the record, that's USD 602,143 patent?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 A. Yes. That's correct.

2 Q. And are you an inventor of that patent?

3 A. Yes, I am.

4 Q. And why don't you tell me what is Exhibit 5.

5 A. Exhibit 5 is another design patent for the -- relating to  
6 the nozzle of the fan.

7 Q. And are you an inventor of that patent?

8 A. Yes, I am.

9 Q. So I'd like to introduce the next two physical exhibits.

10 Have you seen the fan marked as Exhibit 6 before?

11 A. Yes, I have.

12 Q. And what is that?

13 A. This is a Cornucopia fan.

14 Q. And when did you first see that fan?

15 A. In April this year.

16 Q. And in what context?

17 A. It was shown to me by our intellectual property department  
18 at Dyson.

19 Q. And have you made any measurements of the Cornucopia fan?

20 A. I have, yes.

21 Q. And what parts did you measure?

22 A. I have measured the diameter of the nozzle, the depth of  
23 the nozzle, the thickness of the nozzle, the diameter and the  
24 height of the base unit as well.

25 Q. And how do those measurements compare to the corresponding

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 parts of the Dyson fan?

2 A. They are almost identical.

3 Q. And by "almost identical" how close are they?

4 A. Well, within less than a millimeter in most cases.

5 Q. Now, besides the outward dimensions of the fan, did you  
6 notice any other similarities between the Cornucopia fan and  
7 the Dyson fan?

8 A. Yes. There are other similarities apart from the external.

9 Q. Can you describe some of those to us?

10 A. For example, the detail that engages the nozzle part of the  
11 base is very similar. In fact, it's so similar they are  
12 interchangeable. So I can, in fact, interchange the top nozzle  
13 from one and put it on the other.

14 Q. And would the fan work with it attached like that?

15 A. Yes. The fan will still work and function, yes. If I  
16 could turn it on, it would, yes.

17 MR. MARTINELLI: We can turn it on, Your Honor, if you  
18 want to see it.

19 THE COURT: Do you have an outlet there?

20 MR. MARTINELLI: We have a power cord actually. Can I  
21 turn it on?

22 THE COURT: You may.

23 BY MR. MARTINELLI:

24 Q. So that's the Dyson fan with the Cornucopia nozzle on it?

25 A. Yes, it is. Yes.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. And would it work the other way around, too, the Dyson  
2 nozzle on the Cornucopia fan -- I mean -- yes.

3 A. Do you want me to put the Dyson nozzle on the Cornucopia  
4 fan?

5 Q. Yeah. Yeah.

6 A. Turn it on as well?

7 Q. I think we get the idea that you can turn it on.

8 So now, the particular plastic structures that are in  
9 that mount, who designed those on the Dyson fan?

10 A. The actual detail of the fitting would be one of the design  
11 engineers on the team. I don't know specifically which one.

12 It would be specifically unique to this product.

13 Q. Thank you.

14 So in addition to taking physical measurements of the  
15 fan itself, did you test the performance of the Cornucopia fan?

16 A. Yes. I had them test it.

17 Q. And can you describe what the tests showed?

18 A. The tests show that the Cornucopia fan does not perform as  
19 well as the Dyson fan.

20 Q. And in what way is its performance poor?

21 A. In respect that the flow and the velocity are not as great.

22 Q. And can you describe what it means to say the air flow  
23 isn't as great?

24 A. The air flow, the amount of air coming out of the product,  
25 which is what gives you the cooling effect, is significantly

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 lower on the Cornucopia fan.

2 Q. So that's the volume of air?

3 A. The volume of air is significantly lower. And the  
4 velocity, which is the speed at which the air comes out, is  
5 also significantly lower.

6 Q. And how were these tests performed?

7 A. These tests were performed by our -- we have a test  
8 department at Dyson, and they test to a test based on the IEC  
9 standard, International Electrical Commission standard. And  
10 the test is done in an environmental chamber at a set  
11 temperature and humidity. And you take a fan product and then  
12 the test requires that you measure the air flow and the air  
13 velocity at a distance which is three times the diameter of the  
14 fan. So in this case, if it's a 12-inch fan you would test the  
15 air flow velocity at 36 inches away from the fan with the grid  
16 of probes.

17 Q. All right, Mr. Gammack. I have nothing further. Thank  
18 you.

19 THE COURT: Mr. Gammack, is that difference in air  
20 flow -- obviously, some of it is accounted for by the fact that  
21 the Cornucopia motor is 25 watts and the Dyson motor is 40  
22 watts, correct?

23 THE WITNESS: Yes. That's correct.

24 THE COURT: Is it accounted for by anything else?

25 THE WITNESS: I would not know for sure if it was

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 anything else as well. Obviously, the motor power has some  
2 impact, but I don't know the rest.

3 THE COURT: All right. Mr. Ricker, you may  
4 cross-examine.

5 MR. RICKER: I'm going to wait for Mr. Martinelli to  
6 grab his binder here. I will hand it to him.

7 CROSS-EXAMINATION

8 BY MR. RICKER:

9 Q. Good morning, Mr. Gammack.

10 Are you familiar --

11 A. Good morning.

12 Q. -- with plaintiff's Exhibits 4 and 5, the design patents?

13 A. 4 and 5? Yes.

14 Q. Yes.

15 A. Yes.

16 Q. Can you show me where in those patents the fitting between  
17 the nozzle and the base is claimed?

18 A. It doesn't show a fitting between the two there.

19 Q. Are you familiar with what's been referred to in this  
20 litigation as JP '897?

21 A. Possibly, if I could see it.

22 Q. I think we can arrange that.

23 MR. SHWARTS: Is there a copy for counsel?

24 MR. MCGURK: If I may, Your Honor. You will find two  
25 copies.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 BY MR. RICKER:

2 Q. Have you had a chance to look that over?

3 THE COURT: Which exhibit is this, Mr. Ricker?

4 MR. RICKER: That is Exhibit 15, Your Honor.

5 BY MR. RICKER:

6 Q. Have you had a chance to look at that, sir?

7 A. I have had a look at it, yes.

8 Q. Are you familiar with what it is?

9 A. I have seen parts of it but not all of this.

10 Q. Which parts have you seen?

11 A. I have seen this back -- the back page before.

12 Q. The back page, is that the abstract or the --

13 A. The image.

14 Q. You have seen the image?

15 A. Yes.

16 Q. Okay. Have you seen the abstract before?

17 A. I don't recall seeing an abstracts in English, no.

18 Q. You have never seen an abstract in English?

19 A. Not that I recall, no.

20 Q. Have you seen the Japanese text?

21 A. Yes. I have seen the Japanese text.

22 Q. Do you read Japanese?

23 A. No.

24 MR. RICKER: I have a little bit of a cold. I don't

25 know how I managed to do that in 110 degree weather we have

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 here, but I did.

2 BY MR. RICKER:

3 Q. We looked through your declaration a moment ago and looked  
4 at some alternative designs that you were thinking of. Did you  
5 make prototypes of those?

6 A. Some of them but not all of them.

7 Q. Did you test those prototypes with the characteristics that  
8 you have listed in your declaration at Paragraph 18?

9 A. I will have to see which Paragraph 18 is.

10 Sorry. Can you ask the question again, please? I  
11 have got Paragraph 18, I believe, here in my declaration.

12 Q. Paragraph 18, I believe, shows a comparison of certain  
13 performance characteristics for the Dyson and Cornucopia fans,  
14 correct?

15 A. Yes. That's correct, yes.

16 Q. Did you put the prototypes that you developed through these  
17 same tests as you did the Dyson and Cornucopia fans as  
18 reflected in Paragraph 18?

19 A. Possibly some but not all.

20 Q. Were the characteristics the same as the Dyson fan as  
21 reflected in Paragraph 18?

22 A. For which specific one? There were quite a lot that were  
23 shown. Which specific one?

24 Q. Were any of them the same?

25 A. Were any of them the same? Some of them were very similar,

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 yes.

2 Q. Very similar but not the same, right?

3 A. Well, I couldn't say without seeing the exact results, but  
4 some of them were very similar.

5 THE COURT: Mr. Ricker, which Paragraph 18 are you  
6 referring to?

7 MR. RICKER: I'm referring to Paragraph 18 in Mr.  
8 Gammack's declaration which shows the table with the results  
9 for the Dyson and Cornucopia fans.

10 THE COURT: All right. Go ahead.

11 BY MR. RICKER:

12 Q. You would agree with me, sir, that the shape of the nozzle  
13 would affect these characteristics, wouldn't you, specifically  
14 the air flow and air velocity?

15 A. It might affect it some for some configurations more than  
16 others.

17 Q. How about if there was no angle whatsoever to the interior  
18 of the nozzle? Would that affect it?

19 A. That would affect it, yes.

20 Q. How about if you put the nozzle at the front instead of at  
21 the back? Would that affect it?

22 A. Yes. That would probably affect it, too.

23 Q. How about if you just took the depth of the nozzle and cut  
24 it in half? Would that affect it?

25 A. It might affect it, but I haven't tested that.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. The square designs that you looked at with the base being a  
2 square shape.

3 A. Yes.

4 Q. If you used a circular motor in that shape, would the  
5 characteristics be the same?

6 A. Yes. I believe they would because the internal ducting is  
7 not necessarily the same as the external surface. So the  
8 internal ducting could be the same with an outside square or  
9 circle.

10 Q. So you would have to alter the interior ducting based on  
11 the shape of the housing?

12 A. No. The interior ducting could be kept at a certain shape  
13 but the external shape could be different.

14 Q. Well, if you have a circular motor in a square housing, you  
15 would have to put in some type of a -- something to block the  
16 air from flowing back down through the inlet, wouldn't you?

17 A. It would be ducted, but it is ducted, anyway, in the  
18 current fan.

19 Q. Right, but the ducting would have to be different to  
20 account for a square shape versus a cylindrical shape?

21 A. It might have to be slightly different, yes.

22 Q. Now, you said that the way you selected the design that  
23 ultimately became the Dyson Air Multiplier was because it was  
24 the most elegant and pure form. Was that about what you said?

25 A. Yes. That's one of the reasons, yes.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. Would you substitute the base form of the Cornucopia fan  
2 for the Dyson fan? Do you think it's the same elegant and pure  
3 form?

4 A. From the base up, not the square part but the other part  
5 up, yes.

6 Q. So you wouldn't put the base on there because that wouldn't  
7 be the most elegant and pure form?

8 A. The part below the base. If I call this the base, I'm  
9 calling this the base, the foot, I would prefer not to -- I  
10 would prefer this to the Cornucopia one, yes, the foot.

11 Q. Right. So that's because the foot on the Cornucopia fan,  
12 you don't think that would be the most elegant and pure form,  
13 right?

14 A. That's correct.

15 Q. And you would agree that there's a difference between the  
16 two, right?

17 A. There's a difference from the base down on the foot, yes.

18 Q. And you wouldn't substitute the two in your design?

19 A. I wouldn't, no.

20 Q. Let me ask you a few more questions about what's been  
21 marked as Exhibit 15, which is JP '897.

22 A. Okay. I have it. Yes.

23 Q. Turning to the back page that you said you were familiar  
24 with, it shows the figures.

25 A. Yes.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. What's marked as Number 13 on the figure, that's a  
2 cylindrical nozzle, right?

3 A. It's round, but a round section toroidal nozzle, yes.

4 Q. I didn't catch that.

5 A. It's a toroidal shaped nozzle, like a donut shaped.

6 Q. And that is a form of cylinder, right?

7 A. I would not call it a cylinder. It's the shape of a donut,  
8 a toroid.

9 Q. What's depicted as Number 1 on the figure there?

10 A. Yes.

11 Q. The 1A is a cylinder that houses a motor and fan, correct?

12 A. I don't know if it's a cylinder. There's only one section,  
13 so it doesn't state if it's a cylinder or a square or a  
14 triangle or anything.

15 Q. Reading the -- do you have the English abstract in front of  
16 you? Let's use that one.

17 A. Yes, I do.

18 Q. The figure is the same there?

19 A. Yes, it is.

20 Q. Reading the abstract, can you read the purpose section for  
21 me, please?

22 A. To improve the safety and stableness of the fan by  
23 providing an air discharging shaped -- discharging ring shaped  
24 in a hollow cylinder form to receive an air stream produced by  
25 vents and having an annular slit to discharge the received air

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 stream there through.

2 Q. So they call it a cylinder?

3 A. They do.

4 Q. What alternate shape would you think that could be in 1A,  
5 accounting for a fan blade that apparently rotates on the axis  
6 too?

7 A. Well, it could be a cylinder or it could be a hexagon or it  
8 could be a lot of things.

9 Q. We don't see any lines showing a hexagon or a square, we  
10 just see two lines, right?

11 A. Well, it's not that clear. There are other lines behind  
12 which I don't know what they are.

13 Q. Are you aware whether the fan claimed in JP '897 claims a  
14 tilting mechanism?

15 A. I'm not aware of it, no.

16 Q. You don't know one way or the other?

17 A. No. I don't know one way or the other.

18 Q. Are you aware that the fan in JP '897 claims an oscillating  
19 feature?

20 A. I'm not aware one way or the other.

21 Q. The fan in JP '897 is a bladeless fan, correct?

22 A. It appears to be, yes.

23 Q. The fan in JP '897 has a vertical motor like the design you  
24 selected for the Dyson fan, correct?

25 A. Yes, it does.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. We went through some change -- some potential changes to  
2 the nozzle that could be made, including shrinking the depth  
3 and moving the nozzle to the front. Would you agree with me  
4 that were those changes to be made, the air flow and the noise  
5 and the air velocity would be changed. Is that right?

6 A. They may be different but they would not necessarily be  
7 worse.

8 THE COURT: Mr. Ricker, would you pull that microphone  
9 closer and speak -- or speak a little more loudly or maybe do  
10 both? I'm having a hard time understanding you, hearing you.

11 MR. RICKER: I sorry about that.

12 BY MR. RICKER:

13 Q. The -- when you say it may not be worse, what do you mean  
14 by that?

15 A. What I mean is, for example, you may gain something on a  
16 flow but lose something on the velocity or vice versa. So you  
17 may arrive at a solution that has a different combination of  
18 flow velocity if you tested it. But I don't know.

19 Q. It would be different but it may be better or worse  
20 depending on particular tastes?

21 A. Yes. Exactly. Or what you are used to.

22 Q. So the difference in the Cornucopia nozzle is that there's  
23 no abrupt angle at the edge of the cylindrical nozzle, is that  
24 right?

25 A. I'm sorry, on the Cornucopia nozzle?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. Right.

2 A. I don't have it here, but yes, it doesn't have this  
3 parallel section. It carries continually on, yes.

4 Q. Do you know whether that accounts for a change in certain  
5 of these characteristics?

6 A. I could, from my experience, guess what I think it would  
7 do. But I haven't specifically tested it with or without it.

8 Q. What would your guess be?

9 A. My guess would be it would increase the flow slightly and  
10 reduce the velocity slightly.

11 Q. Are you aware of whether it would also increase the angle  
12 that the air is broadcast at?

13 A. It might, but I couldn't be sure on that.

14 Q. And that might be another choice that someone could make.  
15 Wouldn't be worse or better necessarily, but it would just be  
16 different, the function would be different?

17 A. It would be different, but it would be probably a lower  
18 velocity which, in some cases, might be considered worse.

19 Q. On the Cornucopia fan, I believe you called the -- what did  
20 you call it again? The foot? Is that what you called it?

21 A. I called it a foot, yes.

22 Q. Would that have any effect on the function of the fan in  
23 terms of its ability to stand up to a tap on the top of the  
24 nozzle?

25 A. Well, it might, but we don't have a problem with the round

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 base because we have a test which we perform where we have a  
2 tilt test where the fan has to withstand standing on an angled  
3 plane and not fall over. So I don't see a problem with the  
4 existing one.

5 Q. Right. But whether there's a problem or not, adding a foot  
6 onto it would change the function, right?

7 A. It -- ultimately it would make it harder to push over, yes.

8 THE COURT: Excuse me. This phone isn't supposed to  
9 ring.

10 Go ahead. Nick, have the building people check that  
11 out. It's not supposed to ring.

12 Go ahead.

13 BY MR. RICKER:

14 Q. You said it would be harder to push over with the foot  
15 that's incorporated on the Cornucopia base?

16 A. Possibly in some angles, but without looking at it in  
17 detail, the front to back is not much different. So it might  
18 affect it on a diagonal push. I don't know how much difference  
19 it would make on the front to back push.

20 Q. There's a James Dyson listed as an inventor of the '143  
21 patent?

22 A. Yes. That's correct.

23 Q. Can you describe for me what his contribution was to the  
24 design?

25 A. James Dyson spent a lot of time working with myself and

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 other people on the team in particular on the design of the  
2 product in the function as well as the design.

3 Q. Did he draw any of the drawings?

4 A. Not in my exhibit, but he has done drawings, yes.

5 Q. What was Mr. Dyson's contribution to the '748 patent?

6 A. He was involved in many of the design reviews that we had  
7 where we considered different options and which were the  
8 preferred options.

9 Q. The motor for the Dyson fan is located where again?

10 A. It's located in the base, about here.

11 Q. And if you move the motor towards the nozzle, would that  
12 affect the stability of the fan?

13 A. Yes, it would.

14 Q. If you made the base taller, would that affect the  
15 stability of the fan?

16 A. Yes, it would.

17 Q. If you made the base shorter, would it affect the stability  
18 of the fan?

19 A. Yes, it would.

20 Q. If you made the base wider, would it affect the stability  
21 of the fan?

22 A. Yes.

23 Q. Thank you, sir.

24 THE COURT: You may cross -- or redirect.

25 MR. MARTINELLI: I just have a couple questions to

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 follow up.

2 REDIRECT EXAMINATION

3 BY MR. MARTINELLI:

4 Q. Mr. Ricker talked about a lot of parameters that could have  
5 been altered in the Dyson fan design, is that right?

6 A. That's correct, yes.

7 Q. Now, do you have any doubt that you could build a fan that  
8 performs the same as the Dyson fan but doesn't look like the  
9 fan that we have here, the AM01?

10 A. I have no doubt that I could design a fan that performs the  
11 same but looks different.

12 Q. And why is that?

13 A. Because there are several features on the external fan that  
14 don't affect the performance.

15 Q. Why don't you describe some of those to us.

16 A. So for example, the whole outer surface of the nozzle does  
17 not affect the performance. This could be reshaped. The shape  
18 of the base does not affect the performance. This could be  
19 reshaped. The height could be different.

20 Q. And if you wanted to still maintain the same stability  
21 while moving the motor, could you do that?

22 A. Possibly, yes. I could do it, actually, because we have  
23 done that on other products. If I add weight to the base, then  
24 I can put the motor higher to compensate.

25 Q. So all of the performance characteristics that this fan has

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 could be embodied in another fan with a different look?

2 A. Yes. That's correct.

3 Q. Now, we talked about the Japanese reference a bit with Mr.  
4 Ricker, is that right?

5 A. Yes. That's correct.

6 Q. Do you have that in front of you?

7 A. Yes, I do.

8 Q. And you can understand from the drawing that that discloses  
9 a bladeless fan?

10 A. Yes, I can.

11 Q. So functionally, it performs generally the same function as  
12 the Dyson fan?

13 A. As far as I can see, it could do. What the performance  
14 would be, I couldn't say. But it could perform as a fan, yes.

15 MR. MARTINELLI: I have nothing further.

16 Although, I would like to move the physical exhibits  
17 into evidence.

18 THE COURT: Which numbers?

19 MR. MARTINELLI: It is -- I believe it's 3 and 4. No.  
20 2 and 3 and 5 and 6.

21 MR. FRASER: 6 and 7.

22 MR. MARTINELLI: 2 and 3 and 6 and 7.

23 THE COURT: Mr. Ricker.

24 MR. RICKER: No objection.

25 THE COURT: Exhibits 2 and 3 and 6 and 7 are admitted.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1           Before you sit down, Mr. Gammack, the shape of the  
2 nozzle as described in the '449 utility patent as an angle  
3 diffuser describes that as affecting the air flow, I think, to  
4 give it more direction. Is that correct?

5           THE WITNESS: If it's referring to this angled  
6 internal surface, yes.

7           THE COURT: Well, it's both the angle and the tact  
8 that it has width in contrast to the tubular Japanese patent,  
9 correct?

10          THE WITNESS: Yes. That is correct. Yes.

11          THE COURT: So the fact that the nozzle has width and  
12 angle it is functional, correct?

13          THE WITNESS: It is functional to achieve specifically  
14 what we are trying to achieve as a velocity and a flow.

15          THE COURT: So when you described the appearance of  
16 the -- of what you call -- I know patent law creates its own  
17 language. It is intended to be obscure. But you call it a  
18 nozzle. How would it look different and still achieve the  
19 desired function of directing the air flow, increasing the air  
20 flow by having that, what I'm describing as, width and  
21 direction?

22          THE WITNESS: Well --

23          THE COURT: I'm going back to your testimony a minute  
24 ago in which you said the appearance could be made different  
25 without affecting the function.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE WITNESS: Yes. So, for example, the external  
2 surface does not affect the function. The internal surface  
3 does. So the external surface could be angled or could be  
4 shaped. The external surface does not affect it.

5 THE COURT: But the patents D '143 and D '748 do not  
6 describe anything about the external surface. They only depict  
7 an image that shows the shape of it, correct?

8 THE WITNESS: It shows the cylindrical shape, that's  
9 correct.

10 THE COURT: So there's nothing in these design patents  
11 concerning the texture or color or appearance of the nozzle  
12 other than its shape, correct?

13 THE WITNESS: That's correct. Yes.

14 THE COURT: All right. When I ask questions I always  
15 invite counsel if they want to ask follow-up to my question.  
16 So you may both do so if you wish.

17 FURTHER REDIRECT EXAMINATION

18 BY MR. MARTINELLI:

19 Q. So if I understood that, it's -- basically, your testimony  
20 was that the exterior of the nozzle doesn't affect the air flow  
21 because the aerodynamic features are in the interior?

22 A. That's correct, yes.

23 Q. So if you wanted to put a square profile on the back of  
24 that nozzle, for example, instead of a rounded profile, would  
25 you have to make any other changes?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 A. Not provided that I keep the internal geometry as it is, I  
2 could from, say, this point onwards on the outside, I could  
3 change it, yes.

4 Q. And if you wanted to make it thicker, would that affect the  
5 operation of the air flow?

6 A. No. Making it thicker is perfectly all right. I could  
7 make this thicker, yes.

8 MR. MARTINELLI: Nothing further.

9 THE COURT: Mr. Ricker, you don't have to, but if you  
10 want to ask any follow-up questions to my questions, you may.

11 MR. RICKER: I do.

12 RE-CROSS-EXAMINATION

13 BY MR. RICKER:

14 Q. Sir, in addition to the '449 utility patent that Judge Wake  
15 asked about, the other elements of the nozzle are also claimed  
16 in utility patents, correct? For instance, the spacers that  
17 you see in the nozzle?

18 A. Yeah. There are several patents. I couldn't name them all  
19 at the moment, but there are, yes.

20 Q. And those spacers have some effect in directing the air  
21 flow according to Dyson?

22 A. No. These spacers do not in here. The spaces in here you  
23 are referring to?

24 Q. Right, they have no functional effect?

25 A. It's a manufacturing thing. It's a manufacturing thing to

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 achieve an accurate gap.

2 Q. That's it. Thanks.

3 THE COURT: All right. Mr. Gammack, thank you. You  
4 may step down. And I instruct you not to discuss your  
5 testimony with anyone other than the lawyers in the case until  
6 the hearing is concluded.

7 You may call your next witness.

8 MR. SHWARTS: Thank you, Your Honor. Dyson would call  
9 Greg Forrest.

10 THE COURTROOM DEPUTY: State your full name for the  
11 record and spell your last name.

12 THE WITNESS: Gregory Forrest, F-o-r-r-e-s-t.

13 (The witness was sworn.)

14 THE COURT: You may proceed.

15 MR. SHWARTS: Thank you, Your Honor.

16 GREGORY FORREST,  
17 a witness herein, having been first duly sworn by the clerk to  
18 speak the truth and nothing but the truth, was examined and  
19 testified as follows:

20 DIRECT EXAMINATION

21 BY MR. SHWARTS:

22 Q. Will you state your full name, please?

23 A. Gregory Forrest.

24 Q. Who do you work for?

25 A. I work for Dyson Incorporated.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. Is that the U.S. company?

2 A. Correct.

3 Q. Where are you based out of?

4 A. We're based in Chicago, Illinois.

5 Q. What's your position with Dyson?

6 A. Sales director.

7 Q. And what are your responsibilities as sales director for  
8 Dyson?

9 A. I lead manage a team of national account managers that call  
10 on the national accounts in the U.S.

11 Q. Can you give me a sense of how broad, geographically, that  
12 responsibility is?

13 A. Nationwide.

14 Q. Customers on both coasts?

15 A. Correct.

16 Q. Did you give a declaration in this case as part of our  
17 motion for preliminary injunction?

18 A. Yes, I did.

19 Q. If we can refer you please to Exhibit 8.

20 Mr. Forrest, is that the declaration you gave on May  
21 24th of this year?

22 A. Yes, it is.

23 MR. SHWARTS: Just formally, I will move Exhibit 8.

24 THE COURT: Mr. Ricker, any objection?

25 MR. RICKER: No.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE COURT: All right. Exhibit 8 is admitted.

2 MR. SHWARTS: Thank you, Your Honor.

3 BY MR. SHWARTS:

4 Q. We'll come back to that, some specific parts of that in a  
5 minute.

6 What is, from a sales perspective, Dyson's AM01?

7 A. AM01 is a bladeless table fan.

8 Q. And let's talk about the launch of the AM01. When did  
9 Dyson launch the AM01 anywhere in the world?

10 A. It was October of 2009, I believe, in Australia, was the  
11 initial global launch.

12 Q. When was it launched here in the United States?

13 A. Approximately March of 2010, depending on retailer  
14 planograms.

15 Q. We're going to do this a few times. You said the word  
16 planogram. What is a planogram in your parlance?

17 A. I apologize. A planogram is a retailer category set where  
18 products are placed on a shelf or end cap. They change once or  
19 twice a year depending on category, on season, depending on  
20 what it is and what type of products there are.

21 Q. When AM01 is sent out to retailers, does it come in any  
22 kind of packaging?

23 A. It comes in a color coordinate box.

24 MR. SHWARTS: May I approach what is put down beside  
25 the witness if I can grab it.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE COURT: You may.

2 BY MR. SHWARTS:

3 Q. Mr. Forrest, I put up next to you what is Exhibit 3 in  
4 evidence. Is that the box that the Dyson fan comes in when  
5 it's sent out to retailers?

6 A. The AM01, yes.

7 Q. Great. Now, when the AM01 was launched both worldwide in  
8 2009, in the United States in 2010, what was the media, design  
9 media reception to the AM01?

10 A. It was very well received, very exciting, big wow factor,  
11 won many awards. And it was great.

12 Q. If you can look with me at your declaration, Exhibit A, I  
13 just want to run through a few of them that you included in  
14 your declaration.

15 The first one, Dyson received a Good Design Grand  
16 Award for 2010, is that correct?

17 A. Correct.

18 Q. Moving forward, looks like you received awards down in  
19 Australia for International Design Awards, for the Air  
20 Multiplier?

21 A. Correct.

22 Q. Moving forward a few pages, there's a page up at the top,  
23 says Red Dot. Red Dot recognized the Dyson Air Multiplier AM01  
24 for its design and imagination?

25 A. Yes.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. Moving forward another page, 2010, the Baden-Wurttemberg  
2 International Design Award. Go forward a few pages in our  
3 attachment here. Dyson received an award for its Air  
4 Multiplier fan for those 2010 design awards?

5 A. Yes.

6 Q. You can put that aside. Thank you.

7 We just mentioned what the design media reception was.  
8 Let's talk about the next level. What was the reception when  
9 you were able to show the fan to your retail partners?

10 A. It was a definite wow factor. Looking at the product there  
11 was nothing like it in the marketplace within the fan category.  
12 So it was quite a bit of excitement.

13 Q. And how about the consumer reaction, meaning that -- let's  
14 focus on the United States, which is your territory. What was  
15 the reaction to the fan from the consumer once you started  
16 selling the fan in the United States in the Spring of 2010?

17 A. We could not obtain enough product to satisfy the  
18 current -- the demand at the beginning of the season.

19 Q. Now, what are the price points that -- first, is there just  
20 one size of AM01, or is there more than one size?

21 A. No, sir. There's two different sizes. There's a 12-inch,  
22 so it's a 12-inch nozzle and then a 10-inch variant with  
23 several different colors.

24 Q. And what are the price points for the 12-inch and the  
25 10-inch nozzle?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 A. Generally about 329 for the 12-inch.

2 Q. That's \$329 dollars US?

3 A. Correct. And \$299 for the 10-inch variant.

4 Q. What efforts as making the run up to the March 2010 launch  
5 here in the U.S., what efforts did your team and the marketing  
6 team make to help launch this product in the United States?

7 A. Significant efforts leading up to the March 2010 launch  
8 over a year in advance with planogram line reviews, which  
9 generally happen anywhere from six months to 18 months in  
10 advance of a planogram change. Also quite a bit of calling on,  
11 obviously, the headquarters of different national retailers  
12 across the coast as well as working with marketing and  
13 developing a marketing strategy joint business plan for the  
14 actual launch in 2010.

15 Q. Ask you a fairly obvious question. What is the prime  
16 selling season from your perspective for the AMO1 fan?

17 A. From my perspective, generally across the U.S., it's  
18 Memorial Day through about Labor Day. There are small areas of  
19 the country where fans are carried year round, but the majority  
20 of the U.S., that is the window that they are carried in  
21 planograms.

22 Q. Like Phoenix?

23 A. Yeah. Phoenix could be carried year round, I think.

24 Q. How were -- strike that.

25 At the time that Dyson launched the AMO1 here in the

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 United States in March of 2010, were there any competitive fans  
2 on the market at that time?

3 A. Not that I'm aware. There was nothing like it in the  
4 market.

5 Q. Now, does Dyson survey its customers after it launches a  
6 product?

7 A. Yes, we do.

8 Q. And did Dyson perform a customer survey with respect to the  
9 AMO1?

10 A. Yes, we did.

11 Q. And you attached the results of that survey as Exhibit B to  
12 your declaration, correct?

13 A. Yes, I did.

14 Q. In general, at least from Dyson's perspective, what was the  
15 takeaway from the survey you did of your customers who had  
16 purchased the AMO1 fan?

17 A. One of the primary drivers was the form, style, and  
18 function of the Dyson Air Multiplier. Another big factor was  
19 the Dyson innovation and technology advantage cited by most of  
20 our customers.

21 Q. Now, in addition, Exhibit 3 -- Exhibit C to your  
22 declaration, this was a brand survey that's done as well?

23 A. Yes, sir.

24 Q. What's the difference between a brand survey and the  
25 general customer survey that we saw earlier?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 A. The brand survey is going to cover more encompassing in  
2 terms of the brand, the brand health, the perceptions of the  
3 overall brand.

4 Q. Again, in looking at the brand survey that we included as  
5 Exhibit C, what was Dyson's takeaway with respect to why the  
6 customer is looking to purchase Dyson products and why  
7 customers do purchase Dyson products such as the AM01?

8 A. Again, it's about our technology advantage and form, style,  
9 and function.

10 Q. Did there come a time when you learned from Bed, Bath and  
11 Beyond there was a competitor fan available?

12 A. Yes.

13 Q. In general, when did you first learn about a prospective  
14 competitor fan?

15 A. It was last year.

16 Q. Was that the Cornucopia fan?

17 A. Unknown. It wasn't a named -- it wasn't -- didn't know the  
18 name of the vendor.

19 Q. Were you shown any fan at that time?

20 A. I'm sorry. Say it again.

21 Q. Were you shown any competitor fan at that time?

22 A. I was not shown a competitor fan.

23 Q. Did there come a point later on that you learned that it  
24 was Cornucopia and you actually saw a Cornucopia fan?

25 A. Yes, sir.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. When was that?

2 A. The end of March.

3 Q. This year?

4 A. This year.

5 Q. Were you then -- actually, did you get to see a Cornucopia  
6 fan at that time?

7 A. Yes, sir, I did.

8 Q. And the packaging it came in?

9 A. Yes.

10 MR. SHWARTS: May I approach again to grab --

11 THE COURT: You may.

12 BY MR. SHWARTS:

13 Q. Mr. Forrest, I put up on the counter there what's Exhibit  
14 7. Is this the packaging that the Cornucopia fan came in?

15 A. Yes.

16 Q. And looking at it, the box, there's several things on the  
17 outside of the box there. Can you read each of those bullet  
18 points there one at a time, please?

19 A. Yes. The first one is 12-inch bladeless fan.

20 Q. And that's the same as the Dyson fan, correct?

21 A. Correct.

22 Q. What's the next one?

23 A. Oscillates 90 degrees.

24 Q. Does the Dyson fan oscillate 90 degrees?

25 A. Yes.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. What was the next bullet point?

2 A. Easy to clean.

3 Q. Same hold true for the Dyson fan?

4 A. Yes.

5 Q. Next?

6 A. Quiet. No buffeting.

7 Q. Is that true for the Dyson fan?

8 A. Yes.

9 Q. Next one?

10 A. Easy to change angle.

11 Q. Is that true for the Dyson AMO1?

12 A. Yes.

13 Q. Next?

14 A. High impact plastic.

15 Q. Is that true for the Dyson fan?

16 A. Yes.

17 MR. RICKER: Are you asking if it's the same for the  
18 box or same for the fan?

19 MR. SHWARTS: Same for the fan.

20 BY MR. SHWARTS:

21 Q. Next?

22 A. Limited two-year warranty.

23 Q. What's the warranty offered by Dyson?

24 A. Two years.

25 Q. Does anywhere on the outside of the box, does it indicate

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 that the air flow or the motor on the Cornucopia fan is less  
2 powerful than the one for the Dyson fan?

3 A. Not that I'm aware of. I'm going to check the back, the  
4 small print.

5 No.

6 Q. Now, since you gave your declaration on May 24th, have you  
7 learned instances in which the Cornucopia fan is being sold  
8 side by side with the Dyson fan?

9 A. Yes.

10 Q. Is there any one instance in particular you are thinking  
11 of?

12 A. It would be the Lakewood Colorado store.

13 Q. I'm sorry, where?

14 A. I'm sorry, Lakewood, California store.

15 Q. Which store is that? What retailer?

16 A. Bed, Bath and Beyond store.

17 Q. What is your understanding how the Cornucopia and Dyson  
18 products were being displayed?

19 A. They were being displayed in their planogram, and they each  
20 had a sample. So ours had a sample above at eye level and the  
21 Cornucopia fan was also there and then underneath was all of  
22 the Cornucopia product.

23 Q. No Dyson product?

24 A. No. No Dyson product.

25 Q. Was a picture taken of the display at the Lakewood,

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 California store?

2 A. Yes, it was.

3 Q. I'd like you to refer to Exhibit 10, please.

4 Mr. Forrest, what is Exhibit 10?

5 A. That is the planogram at the Lakewood, California store.

6 Q. And what -- if you could describe what we see here starting  
7 from top to bottom.

8 A. From the top are the display models. And at the bottom is  
9 the actual product that you would take and put into your cart  
10 and head off to the register.

11 Q. So are there Dyson fans displayed at the top?

12 A. Yes, sir, they are.

13 Q. Were the prices of the two displayed above?

14 A. Yes. The price tags for all of the products are at the  
15 very, very top on the left-hand part of the screen.

16 Q. And so Dyson's priced out at what price?

17 A. 299 and 329, I believe, although it's hard to see from this  
18 angle.

19 Q. And the Cornucopia fan?

20 A. It's 79.99.

21 Q. And down below beneath those products, those are all  
22 Cornucopia fans?

23 A. Yes, sir, they are.

24 Q. All right.

25 MR. SHWARTS: Offer Exhibit 10.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE COURT: I'm sorry. What is the fan on -- the  
2 small one on the left side of the display?

3 THE WITNESS: That is a 10-inch Dyson Air Multiplier  
4 AMO1.

5 MR. SHWARTS: We offer Exhibit 10.

6 THE COURT: Go ahead.

7 BY MR. SHWARTS:

8 Q. Mr. Forrest, have you had any discussions in the last six  
9 weeks with some of your retail partners about carrying the fan  
10 for future seasons as it relates to competitor fans on the  
11 market?

12 A. Yes, sir. Line reviews for 2014 have started with some  
13 retailers. Others are throughout the summer, and the final  
14 ones are in the early fall.

15 Q. Have you seen any impact of the Cornucopia fan on the  
16 market with any of your retailers?

17 A. Yes.

18 Q. And can you give me any specific examples?

19 A. There's one particular retailer that we had a line review  
20 with. They haven't made final decisions but the verbal  
21 information that I have received is looking at the landscape of  
22 the current market as it is right now, we are not going to be  
23 carrying Dyson Air Multiplier AMO1s in 2013 due to price.

24 Q. Versus its competitor fans?

25 A. Due to price.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 MR. SHWARTS: I have nothing further for Mr. Forrest.

2 THE COURT: Mr. Ricker, you may cross-examine.

3 CROSS-EXAMINATION

4 BY MR. RICKER:

5 Q. Good morning, Mr. Forrest. What retailer are you talking  
6 about, sir?

7 A. Excuse me?

8 Q. You were just asked about a retailer that you had an  
9 interaction with and they were not going to stock the Dyson Air  
10 Multiplier for 2013 due to price?

11 A. Yes, sir. It's a retailer in DIY channel.

12 Q. Had you had other retailers not stock the Dyson Air  
13 Multiplier fan due to price prior to February of 2012?

14 A. Yes. There's several retailers in the mass channel that  
15 the price is a little too high for them at the present time.

16 THE COURT: What does the mass channel mean.

17 THE WITNESS: I apologize, Your Honor. Mass channel  
18 is Target, WalMart, megastores.

19 MR. RICKER:

20 Q. So the anecdote that you just told us about, that happened  
21 prior to Cornucopia's entry into the market, too, is that  
22 right?

23 A. I'm sorry. Say it again.

24 Q. Similar scenarios to the anecdote that you just told us  
25 also happened prior to Cornucopia's entry onto the market,

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 correct?

2 A. Well, I think the big difference is with this particular  
3 retailer I'm talking about, they have carried the Dyson Air  
4 Multiplier before.

5 Q. And how did it do?

6 A. It did fairly well.

7 Q. And did they stock the Cornucopia product?

8 A. To my knowledge they have not stocked the Cornucopia  
9 product yet.

10 Q. Am I correct that you knew that a competitive bladeless fan  
11 was preparing to enter the market in the summer or fall of  
12 2011?

13 A. I knew that there was a competitor fan that was going to be  
14 coming in 2012, but I knew this, yes, in the summertime of last  
15 year because that's where planograms discussions are held with  
16 major retailers for the following year. Work about 12 months  
17 out.

18 Q. Did you have discussions about that with others at Dyson?

19 A. Yes, I did.

20 Q. What were those discussions?

21 A. That apparently, there's some competitor fans that would be  
22 coming out that were apparently bladeless, although I hadn't  
23 seen what it was, and apparently were -- would not violate our  
24 design patents or technology patents from what I understood  
25 from the retailers.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. So that was something that folks at Dyson knew about in  
2 summer or fall of 2011?

3 A. Yes.

4 Q. At Paragraph 10 of your declaration, you state that Dyson  
5 has exceptionally strong brand loyalty and reputation?

6 A. Yes.

7 Q. Have you seen any dip in consumer surveys regarding Dyson's  
8 brand or reputation since Cornucopia entered the market?

9 A. I have not personally seen any dip, but I haven't seen any  
10 of the latest brand surveys that our marketing department has.

11 Q. Have you heard from anyone at Dyson that the brand image of  
12 Dyson has decreased vis-a-vis their surveys since Cornucopia's  
13 entry on the market?

14 A. No.

15 Q. Have you heard of any consumer complaints regarding  
16 bladeless fans generally based on an experience with Cornucopia  
17 fans?

18 A. I have not personally.

19 Q. Do you know if anyone else at Dyson has heard of that?

20 A. Not to my knowledge.

21 Q. And when you put together your declaration and the  
22 supporting documents, did you do the best job you could to come  
23 up with all instances of potential damage to Dyson's brand name  
24 that you could find?

25 A. I believe I did the best job I could.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. Now, you said, I think, in your direct examination that  
2 there is nothing like the -- or at the time that the Dyson fan  
3 was introduced there was nothing like it on the market. Is  
4 that right?

5 A. That's correct.

6 Q. So you wouldn't compare, for example, a Dyson bladeless  
7 fan to a standard bladed fan, right?

8 A. In my opinion, it plays in the same category, but I think  
9 the technology and the design advantages, the features benefits  
10 the Dyson AM01 has are the reason many people, when we first  
11 launched the product, stepped up from 20, 30 \$40 fans to 299,  
12 329. Does that answer your question?

13 Q. Maybe it did. I didn't really understand it. But that  
14 might be on me. So let me ask a follow-up question.

15 What exactly did you mean there was nothing like it on  
16 the market if there was other things like it in the market that  
17 people were looking at?

18 A. There is other products that move air with blades, other  
19 fans. There was nothing like the technology that we were  
20 bringing out in the Dyson Air Multiplier. It -- nothing else  
21 in the market didn't have a blade and didn't move air in the  
22 way that we moved it. So it was unique. People would come in  
23 and stick their hands through the hoop and do all kinds of  
24 interesting things when we first launched the product. It was  
25 new, unique, revolutionary. There wasn't anything in the air

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 movement category, the fan category at that time.

2 Q. And people would pay thousands of percent more for that  
3 technology than they would for the standard bladed fans, right?

4 A. We had many people purchase the Dyson Air Multiplier and  
5 move up from whatever they theoretically were going to purchase  
6 that year, yes. We had a great year.

7 Q. Do you do surveys regarding the pricing of standard bladed  
8 fans?

9 A. Yes, we do.

10 Q. Has it changed since the entry on the market of the Dyson  
11 fan, the pricing of standard bladed fans?

12 A. I did not. I would have to research that. I don't know.

13 Q. Now, you said that summer is the key fan buying season.  
14 Would -- if you knew that a competing fan was on the market in  
15 February, would you wait until May 25th to ask to take that  
16 competing fan off the market?

17 A. Well, at the time we didn't know what product was coming  
18 out. So I don't know how we could do anything until we  
19 actually see where the product is and where it comes out at.  
20 Retailers are not going to generally break confidentiality and  
21 tell you who is coming out with what, give you a product or a  
22 sample of their product. So we had to wait until it actually  
23 came out and was in the marketplace to review it to see,  
24 you know, if it did violate our designs and patents, which we  
25 think it did, obviously, and then we moved forward.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Q. When did you learn that Cornucopia sued Dyson?

2 A. Me personally? I learned about it fairly recently.

3 Q. Do you know whether others at Dyson knew about it?

4 A. I would imagine our legal team does, but I'm in sales. So  
5 there's very little reason for me to know about some of the  
6 legal lawsuits and activities that go on.

7 Q. I'm just asking what you knew. I'm just asking what you  
8 knew.

9 Have you had any demand by Bed, Bath and Beyond to  
10 reduce the price of your Dyson Air Multiplier fan in light of  
11 the price of the Cornucopia fan?

12 A. They have asked us very recently, within the last 12  
13 months, to reduce our price.

14 Q. Within the last 12 months?

15 A. Correct.

16 Q. And as far as you know, the Dyson -- or the Cornucopia fan  
17 only entered Bed, Bath and Beyond in March of 2012?

18 A. That's when I was aware of it, yes.

19 MR. RICKER: Thanks. That's all I have.

20 THE COURT: Any redirect?

21 MR. SHWARTS: No, Your Honor.

22 THE COURT: All right. Mr. Forrest, I instruct you  
23 not to discuss your testimony with anyone other than the  
24 lawyers in the case until the hearing is over.

25 You may step down.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE WITNESS: Thank you, Your Honor.

2 THE COURT: I'm really hoping to finish by noon. I  
3 have a court meeting at noon I need to attend. So you can call  
4 your last witness.

5 MR. SHWARTS: John Jarosz, Your Honor.

6 THE COURT: About how long do you think you will take  
7 with him?

8 MR. SHWARTS: My examination should take less than 10  
9 minutes.

10 THE COURT: All right. Go right ahead.

11 THE COURTROOM DEPUTY: State your name for the record  
12 and spell your last name.

13 THE WITNESS: John C. Jarosz, J-a-r-o-s-z.

14 (The witness was sworn.)

15 THE COURT: You May proceed.

16 JOHN C. JAROSZ,  
17 a witness herein, having been first duly sworn by the clerk to  
18 speak the truth and nothing but the truth, was examined and  
19 testified as follows:

20 DIRECT EXAMINATION

21 BY MR. SHWARTS:

22 Q. Good morning, Mr. Jarosz. Would you state your full name,  
23 please?

24 A. Good morning. My name is John C. Jarosz.

25 Q. And who is your employer?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 A. Analysis Group Incorporated.

2 Q. And what is your position with Analysis Group Incorporated?

3 A. I'm a managing principal of the firm, which means I'm one  
4 of the owners of the firm. I'm also the founder and director  
5 of the Washington, DC office.

6 Q. Were you retained by Dyson to give expert testimony in the  
7 this case?

8 A. Our firm was retained to do an analysis in this case, and I  
9 was asked if I would be willing to provide the results of that  
10 analysis in court if need be.

11 Q. Did you prepare a declaration and submit it -- give it to  
12 us to submit to the Court in conjunction with this motion?

13 A. Yes, I did.

14 MR. SHWARTS: Your Honor, if we could please mark  
15 Exhibit 9.

16 Show that to the witness, please.

17 THE WITNESS: I have it in front of me.

18 BY MR. SHWARTS:

19 Q. Mr. Jarosz, is that the declaration that you submitted to  
20 our firm to file on behalf of Dyson?

21 A. Yes, it is.

22 Q. Is your curriculum vitae attached as Tab 1?

23 A. Yes, it is.

24 Q. If you could just briefly summarize, what is your field of  
25 expertise?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 A. I'm an economist. Most of the work that I do is in the  
2 area of evaluating and valuating intellectual property rights.  
3 Much of the work that I do is in estimating damages or monetary  
4 compensation for infringement or misappropriation of IP rights.

5 MR. SHWARTS: Your Honor, I offer Mr. Jarosz as an  
6 expert and move admission of Exhibit 9.

7 THE COURT: Any objection, Mr. Ricker?

8 MR. RICKER: No objections.

9 THE COURT: Exhibit 9 is admitted.

10 BY MR. SHWARTS:

11 Q. Mr. Jarosz, what was your assignment?

12 A. I and we were asked to evaluate the economics of the  
13 irreparable harm issues here. There is a request by Dyson for  
14 a preliminary injunction, and we were asked to evaluate the  
15 economic issues associated with that request.

16 Q. What information was provided to you by Dyson in order to  
17 assist you in coming to your conclusions?

18 A. They provided me the results of some consumer surveys that  
19 they had done over the years. They provided me some marketing  
20 and market plans. They provided me information about the  
21 product and the business.

22 Q. Did you do your own research and gather your own  
23 information to assist you in reaching your conclusions in this  
24 matter?

25 A. Yes. As we do in any other matter like this, we did our

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 own independent research to understand the companies, to  
2 understand the product, and to understand the business.

3 Q. Did you reach certain conclusions with respect -- oh,  
4 before I get to that, in terms of the documents and materials  
5 you reviewed, those were all summarized in Exhibit 9, correct?

6 A. Yes. And in particular, they are listed in Tab 2 of that  
7 exhibit.

8 Q. Thank you. Did you reach certain conclusions with respect  
9 to the irreparable harm analysis you were asked to perform?

10 A. Yes.

11 Q. And what conclusions were they?

12 A. Basically, two general conclusions: If an injunction is  
13 not issued here it will be extremely difficult to make Dyson  
14 whole for infringement this would occur here. And secondly,  
15 the probability of it recovering for damage done is quite low.

16 Q. Let's take them one at a time.

17 With respect to your first conclusion, if you can give  
18 a little more detail how it is that failure to issue an  
19 injunction here would cause Dyson not to be able to be made  
20 whole in this case?

21 A. Yes. The first part of the analysis had us investigate how  
22 hard or easy it would be to quantify any harm here. And we  
23 found that the facts of this particular case suggest it would  
24 be extraordinarily difficult. It would be difficult for a few  
25 reasons.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 First, in this business, in particular, it's very  
2 difficult to forecast how this -- the performance of Dyson  
3 would have played out had there been no infringement. It's a  
4 new business. And Cornucopia is coming into this business very  
5 aggressively and will have an impact on the volumes and prices.  
6 And it's hard to figure out, even if Cornucopia were to leave  
7 the market in, say, a year, what the market will become and  
8 what it would have been.

9 So the first part is, it's extremely difficult to  
10 forecast what the performance of Dyson would be had there been  
11 no infringement or accused infringement of its rights.

12 Secondly, there will be impact on the reputation of  
13 Dyson in the business. That will impact its abilities to  
14 succeed in the bladeless fan business and will impact its  
15 ability to succeed in its other businesses.

16 And finally, the entry of Cornucopia in the business  
17 will increase Dyson's costs. In other words, it will spend  
18 more time protecting its bladeless fan franchise against this  
19 competition. What that means is that resources will be  
20 diverted away from other businesses and so it's hard to figure  
21 out exactly how those other businesses would have proceeded had  
22 those resources marketing particular resources not needed to be  
23 diverted to respond to the competition.

24 Q. What impact, if any, would there be on reputational harm or  
25 brand harm if the injunction is not issued?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 A. Likely quite substantial. The reputation and branding of  
2 Dyson are extremely important to a company. They invest  
3 tremendously in developing innovative products and then  
4 protecting what it's done and teaching the marketplace about  
5 the merits of their very innovative products. So it is known  
6 in the business as a company that takes common problems and  
7 solves them in very innovative ways, very pleasing ways. And  
8 the result is that it has succeeded in a variety of businesses.

9 When a competitor like Cornucopia comes in at a third  
10 or lower the price, that puts doubts in the minds of  
11 distributors, retailers and consumers about the value  
12 proposition or the branding that Dyson has done. They begin to  
13 question whether all of the investments that Dyson has made  
14 should be warranting the kind prices that it charges.

15 Q. Again, if we were to wait a year, year and a half, whatever  
16 it would take to bring this matter to trial, Dyson prevail and  
17 Dyson get a permanent injunction, couldn't at that time we  
18 quantify the damages?

19 A. It's very difficult in this particular instance, because  
20 what we're talking about is a brand new business. This is the  
21 third season that Dyson has provided bladeless fans. And it's  
22 hard to say precisely how that business will unfold. The  
23 preliminary returns in the sum of countries are quite positive;  
24 in other countries, less positive. So it's hard to figure out  
25 how that would unfold.



July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 reputation and brand in the marketplace. I'm not sure  
2 Cornucopia does. So I'm not quite sure if there's going to be  
3 an impact there, for instance. I'm not sure that Cornucopia  
4 ever intends to price its product at roughly \$300. So I'm not  
5 sure if there would be the same. There's certainly  
6 uncertainties about how this business will unfold whether  
7 Cornucopia is in the business or not. But I'm not sure the  
8 damages analysis would be identical.

9 Q. I wasn't so much asking whether the damage analysis would  
10 be identical but rather whether the difficulties in assessing  
11 what the damages may be would be similar. And I think your  
12 answer to that was yes, right?

13 A. There would be some similarities, and there would be some  
14 differences.

15 MR. RICKER: That's all I have. Thanks.

16 THE COURT: Any redirect?

17 MR. SHWARTS: No, Your Honor.

18 THE COURT: All right. You may step down. I instruct  
19 you -- well, I don't have to give that instruction. No, I will  
20 give that instruction. We might have some more evidence.

21 I instruct you not to discuss your testimony with  
22 anyone other than the lawyers in the case until the hearing is  
23 over. You may step down. Thank you.

24 THE COURT: Anything else?

25 MR. SHWARTS: Just to clean up, Your Honor, the

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 patents, which were Exhibits 4 and 5, I don't think we moved  
2 them formally, make sure those are admitted. And when I moved  
3 Exhibit 10, Your Honor didn't respond to me.

4 THE COURT: That's probably because I didn't hear you.  
5 Any objection, Mr. Ricker?

6 MR. RICKER: No objection to those exhibits.

7 THE COURT: Exhibits 4, 5, and 10 are admitted.  
8 Any other evidence for the defendant?

9 MR. SHWARTS: And the Gammack declaration, which is  
10 Exhibit 1, I want to make sure that's admitted as well.

11 THE COURT: Any objection?

12 MR. RICKER: No, Your Honor.

13 THE COURT: Exhibit 1 is admitted.

14 MR. SHWARTS: Thank you. No other evidence, Your  
15 Honor.

16 THE COURT: All right. Mr. Ricker, do you have any  
17 evidence to present?

18 MR. RICKER: You have until 12, Your Honor? Is that  
19 what you said?

20 THE COURT: I can't hear you.

21 MR. RICKER: You have until 12? Is that what you  
22 said?

23 THE COURT: I have a court meeting at 12 that I have  
24 to break for. I have some time this afternoon. But I have to  
25 be finished with all of this, including the other argument, by

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 2:30, so -- which I think we have plenty of time for all that.

2 So Mr. Ricker, do you have any evidence?

3 MR. RICKER: Well, Your Honor, what I'm -- what I need  
4 to do is go through the outline that I have for Mr. Lahser's  
5 testimony. I think I have pretty much covered everything with  
6 Mr. Gammack. But either I would just go through it with Mr.  
7 Lahser or I would take five minutes and do that.

8 THE COURT: Tell you what. We'll take a -- I will  
9 give you a seven-minute recess. But I do want to finish any  
10 evidence. If you have any evidence, we'll hear it this  
11 morning.

12 MR. SHWARTS: Your Honor, just -- we might be able to  
13 circumvent. We would object to Mr. Lahser taking the stand.  
14 He's counsel of record. I think him taking the stand in this  
15 case would violate the Arizona Rules of Professional Conduct.

16 THE COURT: Well, I am wondering, too, what is it that  
17 Mr. Lahser would testify to?

18 MR. RICKER: Mr. Lahser would testify to the  
19 functionality of the two fans.

20 THE COURT: Tell you what. Here's what I'm going to  
21 do, give him the seven-minute recess. He can make up his mind.  
22 We'll resume this discussion at 11:25.

23 (Recess from 11:18 a.m. until 11:30 a.m.)

24 THE COURT: Mr. Ricker, do you wish to present any  
25 evidence?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 MR. RICKER: I think we presented everything we need  
2 to with the witnesses.

3 THE COURT: All right. Let's hear argument on this,  
4 and then we have a judge's meeting today at noon with our  
5 lawyer representatives that we meet with them about quarterly.  
6 I'm not sure how long that would go. I think it's safe for us  
7 to recess at noon and resume at 1:15. And as I said, I have  
8 got to be done by 2:30 for another matter. I think that would  
9 be plenty of time.

10 So I will hear -- Mr. Shwartz, are you going to argue  
11 this?

12 MR. SHWARTS: I am.

13 THE COURT: Come on up to the podium. The microphone  
14 is better there.

15 And again, the motion is, I think, is quite clear that  
16 it's based on the design patents only. It disclaims any claim  
17 under the utility patents for purposes of this motion. And  
18 also, I do want to make clear that this motion is not based on  
19 a trade dress claim either. This is just a design patent.

20 With that, Mr. Shwartz, I will hear your argument.

21 MR. SHWARTS: Thank you, Your Honor. Thank you for  
22 your attention today.

23 We are moving solely on the two design patents today.  
24 And in terms of the evidence that was presented by Dyson, both  
25 in its moving papers, the declarations that were submitted to

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 the Court, and the evidence that was presented today, we have  
2 clearly met the standard set forth to obtain a preliminary  
3 injunction, meaning we have demonstrated a likelihood of  
4 success on the merits. We have demonstrated that Dyson will  
5 suffer irreparable harm if an injunction is not issued. And  
6 the balance of the hardships clearly weighs in Dyson's favor.

7 The two patents at issue, Your Honor, the '143 patent,  
8 which covers the look of the entire fan, base through nozzle,  
9 and the '748 patent, which is solely the nozzle.

10 THE COURT: What's the difference?

11 MR. SHWARTS: Well, the difference -- may I --

12 THE COURT: I mean, well --

13 MR. SHWARTS: Well, the difference, Your Honor, just  
14 to give an example. If, for example, Your Honor was to say --  
15 we don't believe this to be the case -- but if Your Honor was  
16 to say that the fact that they put a foot on their fan somehow  
17 was relevant to changing the look of the entire patent as it  
18 relates to '143, that base is irrelevant to our design patent  
19 on '748.

20 THE COURT: What you have presented here in exhibits  
21 is the photograph. But, in fact, under the law, we're going  
22 under the design patent itself, which is not the embodiment  
23 that you photographed here but what you filed with the patent  
24 office, right?

25 MR. SHWARTS: Oh, that is correct, Your Honor, but

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 this is for illustrative purposes.

2 THE COURT: Right.

3 MR. SHWARTS: And also, Your Honor, for the ordinary  
4 observer test. Because in looking at this to the ordinary  
5 observer, one cannot tell the difference between the two in  
6 simply looking at the two design elements that an ordinary  
7 observer, looking at the nozzle, which is embodied in '748 or  
8 the ordinary observer looking at the entire device as embodied  
9 by '143, there is no distinction between the two. They are  
10 substantially the same.

11 THE COURT: Let me put to you what seems to me to be  
12 the critical question here. This is more easily put concerning  
13 the D '748 patent, which is just the nozzle. But it also  
14 applies to the D '143 design patent.

15 But let's focus just on the D '748 patent for  
16 discussion now. What is it about that that is not functional?  
17 It looks like it is entirely functional, which puts in play the  
18 whole question of the validity of your design patent in the  
19 first place.

20 MR. SHWARTS: Your Honor, when you speak about a  
21 design patent, it has any kind of utility -- by very nature --

22 THE COURT: But I'm looking at the appearance, and I'm  
23 looking at your patent. And the entire look of this goes back  
24 to the '449 utility patent. So it seems to me -- but I want to  
25 hear what you have to say, but you are going yourself on one

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 horn or the other of your own dilemma that if you have a valid  
2 design patent under '449, the appearance that it gives flows  
3 from the functionality that you claim and that's not before me  
4 on this motion. It will be some other day.

5 MR. SHWARTS: It is not. And most respectfully, I  
6 disagree because the law states that the function must dictate  
7 the design. And that is not the case here. And that has  
8 nothing to do with whether or not the particular elements of  
9 our nozzle are subject themselves to utility patent protection.  
10 This could be a square. We have another --

11 THE COURT: Well, a square would not have the same  
12 functional virtues as a circle. I mean, you don't have to be a  
13 physicist to know that air being injected from a fan is not  
14 going to flow or be distributed as efficiently out of a square  
15 as out of a circle.

16 MR. SHWARTS: Your Honor, again, I respectfully  
17 disagree because you see large fans in box shapes, industrial  
18 fans. Yes, the blades spin in a circle but the fans are  
19 square. Mr. Gammack testified that he could have easily, and  
20 the evidence before you is, did, design fans and we sell fans  
21 that are upright in a large, I would say --

22 THE COURT: By the way, we use fans all year round  
23 here. I use them all year round because the government does  
24 not pay for air conditioning in this courthouse after 6:30 on  
25 weekdays or any time on weekends. So I have to have a fan and

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 very light clothes to do all the work that I have to do. So we  
2 have fans all the time. And the fact that you put a frame  
3 outside the fan for industrial purposes that's square with a  
4 round circle really has nothing to do with a functional fan  
5 like this, which is distributing the air through the structure  
6 that you are claiming that you have a design patent on the look  
7 of it.

8 So go ahead.

9 MR. SHWARTS: Your Honor, we, as the evidence before  
10 you says, we actually have a fan that is a long -- and the  
11 shape is in Mr. Gammack's declaration. It's not a circle and  
12 we market it in the same flow of air out that way. You could  
13 make it zig-zag or circle. The element is, is that the air is  
14 being thrust forth over a surface and out. For their purpose,  
15 they chose this for design purpose as the most -- the one that  
16 was visually the best way to do it. But as the inventor of the  
17 patent said, he could easily have done the same thing, put a  
18 motor in and expelled the air outward without a blade from a  
19 different shape.

20 And you can see even with reference to the prior  
21 Japanese patent that was done, just by looking at the JP patent  
22 which was done in a hula hoop shape, and that's the one that  
23 Cornucopia says they modeled themselves after, that was an  
24 entirely different shape.

25 THE COURT: I mean, it's hard to separate this out,

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 but we have to. I mean, you may have a valid patent in the  
2 '449 utility patent. But that shape does -- well, maybe I  
3 would call the airfoil shape where you call it the angle  
4 diffuser, that shape is part of what delivers the air flow in  
5 the way and with the efficiency that you claim which, you know,  
6 it seems like you are trapping yourself, because Mr. Gammack  
7 testified that he tested these two fans and the Cornucopia fan  
8 didn't deliver as desirable an air flow. Well, and that seemed  
9 obvious but it's got a lower power motor.

10 But if you try to deliver this through a square you  
11 are going to deliver a lesser effect of air flow, too.

12 MR. SHWARTS: Your Honor, that evidence is not before  
13 you. The evidence from Mr. Gammack, from the inventor, is that  
14 he could have performed the same function in a different shape.

15 THE COURT: Actually, I'm -- I don't recall him saying  
16 he could deliver this through a square fan with the same  
17 effectiveness and if he did say that, it is unworthy of belief.

18 MR. SHWARTS: His testimony is he could have done this  
19 in a different shape, different widths, a different look.  
20 There could have been a different thickness on a nozzle.

21 THE COURT: I don't recall him saying he could have  
22 done it as effectively with anything other than a circular,  
23 what do you call it, diffuser. But if he did say that, I don't  
24 remember. I don't think he said that.

25 MR. SHWARTS: Mr. Martinelli asked him that

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 specifically. If I could beg Your Honor, my distinguished  
2 patent colleague, if you would allow him a moment just on this  
3 point.

4 THE COURT: Well, you know, we generally don't allow  
5 counsel to divide argument. I will hear from Mr. Martinelli.

6 MR. SHWARTS: Just briefly.

7 MR. MARTINELLI: So the issue is these fans, these  
8 nozzles are exact. And their design protection in the shape of  
9 this outer curve, so this bevel that you have here is worthy of  
10 design protection in its own right. The dimensions, the  
11 proportions, the overall proportions of the width to the height  
12 of the fan is worthy of design protection in its own right.

13 So the fact that they copied the outer part of our  
14 nozzle and cloned it shows that however thin a design  
15 protection we have, if you find that the interior is  
16 functional, and you have to parse that out. You have to parse  
17 out the functional part from the design elements. However thin  
18 a design you may think there may be in the shape of this fan,  
19 it's an infringement because they copied it. There's no --

20 THE COURT: Actually, that's not really, as a general  
21 matter, that's not correct, Mr. Martinelli. It's not an  
22 infringement because they copied it. It's an infringement if  
23 you have a valid patent on it and they infringed the patent  
24 features. So copying is distasteful but it's not illegal. It  
25 brings us back to the question of --

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 MR. MARTINELLI: So there is design protection  
2 available in this profile. And if you look at the permanent  
3 injunction that Apple just got on the iPad against Galaxy Tab,  
4 what were they protecting? They were protecting a rectangular  
5 screen with rounded corners. So there doesn't -- you could say  
6 a rectangular screen is functional. Nobody wants to hold a  
7 triangular screen. It's the most efficient way to set out a  
8 set of LCD pixels. You you don't want to have to create a  
9 circular LCD, yet their rectangular screen with their rounded  
10 profile on their corners was enough to exclude Samsung from  
11 importing Galaxy Tabs into the U.S.

12 There are a number of design elements, and I think Mr.  
13 Shwartz was correct to say, that there was plenty of testimony  
14 and evidence that there are other ways to make this fan look.  
15 And if you look at the *LA Gear v. Thom McAn* case, if they say  
16 there's other options to perform that function, and going to an  
17 issue of how do you have to define the function, does it have  
18 to be the best? Well, you could change this in a lot of  
19 different ways and not affect the function at all.

20 So is this curve dictated by function? Do you have  
21 any evidence before you that says that the shape of this --

22 THE COURT: I have got your '449 patent.

23 MR. MARTINELLI: The '449 patent is directed to the  
24 inner surface of the frame. So if you look at the claim to the  
25 '449, it describes --

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE COURT: But to have an inner surface you have to  
2 have more than a tubular shape as in the Japanese patent. You  
3 have got to have that width.

4 MR. MARTINELLI: This depth from here to here.

5 THE COURT: Right. And you have to have the opening  
6 and we have this other issue about your spacers patent and the  
7 others. But --

8 MR. MARTINELLI: So the '449 doesn't dictate how long  
9 this profile, this ramp has to be. It just says there has to  
10 be a ramp there. So it doesn't dictate the overall width of  
11 the thing.

12 THE COURT: But, you know, your patent, your D '748  
13 patent, does not -- all you have is the image. You don't have  
14 any textual description. You just have the image where you  
15 have a brief description with some figures and numbers. But  
16 your claim here is hard for me to see how this claim is  
17 anything other than a claim for this shape and not some  
18 particular dimensions of it or, granted, this was an absolute  
19 knockoff copy down to the millimeter. That's the evidence  
20 before me. But your claim is not based on the look.

21 MR. MARTINELLI: The claim is to the pictures.

22 THE COURT: The picture -- and I want to hear what you  
23 all have to say. But the picture is not calibrated to  
24 particular dimensions or size. It is the look that one would  
25 have for the kind of what nozzle you call it that is described

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 in the '449 patent.

2 So I take your design patent as claiming anything that  
3 looks like that. And it's not grounded on particular  
4 dimensions, even though as --

5 MR. MARTINELLI: Well, there are proportions though.  
6 When you look at the prospective view, you see relevant  
7 proportions between the diameter of the fan and the width of  
8 the nozzle. And again, this back curve could be any old shape  
9 and it's not going to affect the claimed elements of the '449  
10 which are the aerodynamic ramp.

11 THE COURT: The back curve is where the air is turned  
12 around and flows out, correct?

13 MR. MARTINELLI: The air is -- there's a channel in  
14 here, and I think you heard testimony from Mr. Gammack that the  
15 precise shape of this back ramp, and you saw bunch --

16 THE COURT: I'm sorry. Remind me which side does the  
17 air actually exit from?

18 MR. MARTINELLI: May I approach?

19 THE COURT: Just tell me.

20 MR. MARTINELLI: There's a slot right here.

21 THE COURT: That's the one you are telling me is the  
22 back curve that your design patent covers the curve of it?

23 MR. MARTINELLI: The back curve is this silver piece.

24 THE COURT: I thought the air exited from the back.

25 MR. MARTINELLI: The air exits from the dark channel

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 between the dark gray piece and the silver piece. But the  
2 precise shape of this curve, whether it's square or whether  
3 it's rounded like we have, is not dictated by function. I  
4 believe Mr. Gammack testified to that if you go back and review  
5 his testimony.

6 THE COURT: Go ahead.

7 MR. MARTINELLI: So those are protectable elements.  
8 There doesn't need to be a wide -- the proportions are in the  
9 figures. The proportions are relevant. That's actually one of  
10 the reasons why we do have the actual photographs of the  
11 product. There is case law saying that if you have an  
12 embodiment of your design patent it's appropriate to compare  
13 embodiments to embodiments because it helps the visualization.

14 So there is no evidence on the record to say that any  
15 of this is functional. It could have been square and Mr.  
16 Gammack testified it could have been square. They took at  
17 least --

18 THE COURT: Actually, you can take anything that's  
19 functional and add something else to change the shape of it  
20 beyond its function to make it look different. And -- but  
21 doing that --

22 MR. MARTINELLI: And you can take things away, too.  
23 You could flatten this curve. You could flatten this bevel  
24 that we have on our edge. It would still push air through the  
25 aerodynamic structures in gray in exactly the same fashion as

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 it currently does. And again, I'm certain Mr. Gammack  
2 testified to that.

3 THE COURT: Go ahead.

4 MR. MARTINELLI: So I think when you look at the case  
5 law you have to have something dictated by function.

6 The other point I'd like to make is function is  
7 typically --

8 THE COURT: I think I want to come back to this.

9 Your patent defines your claim and your right. And  
10 that's what I am looking at is -- of course, it is helpful to  
11 visualize your product. But your patent is what you give  
12 notice to the world about.

13 MR. MARTINELLI: Right. And the patent has  
14 perspective views that show all the proportions that we have  
15 and shows the back that we have. Typically the way function is  
16 used is in situations like the *Richardson* case that Your Honor  
17 decided, where the only similarities between two products are  
18 the functional elements. If you look at the functional cases  
19 that's typically the situation. So you have something like --  
20 just flip to it.

21 Would you turn the ELMO on.

22 So if you look at the case law, this is your case.  
23 It's the typical situation where functionality comes into play  
24 in an analysis and the issue is when you look at the  
25 similarities, well, how is the *Richardson* design similar to the

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Stanley design, well, the only similarities are the functional  
2 aspects. You have got a pry bar at the bottom. You have got a  
3 hammer at the top. And you have got a clamp for attaching to  
4 wood.

5 There are other ornamental aspects to the Richardson  
6 design and the Stanley design. It doesn't render the patent  
7 invalid that these are functional. And without testimony to  
8 say that that back curve --

9 THE COURT: Frankly, I don't -- you know, those two  
10 tools, that was Stanley's fubar and Richardson's step claw.

11 MR. MARTINELLI: Correct.

12 THE COURT: And there were purely, purely ornamental  
13 etchings on them. I don't remember if they were part of the  
14 design patent or not. But I do remember what Richardson wanted  
15 was --

16 MR. MARTINELLI: He wanted to protect just the  
17 functional elements. He said look at Stanley's product. It's  
18 got a hammer at the top, and a claw at the back and a foot at  
19 the bottom. But when you look at the two products together  
20 they don't look alike. You don't have that here.

21 THE COURT: Actually, when you looked at them together  
22 they looked identical because they were the same tool. But  
23 when you --

24 MR. MARTINELLI: They weren't what was depicted in  
25 these pictures?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE COURT: No. They -- they -- well, yeah.

2 MR. MARTINELLI: So there's a curved handle on the  
3 Stanley product. There's a square handle on the Richardson  
4 patent. And that's what you have to give life and meaning to  
5 when you determine the scope of what's functional and what's  
6 not. It's what other ways could you have done this, you know.  
7 You could say, oh, well, you know, there has to be some sort of  
8 handle in there. It doesn't have to be just square. It could  
9 be other shapes.

10 Well, this doesn't have to just be square. It could  
11 be other shapes. They didn't take the other shapes. They took  
12 our shape and they took our design. And I think if you look at  
13 the case law and you look at how precisely -- design patents  
14 might not be broad. It might be easy to design around, but  
15 they do have protection to these sorts of elements. And the  
16 *Apple* case and the *Thom McAn* case, I think, illustrate that.

17 And I think that covers that issue, unless you have  
18 any other further questions.

19 THE COURT: Go ahead.

20 MR. SHWARTS: Thank you, Your Honor. Just to  
21 summarize, the design needs to be dictated by the function.  
22 And in this case, it was not per the testimony before you.

23 I will be brief because I know we're short on time.  
24 On the irreparable harm issue, the evidence before Your Honor  
25 is that we meet the test for irreparable harm, there is -- we

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 have indicated Cornucopia does not of have an ability to meet  
2 damages judgment in this case. In addition to that, we have  
3 put in evidence indicating that given the impact of potential  
4 price erosion, reputation, and harm to Dyson's brand, that  
5 could not be recovered if we had to wait a year plus in order  
6 to seek a judgment in this case. And as our expert and  
7 unrebutted testimony is, there's no way to quantify that  
8 amount.

9 And further, given the amount of investment that Dyson  
10 has made in this product, and that evidence is in the record  
11 before you as submitted on our motion, the million -- in fact,  
12 over 12 to \$15 million of R&D that was put in to bring this fan  
13 to market, that which gives us the --

14 THE COURT: That doesn't have anything to do with  
15 design patent.

16 MR. SHWARTS: I'm talking about hardships to Dyson.  
17 The balance of the hardships is harm that will befall us if a  
18 knockoff competitor that, in our view, violates our patents is  
19 allowed to go into the market, assuming we meet the initial  
20 test, if we have an infringer with a knockoff fan selling it  
21 for a third of the price, the balance of the hardship weighs  
22 greatly in favor of Dyson in order to allow us to proceed.

23 If Your Honor is disposed to grant the injunction, we  
24 ask that if you do do so, you direct Cornucopia to identify  
25 those retailers where it has placed its product so we can give

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 them notice of this Court's ruling.

2 THE COURT: What about a bond?

3 MR. SHWARTS: We understand that Your Honor would want  
4 to give a bond but given the size of Cornucopia I don't think  
5 its needs to be a substantial bond.

6 THE COURT: Well, the bond is supposed to be in an  
7 amount that will compensate Cornucopia for all the economic  
8 consequences of having complied with the injunction between the  
9 time it's granted and the time it's lifted. So it's the flip  
10 side of your damage claim. Not totally, but in terms of their  
11 lost profits. Won't be the same profits, but they will have  
12 the same issues of lost profits unmarketable inventory.

13 MR. SHWARTS: I understand that, Your Honor.  
14 Cornucopia came forth with no evidence about its business.  
15 Cornucopia is not a manufacturer. It's solely an importer of  
16 product. It is one man, John Schwartz, that is Cornucopia who  
17 runs this out of his house in Scottsdale. So I don't know what  
18 damages or what his profit margin is from his purchasing this  
19 product from China. So I would be speculating as to what that  
20 number would be. Dyson, though, does understand that it is  
21 required to post a bond.

22 THE COURT: All right. We can go -- Mr. Ricker, let's  
23 take about 10 minutes and then I'm going to take a recess. You  
24 don't have to finish in 10 minutes. We'll resume when we come  
25 back.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 MR. RICKER: Thank you, Your Honor.

2 The law is that the patentee, Dyson, must show that  
3 the alleged infringer's defense lacks substantial merit. They  
4 haven't done it. As Your Honor pointed out, the only thing we  
5 heard from them is that this might be protectable and  
6 non-functional.

7 The law is twofold when it comes to functionality and  
8 design patents. For a design patent to be valid, it has to be  
9 dictated by the function. That's one. But even if the design  
10 patent is valid, like Your Honor did in the *Richardson* case,  
11 you then have to move to excluding all of the elements that are  
12 functional from the infringement analysis.

13 We think, based on Mr. Gammack's testimony today, that  
14 the design of Dyson's fan as embodied, the designs from the  
15 D '143 and D '748 patents are exclusively functional and  
16 dictated by function. We heard that if you change the base it  
17 will tip over more. If you make it taller it will tip over  
18 more. We heard if you change the fan shape it will change how  
19 the air comes out.

20 Now, whether air comes out and how the air comes out  
21 is a different thing. What we heard from Mr. Gammack is that  
22 if he put together prototypes for all those different designs  
23 he came up with, he didn't know whether they would have the  
24 same properties or not. Some of them did, some of them might,  
25 some of them could. But the fact of the matter is, that if you

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 put together a different design it is going to blow that air  
2 out in a different way. And that's exactly what Cornucopia has  
3 done. You don't see a smooth edge on the Dyson fan and  
4 Cornucopia's fan blows differently. That's different.

5 I flat out disagree, and I think based on what Your  
6 Honor said about the square fan you agree, that if you made  
7 this square or bigger or longer, the way that air comes up and  
8 is pushed out is going to be different. And I think that's  
9 exactly what Mr. Gammack said.

10 THE COURT: I think their argument is -- I don't know  
11 if they are admitting this but it seems obvious to me that you  
12 need to have that rounded interior surface to catch the air and  
13 expel it in the direction that you want. But I think what they  
14 are saying is you could have arbitrarily changed the outside by  
15 instead of just leaving it the same -- with an outside shape  
16 the same as the inside shape you could have added something to  
17 make it look different. I think that's what they are arguing.

18 MR. RICKER: Right. So they are saying that we could  
19 leave this on the inside and put something else on the outside?

20 THE COURT: You could have put an angular edge, add  
21 two angles. Of course, it would have cost a little more to add  
22 that extra material. Might have added some weight.

23 MR. RICKER: I think like Your Honor said, you could  
24 do all that in addition to what's already here. But if you  
25 take out this outside portion with the curved back and replace

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 that with something with a square back or a bigger back that's  
2 going to change the function of the fan. And I think that's  
3 exactly what Mr. Gammack said in his testimony, when you change  
4 the shape of these things there's going to be some effect on  
5 the air flow and the air velocity and even the noise. That's  
6 what their patent said as well.

7 So the first step in this is construing claims and  
8 that's where you have to look at -- if we find that it's valid  
9 and not dictated by function we have to construe the claims and  
10 separate out all of the different functional elements before  
11 you get anywhere else. All that we have heard is that, there's  
12 differences in these fans. This is different, the base is  
13 different, the air inlets are different. The controls are  
14 different. The power cords are different. And none of that  
15 was controverted by the Dyson folks today.

16 In addition to the validity argument based on  
17 functionality, we have the validity argument based on the  
18 withholding of JP '897, the full translated version. I think  
19 we'll hear a little bit more about that this afternoon when we  
20 argue the motions to dismiss. But I think, again, there is a  
21 substantial question regarding that. Again, the patentee must  
22 show that the alleged infringers's defense lacks substantial  
23 merit. They haven't done it. We know that that full  
24 translation wasn't provided in these applications.

25 THE COURT: Well, that's not this motion.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 MR. RICKER: It is this motion because that's an  
2 invalidity defense that we have as well.

3 THE COURT: Well, okay. All right. I recall you  
4 argued that this design patent is connected with the prior  
5 fraudulently obtained or otherwise invalid bad function.

6 MR. RICKER: That's one of the arguments. And the  
7 other argument is that with respect to these design patents  
8 themselves, the translated version wasn't provided. And I  
9 acknowledge that the untranslated version and the abstract have  
10 images as well, but if I'm designing something or analyzing a  
11 design, while it may be sufficient for patentability to provide  
12 a picture, if there's a bunch of words there I want to know  
13 what they say.

14 THE COURT: Let's suppose their utility patents are  
15 invalid. They can still get a design patent on something they  
16 don't have a utility patent on, right?

17 MR. RICKER: Yes.

18 THE COURT: So I still have to think about this just  
19 in terms of the pure design patent, even if -- except the  
20 difference is that to the extent the appearance in the claimed  
21 design really is dictated by the function, they can't get a  
22 design patent on that aspect of it.

23 Actually, as I said to Mr. Shwarts earlier, even if  
24 the design -- the utility patent is valid the way this motion  
25 is crafted and presented to me, it doesn't matter whether the

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 utility patents are valid or invalid if, in fact, this design  
2 is functional in the ways that matter.

3 MR. RICKER: For purposes of whether or not to grant a  
4 preliminary injunction.

5 THE COURT: For design, correct.

6 MR. RICKER: Right.

7 So what we're arguing is that -- we're arguing  
8 twofold: One, that the abstract -- or that the full translated  
9 version wasn't provided with these design patent applications,  
10 and two, that whole patent is affected by the failure to  
11 provide --

12 THE COURT: Let's talk about that with the motion to  
13 dismiss.

14 This would be an easier case for you if your client or  
15 their manufacturer had not done an exact replica, at least, of  
16 the nozzle in terms of its dimensions. Some of the colors are  
17 different.

18 MR. RICKER: I think Your Honor was absolutely correct  
19 to point out that what we're talking about here is the  
20 protectable and the not -- or the protected and the not  
21 protected. And whether it would be an easier case for me or  
22 not, that's a different question. But did my client copy the  
23 protected elements of it, and the answer to that is no. So  
24 could he have done something differently? I don't know. I  
25 mean, what we have heard is if you change the shape of it, the

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 function changes. And obviously, the goal with the fan is to  
2 provide as much cooling as you can and you may want to change  
3 the angle of how that happens. But I just don't think that  
4 anything there can be changed arbitrarily and that means it's  
5 functional.

6 Turning to the argument regarding irreparable harm, we  
7 basically heard that it's going to be really hard to calculate  
8 damages and therefore --

9 THE COURT: First of all, there is no doubt there's  
10 going to be damages. There's going to be loss of sales. I  
11 mean, your client is really marketing on a nationwide basis,  
12 right?

13 MR. RICKER: As far as I know, the only major retailer  
14 that carries it, and that's in the subset of its stores, is  
15 Bed, Bath and Beyond.

16 THE COURT: But your client is trying to market much  
17 broadly, more broadly, right?

18 MR. RICKER: I believe so, yes.

19 THE COURT: So if I don't grant this injunction and  
20 your client's sales go forward, it seems completely obvious  
21 there's going to be substantial loss of sales, loss of revenues  
22 to Dyson and --

23 MR. RICKER: If you do grant it, the same is going to  
24 be true going the other way.

25 THE COURT: That's true. And that's why the Court has

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 to meet all the appropriate burdens of persuasion before  
2 granting any relief. But if there is a protected right and if  
3 there is infringement, it seems to be beyond -- it is beyond  
4 question that there would be substantial financial loss to  
5 Dyson just from the loss of sales without getting to the second  
6 tiers of injury they argue for.

7 And to litigate that would be, well, litigating lost  
8 damages, especially for a startup or expanding business is  
9 highly uncertain. It turns on the persuasion of the jury based  
10 on projections and expert witnesses and that's not near as good  
11 as having your sales receipts in hand. So it seems like a  
12 classic case of sufficient harm that it cannot adequately be  
13 made up after the fact with damages, even assuming that your  
14 client was fully solvent and able to respond to a substantial  
15 judgment.

16 I mean, this just looks like a completely obvious case  
17 for irreparable injury to satisfy that branch of a preliminary  
18 injunction test. Tell me why that's wrong.

19 MR. RICKER: Well, I think Your Honor touched on it is  
20 that there may be lost sales, but those are compensable. We  
21 have heard their argument that my client can't pay those  
22 damages but the cases that they rely on all include some  
23 indication that's stronger than just hey, that's a small  
24 company. They won't be able to pay us in the end. They  
25 include a company that actually didn't pay -- I forget if it

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 was royalties or something, license fees or something along  
2 those lines, to the plaintiff and another that also hadn't paid  
3 its debts in the past. So we're talking about cases that say,  
4 all right, this person has been shown to not be able to pay its  
5 debts versus here, where that showing hasn't been made.

6 And then if we just get to, you know, are there  
7 damages and is there money out there, then we're going to prove  
8 that up anyway.

9 THE COURT: By the way, what's the extent of the  
10 capitalization of your company? It was started last November?

11 MR. RICKER: As far as I know, yeah.

12 THE COURT: Do you know what the capitalization was?

13 MR. RICKER: I don't.

14 The other element to the irreparable harm argument is  
15 the delay in bringing this preliminary injunction. And based  
16 on what you said --

17 THE COURT: What they have established is that they  
18 didn't have this product in hand until March. And it took them  
19 two months, a tad bit more, to put it together.

20 MR. RICKER: What was established is that they knew  
21 there might be an issue back in the summer of 2011. And then  
22 they were sued in February and they had my name, my phone  
23 number, my e-mail address and at any point could have called,  
24 e-mailed, and asked for a prototype, a picture, a copy,  
25 whatever they wanted.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE COURT: You didn't supply them with their product.  
2 They had to buy it or get it from other sources and they didn't  
3 get it until March. And that's undisputed.

4 MR. RICKER: They never asked me for it. And they  
5 could have got it off the internet, too. So they asked for a  
6 four-month extension to answer our complaint and never asked  
7 for a copy of the fan. If they had an infringement issue and  
8 were worried about it, they could have done that during that  
9 period of time.

10 THE COURT: Well, two months is plainly within the  
11 range of reasonableness for diligent preparation of a  
12 substantial motion for preliminary injunction in any big  
13 business case, including a patent case. So I don't have any  
14 problem with -- two months falls far just short of laches.

15 MR. RICKER: The remaining two elements, the balancing  
16 of the equities and the public interest are in Cornucopia's  
17 favor as well. In terms of the balancing of the equities, I  
18 think the delay in bringing the motion applies there as well.  
19 I think also the size of the companies in the antitrust claim  
20 have a bearing there as well.

21 In terms of public interest --

22 THE COURT: Let me come back to that. I need to  
23 recess. I'm already a little late and probably I need to go to  
24 the meeting.

25 I think it likely that that meeting will be done in

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 time for me to be back by 1:15. There's a chance I might be a  
2 little bit late. But if I am, I'd rather have you here ready  
3 to go so we can use all the time. I think I will probably be  
4 able to start at 1:15.

5 So please be back and be ready by 1:15.

6 We'll be in recess.

7 (Recess from 12:10 p.m. until 1:26 p.m.)

8 THE COURT: Mr. Ricker, you may continue. Did you  
9 have more?

10 MR. RICKER: Oh. Yes. One housekeeping matter I  
11 realized over the break that Exhibit 15, I don't know if it was  
12 formally admitted.

13 THE COURT: Any objection?

14 MR. SHWARTS: No objection.

15 THE COURT: Exhibit 15 is admitted.

16 MR. RICKER: I just have a couple more quick remarks.  
17 I think the public interest is adequately treated in the briefs  
18 and I will leave it at that.

19 On the balancing of the equities, though, one of the  
20 important things there is to move beyond just the issues  
21 between the parties with respect to these two design patents.  
22 When we balance the equities, we are looking at the parties in  
23 their totality. And in doing so, what needs to be looked at is  
24 Dyson's choice to bring this preliminary injunction motion  
25 based solely on these design patents. I think that was a

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 conscious decision made in order to try to separate the  
2 antitrust issues that we're going to be talking about later  
3 this afternoon from the issues that we were discussing this  
4 morning. I don't think that works for the reasons I talked  
5 about in the validity argument.

6 But regardless, I think the critical thing to look at  
7 is when we balance the equities, who are the parties. And as  
8 to Dyson, we have an undisposed of antitrust claim that I think  
9 has substantial merit and that the defendants have not  
10 adequately attacked.

11 So that's all I have. Thank you, Your Honor.

12 THE COURT: Mr. Shwarts, any rebuttal? Then we'll  
13 move on to the other motion.

14 MR. SHWARTS: Yes, Your Honor. Thank you. Couple  
15 quick points.

16 I would like to commend to Your Honor Judge Koh's  
17 decision. It's a series of them, but her decisions in the  
18 *Samsung versus Apple* matter. And I will draw your attention  
19 briefly to her decision last year where she was making rulings  
20 on the design patents. And from her slip opinion, I would like  
21 to quote briefly. I will try to do this slowly for purposes of  
22 the court reporter.

23 Samsung argued that the core of some of the design  
24 patents, and they are pictured in there, in the ruling, were  
25 minimalistic, and that the ornamentation is stripped down to

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 functionality and therefore, the patents were invalid.

2 And Judge Koh made the following statement:

3 "Samsung's arguments, however, do not address the standard  
4 required to find that Apple's '677 and '87 design patents are  
5 invalid. The standard employed to invalidate a design patent  
6 based upon functionality requires that the design itself be  
7 dictated," emphasis on dictated, "by the functionality of the  
8 item. Just because various elements of Apple's '677 and '87  
9 patents enhance," emphasis on the word enhance, "the user  
10 experience does not necessarily mean that the patent design is  
11 dictated," emphasis on dictated, "by functionality. The  
12 federal circuit has previously rejected precisely the type of  
13 argument advanced by Samsung. In *LA Gear* the parties seeking  
14 to invalidate a shoe patent based on functionality argued that  
15 the various design elements had utilitarian purposes,  
16 increasing the benefit to the wearer of the shoe. The federal  
17 circuit refused to find the design patent was invalid as  
18 functional because, quote, "a design patent -- the utility of  
19 each of the various elements that comprise the design is not  
20 the relevant inquiry with respect to a design patent.'"

21 As we indicated here, Your Honor, firstly, the fans  
22 are in evidence are a knockoff. I commend Your Honor to take a  
23 look at them when they are in chambers and see how they work as  
24 explained by Mr. Gammack. The air is pushed up. It doesn't  
25 suck in air from the back. It sucks it from the base and

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 pushes it out from a line of openings in the back. Those  
2 openings could be shaped in any which way. And in fact, Your  
3 Honor, Dyson has done just that.

4 Bear with me as we warm up.

5 From Exhibit 3 to Mr. Forrest's declaration, on the  
6 left, Your Honor, is the AM01. In the center is the AM02  
7 bladeless fan. On the right is the AM03. All different design  
8 shapes. All bladeless fans. I think this in itself, Your  
9 Honor, disposes of the issue. We have the same function with a  
10 different shape. And this is just Dyson's shapes. Your Honor  
11 could take judicial notice that simply a search on the web of  
12 the term bladeless fans on Google image --

13 THE COURT: You know, Mr. Shwartz, I commented at the  
14 beginning, this is not a trade dress case. If it were, this  
15 exact copying would certainly have a lot of significance. But  
16 what I have here is I have got a design patent that's your  
17 piece of paper. It's what your client claimed. That's what it  
18 is.

19 MR. SHWARTS: Agreed.

20 THE COURT: And there are a lot of features here that  
21 are copied that are not in your design patent.

22 MR. SHWARTS: But they copied everything that is.

23 THE COURT: That doesn't make a design patent  
24 infringement. Again, that would be relevant to trade dress but  
25 you haven't made that claim. And I'm not suggesting that you

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 should. But --

2 MR. SHWARTS: Well, Your Honor, to the extent that we  
3 have disclosed in the design patent both the front view and the  
4 top view, they copied that to a T. I mean, there could be no  
5 question if the patent is valid they have infringed. There  
6 could be no question of that. By the ordinary observer test,  
7 these patents were infringed. They don't even make an argument  
8 that they are not. Their argument is invalidity. Their  
9 argument is they don't infringe if the patents are valid.

10 And what we have here, Your Honor, I'm addressing the  
11 question Your Honor raised. Your Honor was debating the point  
12 about functionality. And in order for you to say that these  
13 patents are invalid, you would have to make a finding as matter  
14 of law that what was disclosed in our two patents was dictated  
15 by function. This picture in itself shows you that it's not.  
16 This is ornamental. It is not dictated by function. If we do  
17 it different way in a different shape, it's not our patent. If  
18 you do a Google search on Google images for bladeless fans,  
19 you will see other bladeless fans that are different shapes,  
20 different models, by other people other than Cornucopia.

21 THE COURT: But you own the circle?

22 MR. SHWARTS: We own the circle. The U.S. Patent  
23 Office says we do.

24 THE COURT: And that's the question of whether you  
25 validly own the circle.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 MR. SHWARTS: We do. Assuming the patent is valid for  
2 the purposes of a bladeless fan, we own the circle on the  
3 nozzle and we own the design from the base up. That is our  
4 intellectual property. We have a valid patent issued by the  
5 patent office. And it's ornamental. And they have not argued  
6 that they have not infringed. And in terms of invalidity, we  
7 deal with our papers and I will let my colleague, Mr. Rosenfeld  
8 address that.

9 THE COURT: Briefly, because we do need to get on.

10 MR. SHWARTS: We do need to get on to that.

11 I would note, Your Honor, just one final remark to sum  
12 up.

13 We came before you on May 29th to schedule this  
14 hearing. Cornucopia asked for four months before they could  
15 respond. You then invited them to do discovery. In fact, you  
16 invited them to come to you if we did not give them discovery.

17 THE COURT: But Mr. Shwarts, in every preliminary  
18 injunction, I allow the parties to do brief initial discovery.  
19 I don't allow a plaintiff to just take their two months and  
20 then sandbag a defendant. So I'm not picking on you. That is  
21 basic fairness for every case.

22 MR. SHWARTS: Oh, no. You are -- let me finish. I  
23 apologize. My point is they did nothing. That's my point.  
24 They asked for four months. Your Honor gave them carte blanche  
25 to come in and do what was necessary. We didn't even get a

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 phone call. They came -- they put in opposition. They put in  
2 no evidence in opposition, just argument. They came before you  
3 today with no evidence.

4 All the evidence that Dyson has put in is  
5 uncontroverted in the record. We have met all the elements  
6 required. We are prepared to post a bond. And we ask Your  
7 Honor to grant the preliminary injunction, order such a bond  
8 that Your Honor deems necessary to protect Cornucopia, and ask  
9 Cornucopia to disclose those retailers that they have sold  
10 their fan to so we can provide a copy of your order to them.

11 On that, we submit, Your Honor.

12 THE COURT: Let me ask Mr. Ricker one last question.  
13 What about the bond? I forgot to ask you about that. What's  
14 your response as to what the amount of the bond should be if I  
15 grant the injunction?

16 MR. RICKER: My response is that --

17 THE COURT: Come up and speak into the microphone.

18 MR. RICKER: I just wanted to say, he claims that we  
19 didn't argue the patents weren't infringed. We have four pages  
20 of that argument.

21 Dyson's a giant company. They say they have spent  
22 some \$50 million on this technology. The bond should be \$10  
23 million in my view.

24 THE COURT: You don't just pick numbers out of the  
25 air. How do you get to that as a reasoned amount?

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 MR. RICKER: Looking through the Jarosz report about  
2 Dyson sales, looking at what --

3 THE COURT: The issue isn't Dyson sales. The amount  
4 of the bond would be affected by the amount of Cornucopia's  
5 sales.

6 MR. RICKER: I mean, their whole argument is we're  
7 going to be taking away their sales. So if we're successful in  
8 doing that then that's how much we would get.

9 THE COURT: No, how much you would get would be how  
10 much money your client would make selling your product, which  
11 is you're selling it for a third of the price of their product.  
12 So I'm asking for a reasoned basis to get to an amount of a  
13 bond.

14 MR. RICKER: Right. I don't have my client's sales  
15 figures. The product sales are in infancy but, I understand,  
16 growing quite substantially. I think all the issues Mr. Jarosz  
17 highlighted with respect to valuating these things apply, and I  
18 think that a high bond is appropriate in light of the size of  
19 the company, the potential for growth, the uncertainty that  
20 exists at this point. And that would be my reasoned approach.

21 THE COURT: All right. Very well then. So let's move  
22 on to your motion to dismiss.

23 MR. SHWARTS: Your Honor, one quick thing, technical  
24 thing.

25 We ask that Mr. Jarosz's report, which is Exhibit 9,

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 and his testimony be deemed under the protective order as  
2 confidential because he gave some business information in  
3 there.

4 THE COURT: Actually, you all had agreed to that  
5 protective order, correct?

6 MR. SHWARTS: We did. There was a protective order in  
7 place but to the extent we put it in evidence today, I want to  
8 make sure Exhibit 9 is covered by the protective order and his  
9 testimony.

10 THE COURT: It is ordered that -- well, it is ordered  
11 that Exhibit 9 remains under the protective order previously  
12 entered. But, you know, frankly, I'm not remembering any  
13 testimony here that was --

14 MR. SHWARTS: He gave some testimony about gross  
15 margin.

16 THE COURT: Oh. Yes. That's right.

17 MR. SHWARTS: We would like that to be covered by the  
18 protective order, please.

19 THE COURT: Any objection to that, Mr. Ricker?

20 MR. RICKER: I don't have any objection to that.

21 THE COURT: That's confidential information.

22 I think that -- was there anything else that he  
23 testified to today here that could fairly be deemed  
24 confidential? The rest of it seemed pretty generic.

25 MR. SHWARTS: That one thing. When we finished his

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 testimony we recognized he gave that figure. I am not even  
2 sure that figure is in the report. He extrapolated it from the  
3 financial information, but he gave that information orally. We  
4 want to make sure that's protected.

5 THE COURT: Then this is for the court reporter, but  
6 it is ordered that the testimony concerning Dyson's gross  
7 margin is sealed.

8 MR. SHWARTS: Thank you.

9 I'd like to introduce my colleague, Robert Rosenfeld,  
10 who will be addressing the motion to dismiss.

11 MR. ROSENFELD: Good afternoon, Your Honor.

12 THE COURT: Go ahead.

13 MR. ROSENFELD: Being mindful of the time and also  
14 mindful of the fact that you gave us sort of a take home exam,  
15 I thought maybe it would be most appropriate to go right to  
16 those questions, because we have both briefed --

17 THE COURT: Well, I want to hear everything, but those  
18 are things I wanted to warn you about so you could fit all of  
19 that into your presentation.

20 MR. ROSENFELD: So what I will do is walk through  
21 those questions and attempt in the course of that to give you  
22 our views in general on the issue.

23 Let's start with an introduction. The type of  
24 antitrust claim pled here, *Walker Process* claim, is a  
25 particularly complicated one and it's encumbered a lot by odd

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 pleading requirements. And the reason for that is, of course,  
2 we have this inherent conflict between antitrust law and patent  
3 law where one allows you to exclude and the other says  
4 excluding is a bad thing. So in order to deprive a patent  
5 holder of its immunity from the antitrust laws, you have to  
6 prove, in this case *Walker Process*, you have to prove fraud.  
7 And you also have to demonstrate that you get around  
8 *Noerr-Pennington*, which says you have the right to file  
9 infringement cases. That has two consequences.

10 One, you have to plead fraud. You have to satisfy  
11 Rule 9(b). Second, all this has to be viewed through the prism  
12 of clear and convincing evidence, because that's the obligation  
13 that is required to overcome the presumption of validity that  
14 every patent holder has. That's the threshold.

15 But that's only the threshold. If you satisfy those  
16 two requirements, then you still have the obligation to make  
17 out all the standard requirements of an antitrust claim, and in  
18 this context, the Section 2 claim, and in particular, you have  
19 the obligation to satisfy the market definition and market  
20 power test.

21 So I think just by way of introduction, tough pleading  
22 standards, usually these kind of cases involve egregious  
23 wrongdoing and they are very rare to get past the pleading  
24 stage and they are very rare to succeed on the merits.

25 With that in mind, let's clear out a little of the

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 underbrush. Your first question asks about patents '449 and  
2 the '111. And given that we didn't claim infringement of those  
3 patents the question is whether they will still support either  
4 a declaratory judgment, as is sought here both as kind of on  
5 the patent issues and on antitrust issues, or whether they  
6 would survive an antitrust claim. So let me be clear on that  
7 from our standpoint.

8 One, we did not assert that those claims were  
9 infringed by the current Cornucopia product, and we don't  
10 intend to do so. Based on that, we believe there is no basis  
11 --

12 THE COURT: So all your -- well, actually, but you  
13 have also made demands against the suppliers that they not they  
14 not take any of these products. Doesn't that have the same  
15 effect as --

16 MR. ROSENFELD: First of all, I don't believe that the  
17 pleading is adequate even to establish that we have made those  
18 kind of claims. But it seems to me that our position of not  
19 suing to enforce and representing to this Court that we are not  
20 going to with regard to Cornucopia's current product eliminates  
21 the basis for declaratory judgment jurisdiction.

22 THE COURT: But you are making demands of the  
23 retailers that they not take the product.

24 MR. ROSENFELD: To the extent it infringes patents,  
25 given the ones we have stated claims on, but not as to these

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 two. And that's what I understood your question to go to.

2 THE COURT: What I'm trying to get at is the  
3 distinction you are stating between suing to enforce the  
4 patents and just making demands that result in their products  
5 not being retailed because you are asserting that it infringes  
6 your patents. That's the difference you assert?

7 MR. ROSENFELD: I think if we are saying, Your Honor,  
8 that we're not contending their current product infringes, we  
9 would also not be in a position to go out to suppliers and say  
10 it infringes these patents. That doesn't preclude us from  
11 saying it might infringe the other patents on which we have  
12 sued. But as to these patents, we don't believe there's a  
13 basis for declaratory judgment jurisdiction.

14 THE COURT: Is that a subtlety that you have  
15 communicated to the retailers in your demands that they not  
16 carry your products?

17 MR. ROSENFELD: I don't believe we have made demands  
18 to the retailers that they not, given that we haven't sued on  
19 those particular patents. That's pretty open and notorious.  
20 On the antitrust claim, I think the analysis is a tad bit  
21 different but the effect is the same.

22 THE COURT: Let me back up. You are suing on the  
23 spacers patent and the tilt patent. That's all, right?

24 MR. ROSENFELD: Right. And the design patent.

25 THE COURT: Right. Yes.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 MR. ROSENFELD: On the antitrust claim, this gets a  
2 little more complicated but I think we end up in the same  
3 place. It is an element of the antitrust claim that you seek  
4 to exclude by filing litigation or the like. In other words,  
5 under *Walker Process*, the fact that you might have wrongfully  
6 obtained a patent doesn't state an antitrust claim unless it  
7 also is -- you seek to enforce it.

8 And so given that we're not seeking to enforce these  
9 patents against this current product I think eliminates the  
10 antitrust cause of action as well because they can't satisfy  
11 the exclusionary conduct test.

12 So we would say the answer to your first question is  
13 that as to those two patents, there is no basis for a  
14 declaratory judgment action or an antitrust claim.

15 Now, turning to the second and third questions, which  
16 I think really do go together, let me put it in the context as  
17 I understand it.

18 First of all, the plaintiffs have argued in their  
19 complaint and in their opposition, their essential theory is  
20 not that we didn't disclose the Japanese patent, because, of  
21 course, we did disclose the Japanese patent enumerable times in  
22 the course of each of these various patent applications. The  
23 issue, rather, is that we did not disclose or provide an  
24 English translation of the Japanese patent. And the argument  
25 is that our failure to do that distracted the patent examiners

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 or diverted their attention from the Japanese patent which  
2 otherwise would have served as a basis to invalidate the  
3 patents. And to satisfy the pleading requirements under *Walker*  
4 *Process*, they have to say our failure to disclose was material  
5 and material for purposes of *Walker Process* is very strict but  
6 for. So what that means is but for our failure to disclose or  
7 provide an English language version of that patent, the  
8 Japanese patent, the U.S. patents would not have issued.  
9 That's what they have to plead. That's what they have to  
10 prove.

11 THE COURT: For today they only have to plead it.

12 MR. ROSENFELD: Yes. I agree with you.

13 Okay. So where are we then? You pointed out, and you  
14 did us one better by pointing out that in two instances, at  
15 least, that we can divine from those prosecution histories, not  
16 only did the patent examiners in the U.K. or the European  
17 Patent Office in the U.S., not only were they aware of the  
18 Japanese patent, but they said it was the dispositive slash  
19 decisive piece of prior art and in both instances rejected the  
20 patent claims that Dyson had submitted, or most of them, based  
21 principally on that very Japanese patent.

22 Now, when we got those rejections, we amended our  
23 claims and attempted to deal with the prior art. But the prior  
24 art was the Japanese patent. And that prior art was not  
25 ignored by the U.S. and the British patent authorities, but, in

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 fact, was relied upon as a basis for rejecting the claims.

2 On its face, that is inconsistent with the theory  
3 advocated here. Not to be cute, but in some ways it suggests  
4 that the translation was immaterial to the patent examiners  
5 because without it, they were able to understand the Japanese  
6 patent and rely on it to reject the claims.

7 So it raises an important question about the  
8 plausibility of the theory being advanced by the plaintiffs  
9 here. And I use the word plausibility intentionally, because  
10 the standard here, in addition to 9(b), in addition to the  
11 prism of clear and convincing evidence, we've *Twombly* and  
12 *Iqbal*, which I know you are familiar with. Every motion to  
13 dismiss talks about those two cases. We don't have to go  
14 through and rehash all of the articulations.

15 But the key takeaway from that is it's got to be a  
16 plausible claim. We've gotten away from *Conley v. Gibson* where  
17 the limit of pleading was the limit of your imagination. And  
18 we have gotten to a point where it's got to be plausible.

19 So to respond directly to your two questions, what's  
20 the significance of the actions of the British and the U.S.  
21 patent offices based on the Japanese patent suggests that an  
22 argument that somehow by failing to provide a translation we  
23 deceived or misled the patent examiners is not plausible.

24 It also -- and this goes to your fourth question,  
25 which I am really going to leave to Mr. Ricker, because we have

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 the presumption of validity about the patent, but it goes to  
2 your fourth question. Because I think, properly viewed, what  
3 the prior conduct that you identified and we identified does is  
4 it really does raise that pleading bar on materiality.

5 Because now what Mr. Ricker has to demonstrate is, as  
6 you put it in your fourth question, what is it, separate and  
7 apart from the prior art, that the patent examiners focused on?  
8 What is it in that translation of that Japanese patent that we  
9 would find would result in the rejection of the claims in the  
10 current patents, patents that were amended and modified to be  
11 taken advantage -- or excuse me -- to get around the prior,  
12 prior art, that was identified in the Japanese patent.

13 And he has to do that, again, as you set out in your  
14 fourth question, on a claim by claim basis. That is, what is  
15 going to -- what, in that translation, is going to invalidate  
16 those independent claims in those patents? And that has to be  
17 done against the background of what has already happened.

18 So what's in that Japanese patent can't be cumulative.  
19 It can't be what was already used to invalidate Dyson's prior  
20 applications. It's got to be new, non-cumulative, and  
21 dispositive. And I submit that that's a burden he can't meet.  
22 But that's the articulation of the burden. And you got there,  
23 I think that's the import, if I read your last question, that's  
24 the import of your last question.

25 That's not, however, the end of the inquiry, because

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 under *Walker Process*, and I think I talk a lot about *Walker*  
2 *Process*. These days, the case everybody views *Walker Process*  
3 through is the *Therasense* case, which was a decision of the  
4 federal circuit last year that focused on a related concept.  
5 And that is, if the affirmative defense of inequitable conduct  
6 that is raised in the federal circuit is to be believed, almost  
7 every patent case. And it sets certain standards for  
8 inequitable conduct, reminding us that the burden for *Walker*  
9 *Process* is greater, higher, more rigorous because it's an  
10 affirmative claim. It's a sword. It's not a shield. So it's  
11 even higher.

12 But *Therasense* says, one, but for materiality; two,  
13 again, by clear and convincing evidence you have got to prove  
14 an intent to deceive. You have got to plead an intent to  
15 deceive. And that intent to deceive, and here we go beyond  
16 plausibility, doesn't merely have to be plausible. It's got to  
17 be the single most reasonable inference from the facts as  
18 presented. A single most reasonable inference.

19 I submit given, in this context, we're not talking  
20 about a nondisclosure. We didn't hide any prior art. In fact,  
21 we disclosed it as I think we said in the brief pretty much  
22 with flashing and glowing lights in every one of the  
23 applications.

24 The issue here is instead an omission. Omissions are,  
25 of course, inherently ambiguous. But it is the alleged

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 wrongful omission to have an English language transcript of the  
2 patent. There was an English language version of the abstract.  
3 There were figures. There were figures in the patent. And  
4 indeed, the figures in the patent application were what both  
5 the U.S. and the British examiners relied upon in reaching  
6 their earlier conclusions about the strength of the prior art.

7 So you have got the intent burden as well. Then let  
8 me carry it one more step because I want to wrap everything.  
9 And that is my effort, Your Honor, to respond to your questions  
10 and the significance of them. I think they are very good  
11 questions because they allow all of these issues to be wrapped  
12 up inside. But if I have missed something, I'm sure you will  
13 tell me I missed it.

14 THE COURT: You know, Mr. Rosenfeld, I never had a  
15 lawyer tell me my questions were bad questions.

16 MR. ROSENFELD: I figured as much.

17 THE COURT: Even when they are.

18 MR. ROSENFELD: But these kept us thinking.

19 Let me take it one step further, however, which is we  
20 have just been talking about *Walker Process*. And as I said  
21 before, that sort of sits on top of all of this. This is,  
22 after all, at base, an antitrust claim. So what more has to be  
23 alleged and what wasn't to satisfy an antitrust claim.

24 Well, *Walker Process* is a Section 2 claim under the  
25 Sherman Act. And that's a monopolization claim. And they --

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 plaintiffs allege both monopolization and attempted  
2 monopolization in the same -- under the Arizona statute and I  
3 think they are pretty consistent or congruent.

4 The key element of a monopolization claim is, of  
5 course, establishing that the defendant either is a monopolist  
6 or has a reasonable or substantial probability of becoming one.  
7 And in order to do that, you have got to define a market, and  
8 then you have got to say how much share do you have of that  
9 market.

10 That's not just a technical requirement. The whole  
11 Section 2 claim makes no sense if you can't satisfy that  
12 threshold. If Dyson is not a monopolist or dangerously close  
13 to being one in a relevant market, then the whole *Walker*  
14 *Process* thing goes away and we're just another competitor  
15 out there and Section 2 doesn't apply. So the market  
16 definition is a critical threshold to allow this case to go  
17 forward and discovery to proceed.

18 Here, I think on its face the market definition is  
19 inadequate. It's a market definition that is designed to take  
20 one product, essentially, one company's product, and use that  
21 to define the whole market. So we're not talking about devices  
22 that move air. We're talking about one type of device that  
23 moves air that is really manufactured by one company. And the  
24 Supreme Court has recognized that you can, on occasion, on  
25 very, very rare occasions, have a one-product market. Those

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 are usually aftermarket cases. So repair services for a Xerox  
2 copier, that might be one market because only a limited number  
3 of people can compete. But with those kind of exceptions,  
4 one-product markets don't fly.

5 And the best case to read on this, in addition to the  
6 old *DuPont* case which talks about it, is the *Tempur-Pedic* case.  
7 We all watch TV. We have all seen those ads. We probably all  
8 have kids who think they need some sort of Tempur-Pedic  
9 mattress to get through the night. But we all know those are  
10 just things people sleep on. And they may have a different  
11 kind of foam and they may tout different kinds of health  
12 advantages than the Sealy Posturepedic. They are just  
13 mattresses. May be more expensive, but we're used to products  
14 in the same market being more expensive. And that case says  
15 you don't just take the fancy special product and make it into  
16 a market.

17 And here, all we have are assertions by the plaintiff  
18 that this is a separate market, that consumers are not  
19 interested in other kinds of fans as potential substitutes and  
20 the like. And they talk about how these fans are more  
21 expensive, but, of course, the real test is interchangeability  
22 of function. Sounds like you are more of an expert on this  
23 than we are. But --

24 THE COURT: Actually, I know about Tempur-Pedic  
25 mattresses because it's the only thing I can sleep on. I guess

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 that's not enough to disqualify me in this case.

2 MR. ROSENFELD: We will let that go. And you also  
3 know about fans now, right?

4 And I think there are a variety, and some of the  
5 exhibits that you saw in connection with the PI motion talk  
6 about all the competitors we face in the marketplace. And in  
7 the marketplace for devices that cool you off and move air, our  
8 share is well below, I think, five percent. That's the  
9 relevant market definition. And then you consider what the  
10 effect of a change in price is.

11 And who knows, if Dyson were to lower the price  
12 significantly on the bladeless fan, maybe some of those folks  
13 who buy the box fans we were talking about, they might buy a  
14 bladeless fan. That's how you define a market.

15 That wasn't done here. The pleadings are not  
16 sufficient. And on that basis as well, the case should not be  
17 allowed to go forward because that is a very meaningful  
18 threshold in terms of who gets to bring these kinds of  
19 antitrust cases and who doesn't.

20 So that's the big picture. We have talked about a lot  
21 of these same issues in our brief, in our briefs, actually. We  
22 have emphasized the general *Twombly* and *Iqbal* arguments that  
23 there are -- the absence of the who, what, when, where, and how  
24 in many, many of the allegations is quite striking. But the  
25 principal flaws are not satisfying *Walker Process*, not meeting

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 the 9(b) standards for fraud, not providing a pleading that has  
2 a reasonable hope of generating clear and convincing evidence  
3 of wrongdoing, and not satisfying the antitrust standards as  
4 well.

5 Now, the last point I will make is amending. The  
6 facts are not -- it's not like they are going to go out and  
7 discover other facts. There's no dispute there was no  
8 translation provided. And the issue is whether they can, and  
9 based upon what they have done I think the answer is no,  
10 whether they can plead that there is something in that  
11 translation that would result in the invalidation or rejection  
12 of the independent claims, the patents, as you identified in  
13 Question 4, and whether they can plead, again to satisfy Rule  
14 9(b), that the failure to provide that translation and that  
15 articulation suggesting it was required when there's no  
16 indication that it was, but whether that was done with an  
17 intent to deceive.

18 That's, I think, the big picture, Your Honor. I'm  
19 happy to answer questions. But otherwise --

20 THE COURT: Of course, you know, attaching the  
21 Japanese patent without a translation except for the summary,  
22 and -- I mean, they -- does it become a question of inference  
23 of what is actual -- whether what is in that actual patent, it  
24 would, in fact, affect whether the patent would have issued.  
25 And if so, why didn't you attach a translation? I mean, surely

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 you didn't think the patent office would be able to read the  
2 Japanese patent or would seek out a translation on its own.

3 MR. ROSENFELD: All I can say, Your Honor, is we know  
4 what was submitted, and we know what both the British and the  
5 U.S. patent offices were able to do based on the abstract.

6 THE COURT: And did the British and European  
7 applications, did they only include translations of the  
8 abstract?

9 MR. ROSENFELD: Yes. Yes.

10 With that, I will turn over the mike.

11 THE COURT: All right. Mr. Ricker.

12 MR. RICKER: I think your questions were good too,  
13 Your Honor.

14 Let's go to Number 4 first, as it was left to me. And  
15 let's talk about the tilt that Your Honor asked about. If you  
16 look at the abstract that was provided to the patent office,  
17 the English language abstract, there is no reference to tilt in  
18 that abstract. I will read from the translation a little bit.  
19 And obviously, this wasn't pleaded.

20 THE COURT: There wasn't anything in the Japanese  
21 patent about tilt, was there?

22 MR. RICKER: Yes, there was.

23 THE COURT: Okay.

24 MR. RICKER: Not in the abstract but in the patent  
25 itself there is. Obviously, this wasn't pleaded. I don't

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 think it was required to be pleaded. But if we're forced to  
2 replead we can plead it.

3 All right. So the scope of the patent claims in the  
4 English language translation of Japanese patent '897, "The  
5 electric fan according to Claim 1 wearing the wind discharge  
6 ring is supported in a manner such that the angle of elevation  
7 can be adjusted on the base stand."

8 And the reason -- the way they do that, and one of the  
9 things they are conscious of in doing that, is that the motor 2  
10 is stored inside facing downward through an opening in the  
11 bottom surface and the motor 2 is fastened by screws -- sorry.  
12 Wrong one.

13 So they discuss the prior art first, and this is a  
14 discussion of the prior art. "A motor with weight is provided  
15 on the base stand so the stability of the entire device is  
16 inferior." That's a discussion of the prior art.

17 And an object of the present invention is to provide  
18 an electric fan with inherently enhanced safety improved  
19 stability and that can be sufficiently simplified, the design  
20 and the like.

21 We have more on -- and this all goes to the center of  
22 gravity and the tilt feature, which is one of the primary  
23 claims in the Dyson patent. This is not included in the  
24 abstract. It is included in the body of the patent itself.

25 All right. This is in the written description:

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Having motor 2 stored inside the base stand 1 together with the  
2 fan blade 5 so the stability of the entire device could be  
3 similarly increased and the shape can be more freely determined  
4 from aesthetics and is conventional because there is no need to  
5 struggle to ensure the stability and therefore, the design can  
6 be simplified.

7 So, Your Honor asked whether the Japanese patent  
8 disclosed anything regarding the tilt. And my answer is yes,  
9 it did. And what was disclosed in the abstract, nothing.

10 THE COURT: Was it the same tilt mechanism or was it  
11 different technology?

12 MR. RICKER: I think it's, you know, I'm not an expert  
13 on that. We will certainly do that at some point. And I think  
14 that is another point that I want to talk about here today that  
15 you know what we've done here now is we're measuring  
16 Cornucopia's pleading against a bunch of things that Dyson has  
17 selected to say that it's implausible. In a summary judgment  
18 setting, obviously, we would have the opportunity to present  
19 our own evidence, gather our own experts that would testify on  
20 each of these issues.

21 But, you know, I think it's pretty clear that the  
22 Japanese patent, the full patent, contains material that is not  
23 included in the abstract, particularly with regards to the  
24 tilt. And to me, that's a very clear indication of why someone  
25 would intend to provide an abstract but not the English

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 translation. And that is a plausible inference based on what  
2 we have pleaded.

3 In terms of Questions 2 and 3, what the import of the  
4 examiner's findings based on the abstract may be, you know, I  
5 think it's pretty clear that Dyson knew that JP '897 was going  
6 to come to light at some point. And once you know that, what  
7 do you do? You have to minimize the importance of it. How do  
8 you do that properly? You provide the translation and you deal  
9 with it. How do you do that improperly? You provide the  
10 abstract and you minimize the scope of the patent and you don't  
11 tell anybody it deals with tilt and you don't tell them all  
12 these things. And based on what we have seen and what we have  
13 pleaded, we think that's exactly what happened here.

14 On your first question, I think Your Honor hit it  
15 right on the head, the threat of a lawsuit is all that's needed  
16 for either a declaratory judgment action with respect to a  
17 patent infringement claim or a *Walker Process* claim, and that  
18 still exists. I appreciate the representation here in court  
19 today, but I don't think that is sufficient to assuage all the  
20 retailers out there who are hearing threats from Dyson, the  
21 manufacturers, the same. We have pleaded both of those.

22 One of the cases, probably the principal case that we  
23 cited and was not addressed here today is the *Abbott* case from  
24 the Ninth Circuit which deals with pretty much the exact same  
25 factual scenario, except it was actually a little bit different

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 in the *Abbott* case because the examiner who was examining the  
2 patent that didn't get the benefit of the full translation was  
3 that the same examiner that got the translation with respect to  
4 another application. Here, we have a multitude of different  
5 people. We don't know what was in their heads. We know that  
6 the patent has a bunch of stuff in it that's not in the  
7 abstract. We know that two people have said, hey, this is very  
8 relevant based on their limited understanding garnered from the  
9 abstract. And it's highly plausible that had they understood  
10 more about what was in that patent, they would have gone beyond  
11 just an initial rejection and rejected these things once and  
12 for all based on invalidating prior art in this Japanese  
13 patent.

14 Turning to the arguments on the monopoly power and the  
15 market definition, I think it's been pleaded, and I think it's  
16 been admitted for purposes of this motion that if the market is  
17 bladeless fans, Dyson has more than market power in that  
18 market. I think that it's fairly clear that there's a huge  
19 distinction between Tempur-Pedic mattresses, some of which are  
20 more expensive than other mattresses, some of which are less  
21 expensive, and fans, where you have \$20 bladed fans being  
22 compared to \$320 bladeless fans. These things are vastly  
23 different.

24 We heard a little bit from Mr. Forrest today, and I  
25 think that was just the tip of the iceberg of what we

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 eventually will hear showing that consumers absolutely do not  
2 walk into Rite Aid and say, I want a fan to cool myself and  
3 decide on the spur of the moment hey, I want to buy a \$320  
4 Dyson Air Multiplier. These are different products. One is a  
5 specialty product that's designed to improve safety and have  
6 some other benefits. One is typically utilitarian that's been  
7 around forever. They are different.

8 I think the rest of it is --

9 THE COURT: Let me back up a minute. They're not  
10 suing on the '449 and '111 patents. Do you have any cases that  
11 say you can maintain a *Walker Process* in an antitrust claim  
12 where there is, in fact, no litigation, no enforcement at least  
13 in the courts?

14 MR. RICKER: *Walker Process* itself says that. It says  
15 you don't have to wait to be sued in order to seek a  
16 declaratory judgment. And the same is true now, you know.  
17 They haven't done it to this point, and we refer to  
18 representation here today that they don't intend to do it at  
19 this point. But the threat, I think, is pretty real. They  
20 have alleged their -- I mean, we have seen in their papers  
21 their enforcement activities everywhere else. Cornucopia has  
22 pleaded threats to retailers. We saw more of that -- whether  
23 it's a threat or whether it's a communication, whatever you  
24 want to call it in Forrest's declaration. There's no doubt  
25 they are out there in the marketplace saying this is our

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 technology. This is our space and we're going to enforce it  
2 vigorously. And that's exactly what they've done.

3 THE COURT: What they are telling us is they are only  
4 suing to enforce the spacers patent and the tilt patent, well  
5 and the design patents. Are you taking them at face value or  
6 are you asking me to go beyond that, to find that they are  
7 attempting to monopolize through these non-litigation  
8 communications and threats?

9 MR. RICKER: Today is the first that we have heard  
10 that they are making some kind of a representation that they  
11 are not going to allege infringement of those other patents.  
12 Obviously they did in their initial claim, but whether that's a  
13 bar or not would be left for another day. And the question is,  
14 is there an apprehension of being sued on the part of  
15 Cornucopia, the retailers it deals with, and the manufacturers  
16 it deals with. And I think that the answer is, yes, with  
17 regard to each of these patents that touches on this technology  
18 because, really, what they are is one patent and it's kind of  
19 like do I want to get shot with that arrow or do I want to get  
20 shot with this arrow? No, I don't want to get shot with any  
21 arrows. There's really no distinction of which one you get  
22 shot with. The threat is there and that's what the issue is  
23 when are you seeking a declaratory judgment and/or bringing a  
24 *Walker Process* claim.

25 THE COURT: What do we make of the fact that the file

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 in the '449 patent contains a report from the Patent  
2 Cooperation Treaty international search report that addresses  
3 the Japanese patent and the fact that the British denied the  
4 patent based on that? That's right in the '449 file, isn't it?

5 MR. RICKER: Yes. And what --

6 THE COURT: So that's not very effective fraud, is it?

7 MR. RICKER: Well, you know, I think it was absolutely  
8 impossible for the Japanese patent to go completely unnoticed.  
9 What the thought is, is let's minimize the scope of it. And  
10 the way you do that is you supply an abstract that has a  
11 smaller scope than what the actual patent does, and then you  
12 get a rejection based on the smaller scope than what you get a  
13 rejection on if they see the whole patent. And that's the  
14 theory, I think. You know, I think that is a very plausible  
15 theory that you can't -- you know you can't conceal it  
16 completely, so what do you do? You give a thousand references,  
17 some 200 foreign references and a cajillion U.S. references and  
18 then you give an abstract and see what happens. And that's  
19 what happened, and they were able to go ahead and secure a  
20 pretty broad patent in the state despite that abstract. And I  
21 don't think they would have been able to had that fully --

22 THE COURT: What about the fact that the file in the  
23 '166 patent application contains the examiner's non-final  
24 rejection of at least some large part of the proposed claims  
25 based on the Japanese patent. Doesn't -- I mean, what do you

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 make of that? Doesn't that show that the examiner had  
2 awareness of the Japanese patent enough to deny some part of  
3 the claim based on that?

4 MR. RICKER: Right. That's what I'm saying. He had  
5 enough awareness of it to deny some part of the claim, some  
6 part. But then they changed the claim and based on the smaller  
7 scope that's described in the abstract, were able to get a  
8 patent issued ultimately. So what I'm saying is the examiner  
9 saw that the Japanese patent was there, saw it was relevant,  
10 but didn't because of Dyson's omission, understand what the  
11 full scope of it was.

12 And that's -- I mean, this is the exact thing we had  
13 in the *Abbott* case. An English translation was provided in  
14 that case. The Japanese language patent was provided in that  
15 case. And the Ninth Circuit said no, that's not good enough.

16 So, you know, I think those all are fact questions  
17 that we are going to find out exactly what those examiners saw.  
18 We'll see all of the documents that they had before them.  
19 We'll have experts that are going to compare what they would  
20 make of the full translation of the Japanese patent versus just  
21 the abstract. And those are all fact issues.

22 But what we do know is that it is relevant and it is  
23 material. Just exactly how that plays out, we're going to find  
24 out.

25 THE COURT: What do you say about the market, what is

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 the market, relevant market here?

2 MR. RICKER: The market is bladeless fans. And, I  
3 mean, we briefed that issue. We think that they are  
4 sufficiently different from standard bladed fans that there is  
5 no elasticity of demands or supply. I asked Mr. Forrest the  
6 question about that earlier today. He didn't have a definitive  
7 answer for it. But I think when we do have a definitive answer  
8 we're going to find out that there's absolutely -- there was  
9 absolutely no change in pricing of standard fans when Dyson's  
10 bladeless fan came on the market and that a change in the  
11 pricing of standard bladed fans won't have any impact at all on  
12 the pricing of Dyson's fans, vice versa.

13 And I think we'll find that there's no elasticity of  
14 supply either. I think the people who are manufacturing these  
15 bladed fans are different folks doing something differently,  
16 and they are locked into what they are doing right now.

17 THE COURT: We're in a pleading level, so it's a  
18 different standard, but do we have any market data about actual  
19 consumer behavior? Because I would think that as between a  
20 \$330 fan from Dyson and my \$30 fan in my chambers, I will stick  
21 with the \$30 fan. A lot of people would do it that way.

22 MR. RICKER: I think a lot of people would. I think  
23 people wouldn't even make -- I think that choice wouldn't even  
24 be a choice. They would say, am I buying a fan for \$30 or am I  
25 going to go out and buy something that has different

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 attributes, is a different product, and spend a lot of money?  
2 I don't think that -- I think that people that want to buy a  
3 bladeless fan are not necessarily people that are just walking  
4 into Rite Aid and saying, I need to cool myself down right now.  
5 I think that's exactly what we'll find.

6 I don't have market data at this point. We didn't  
7 plead it in the pleadings, that we pled the price, we pleaded  
8 the safety differences and we pleaded a few other things that I  
9 think are sufficient to define a certain submarket for  
10 bladeless fans.

11 The AT & T, I forget exactly what it is, but there is  
12 a case in which little electrical boxes that were made to the  
13 specifications of AT & T were a separate market from, you know,  
14 other electrical boxes that are the exact same other than the  
15 difference in specifications. And I think that that shows that  
16 small markets are appropriate in cases where there's a really  
17 defined demand, people are unwilling to make a switch from one  
18 to the other, and that's what we have here.

19 THE COURT: Just one sense from being a consumer is  
20 that people who want to be cool are going to look at more than  
21 just bladeless fans. It will depend on a wide range of  
22 consumer preferences, including cost, convenience, size, even  
23 novelty and aesthetics. But on the other hand, we're here at  
24 the pleading phase so that's the lowest standard that has to be  
25 met.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Anything else?

2 MR. RICKER: That is it, Your Honor. I think the  
3 briefs summarize it well beyond that.

4 THE COURT: All right. Mr. Rosenfeld, you can reply.

5 MR. ROSENFELD: Thank you, Your Honor. I, too, will  
6 try to be brief.

7 I will start with a point you made. We're talking  
8 about fraud here, and that's the core element of the claim.  
9 Mr. Ricker plotted out quite a theory that the strategy here  
10 was to disclose only the abstract to sort of smoke out a  
11 rejection. People would be satisfied that they had done their  
12 duty and we would have hidden what was in the full translation.

13 That's quite an elaborate theory. It's not supported  
14 by anything, including sort of what happened, I think, with the  
15 British and the American examiners. In addition, he came up  
16 with one response which was, thinks there is something in the  
17 Japanese patent relating to tilt. There, of course, were four  
18 patents here. He didn't plead any of that. In fact, in his  
19 pleading what he emphasized was that somehow we had hidden the  
20 Coanda surface which, of course, is discussed in the U.S.  
21 examiner's write-up.

22 So we're sort of going from theory to theory in a  
23 world of 9(b) requirements and clear and convincing  
24 requirements. And then we made one other cardinal mistake,  
25 which is, and this is straight out of *Therasense*, "You don't

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 get to reason from materiality to intent. That is, if there is  
2 a material omission then you can conclude there was an intent  
3 to do it. The case is quite clear those are separate  
4 requirements. It's not a sliding scale. They are separate  
5 requirements and the intent has to be the single most  
6 reasonable inference. There's no way that he has satisfied  
7 that standard and I submit there's no way that he can. So  
8 that's the issues in terms of the fraud, which is what we're  
9 talking about.

10 In terms of the *Abbott* or *Kaiser* case, I would urge  
11 Your Honor to read that case because it's not simply a case of  
12 an omitted translation. It's a case where in one context the  
13 translation was provided. In a different context, the  
14 translation wasn't provided. And it's a case where there was  
15 additional behavior, like hiding and/or overwhelming the  
16 examiners with prior art and the like. It is the classic case  
17 of egregious conduct, the kind of case that really falls quite  
18 neatly into the *Walker Process* fraud model. This case is not  
19 close as pled or as can be pled.

20 I think it's also very important, the pleading burden  
21 as you suggested in your question is claim by claim, element by  
22 element, and particularly given what happened with the British  
23 and the American examiners, non-cumulative information.  
24 Non-cumulative information.

25 On the declaratory judgment point, these threats in

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 the air, I do not think are enough. Yes, if you are trying to  
2 beat the person who is out to sue you to the courthouse door, I  
3 understand it. But in the face of our not suing on those  
4 patents, and representing to the Court that we don't intend to  
5 with regard to the current product, this notion of threats in  
6 the air is just that, and I don't believe it is a basis for  
7 declaratory judgment jurisdiction.

8 THE COURT: So let me digress just for a minute. In  
9 terms of the utility patents, all you are suing on is the  
10 spacer patent and the tilt patent. Well, you know, those --  
11 well, the spacer patent -- well, there's obvious questions that  
12 occur to me about that. It's not on this motion. And the tilt  
13 seems almost independent. I mean, the technology there is  
14 going to be not totally independent but it's quite distinct for  
15 the technology of the fan in general. And one would just,  
16 without knowing, my hunch would be that the validity or  
17 invalidity of those, both of those, are going to stand or not  
18 stand somewhat independent of your attempt to harness the  
19 coanda effect. So this looks like the utility patent part of  
20 this may be quite limited now that you are disclaiming  
21 enforcement of your first two patents.

22 Tell you what. I don't want to -- I will hear from  
23 Mr. Martinelli. He can comment on that after you finish your  
24 argument.

25 MR. ROSENFELD: Good. I appreciate that.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 Last point I would make, Your Honor, is on the market  
2 issue. I mean, it sounds to me like what Mr. Ricker was saying  
3 is that there is a market, separate market, for expensive  
4 bladeless fans. So whether Cornucopia's \$70 bladeless fan  
5 competes with that \$40 fan may be one issue, but if it's an  
6 expensive fan then it's a different market, submit that there  
7 is no precedent for that kind of market definition. They  
8 simply have not satisfied that requirement, and it's not just a  
9 technical pleading point. That's what makes this an antitrust  
10 claim. If Dyson has a 5 percent share *Walker Process* is  
11 irrelevant. They don't have the ability to monopolize the  
12 market. They have pled nothing to suggest that we do. And  
13 those facts are not susceptible of clever turn of phrase. They  
14 are what they are. And the materials that accompany Mr.  
15 Forrest's declaration, there's all kinds of material about who  
16 the competitors are and what the shares are and so on.

17 So I submit that they haven't and cannot meet their  
18 burden on that issue as well. With that, I will defer to Mr.  
19 Martinelli.

20 THE COURT: Brief comment, Mr. Martinelli, if you  
21 wish. Or as I tell people when I'm sentencing them to prison,  
22 you are free to say anything you would like but you don't have  
23 to.

24 MR. MARTINELLI: I'm just happy to clarify any  
25 questions you have. You seemed a little -- if there was

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 something there.

2 THE COURT: Not so much a question as just thinking  
3 through where this sits now that you have disclaimed the first  
4 two patents.

5 MR. MARTINELLI: We are not asserting the first two  
6 patents against that fan. We don't believe that fan infringes  
7 the first two. So this case going forward from our side will  
8 be about the aesthetic designs in the two patents that we  
9 asserted in the PI, the tilt patent, and the spacer patent.

10 Now, there are aspects of both the tilt patent and the  
11 spacer patent that are relevant to bladeless fan designs. I  
12 don't know that they would necessarily be directly applicable  
13 in other types of fans. But that's what we're going forward  
14 on. That's what the case is going to be about.

15 THE COURT: And the reason I'm sort of musing about  
16 this is it does seem to narrow this somewhat and at least make  
17 it more manageable looking ahead at it.

18 All right. By the way, have you all done any  
19 discovery? You just told me he didn't do anything. Have you  
20 sent out any discovery?

21 MR. SHWARTS: Your Honor, under the rules we need to  
22 wait for your order or Rule 16 conference which we have not  
23 had.

24 THE COURT: Actually, you know, my practice is I rule  
25 on the motions to dismiss and then I set out a scheduling

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 conference. And in that order I direct you to commence  
2 discovery and not wait.

3 MR. SHWARTS: Either way, we haven't crossed that  
4 bridge yet.

5 MR. MARTINELLI: There's been no answers in either of  
6 the two actions, either.

7 THE COURT: All right. The motions are taken under  
8 advisement. The fans are taken under advisement as well. And  
9 after I have filed a ruling you can call chambers and arrange  
10 to pick up your fans.

11 Oh. Yes. I just forgot this when I was scheduling  
12 this. I usually call for the submission of proposed findings  
13 of fact and conclusions of law in preliminary injunctions, and  
14 I just forgot. And even when I forget, sometimes the lawyers  
15 do it on their own.

16 I don't want to slow this down, but on the other hand  
17 I think that would be very helpful in defining the parties'  
18 contention. So let me ask counsel how long would it take you  
19 to submit the proposed findings of fact and conclusions of law?  
20 Let me tell you, I really want to move on this. I don't want a  
21 delay.

22 MR. SHWARTS: Your Honor, we could submit by Monday.

23 THE COURT: Mr. Ricker?

24 MR. RICKER: I could do it by Wednesday, next  
25 Wednesday.

July 11, 2012 - Preliminary Injunction Hearing/Motion to Dismiss

1 THE COURT: That's fine. It will help you to see  
2 theirs before you finalize yours. It is really helpful because  
3 even if it's not very persuasive, it does make clear for me  
4 exactly what both sides are seeking findings about. And it's  
5 easier not to overlook something that I might overlook because  
6 I don't think it's all that important but that one of the  
7 parties does think it's important. I still might not make  
8 specific findings.

9 I wish I would have thought of that before. So it is  
10 ordered that the Dyson submit proposed findings of fact and  
11 conclusions of law by Monday, what day is that, July 16; and  
12 Cornucopia submit its by July 18.

13 I intend to get a ruling out on this very quickly but  
14 I will need your submissions first.

15 Thank you. We'll be adjourned.

16 (Proceeding concluded at 2:34 p.m.)

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C E R T I F I C A T E

I, LAURIE A. ADAMS, do hereby certify that I am duly appointed and qualified to act as Official Court Reporter for the United States District Court for the District of Arizona.

I FURTHER CERTIFY that the foregoing pages constitute a full, true, and accurate transcript of all of that portion of the proceedings contained herein, had in the above-entitled cause on the date specified therein, and that said transcript was prepared under my direction and control.

DATED at Phoenix, Arizona, this 12th day of July, 2012.

s/Laurie A. Adams

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Laurie A. Adams, RMR, CRR

# Exhibit 5

1 **WO**

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6 IN THE UNITED STATES DISTRICT COURT  
7 FOR THE DISTRICT OF ARIZONA

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9 Cornucopia Products, LLC,  
10 Plaintiff,  
11 vs.  
12 Dyson, Inc. and Dyson, Ltd.,  
13 Defendants.

No. CV 12-00234-PHX-NVW

**CONSOLIDATED WITH:**

14  
15 Dyson Technology Limited; Dyson, Inc.,  
16 Plaintiffs,  
17 vs.  
18 Cornucopia Products, LLC,  
19 Defendant.

No. CV 12-00924-PHX-NVW

**ORDER**

20 Before the Court is Dyson, Inc.'s and Dyson Technology Limited's Motion for a  
21 Preliminary Injunction (Doc. 33) against Cornucopia Products, LLC. This order  
22 comprises the Court's findings of fact and conclusions of law pursuant to Fed. R. Civ. P.  
23 52(a).

24 Dyson seeks to enjoin sale of Cornucopia's bladeless fan. Cornucopia's fan, from  
25 an unknown Chinese manufacturer, is "almost a direct copy" of Dyson's bladeless fan.  
26 *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1125 (Fed. Cir. 1993). There  
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28

1 are a few differences, but the overall appearance is strikingly similar. Intentional copying  
2 is both proven and undisputed.

3 Dyson's U.S. patent estate in its bladeless fan includes four utility patents and two  
4 design patents. Yet on this motion Dyson relies only on its design patents. It withdraws  
5 two of its utility patents from any claim against Cornucopia and withdraws the other two  
6 from consideration in this motion. Cornucopia's defense is that everything it copied is  
7 functional and cannot be monopolized by a design patent. Much of what it copied is  
8 functional. But some of Dyson's design is valid and easily could have been avoided  
9 without loss of function to Cornucopia. Instead, Cornucopia strained for the same look.  
10 Though Dyson's motion fails in important respects and is a close call in other respects, on  
11 balance preliminary injunctive relief is warranted. A bond of \$500,000 will be required.

## 12 **I. BACKGROUND**

13 In February of this year, Cornucopia Products, LLC, filed an action in this Court  
14 against Dyson Ltd., a United Kingdom company, and its United States subsidiary, Dyson,  
15 Inc. Cornucopia's complaint accused Dyson Ltd. and Dyson, Inc. of violating Section 2  
16 of the Sherman Act by illegally monopolizing the "bladeless fan" market through  
17 obtaining patents by fraud on the United States Patent and Trademark Office, and  
18 enforcing those patents through sham litigation. More specifically, Cornucopia claimed  
19 that the Dyson entities failed to provide the Patent Office with a full English translation  
20 of a Japanese patent (JP S56-167897), which allegedly was invalidating prior art.  
21 Cornucopia further claimed that its bladeless fan product embodied the Japanese patent  
22 and sought a declaration that four Dyson-owned utility patents were invalid,  
23 unenforceable, and not infringed.

24 On May 2, 2012, Dyson Technology Limited (the actual owner of the Dyson  
25 patents) and Dyson, Inc. (collectively, for purposes of this order, "Dyson"), but not  
26 Dyson Ltd., filed a separate action in this district against Cornucopia for infringement of  
27 four patents — two of which overlapped the four utility patents identified in  
28 Cornucopia's antitrust action. Dyson's complaint also charged that Cornucopia infringed

1 two design patents not identified in Cornucopia’s antitrust complaint, namely U.S.  
 2 Design Patent Nos. D602,143 (“D143”) and D605,748 (“D748”).

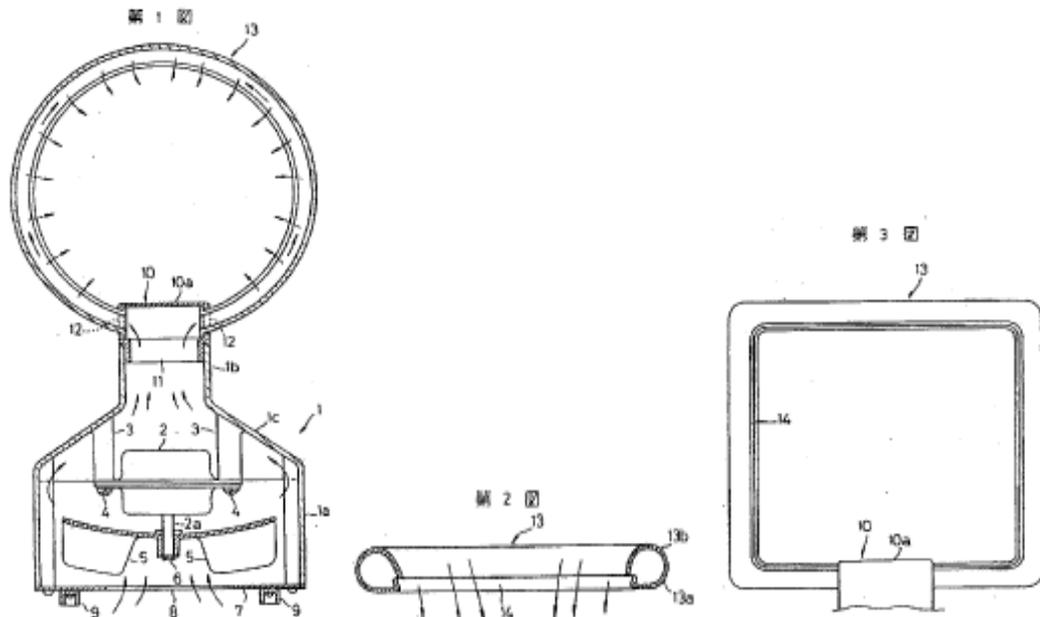
3 The two actions were consolidated by stipulation of the parties on May 24, 2012.  
 4 (Doc. 25.) The next day, Dyson filed this Motion for Preliminary Injunction with  
 5 supporting declarations and evidence. (Doc. 32 (sealed version); Doc. 33 (public  
 6 redacted version).) Dyson’s Motion seeks to enjoin Cornucopia from making, using,  
 7 offering to sell, or selling the bladeless fan it currently offers (model no. D8600-12), on  
 8 the grounds that it infringes the D143 and D748 patents. Although Dyson’s complaint  
 9 alleges infringement of both design and utility patents, Dyson seeks a preliminary  
 10 injunction only on the design patents.

11 On July 11, 2012, the Court took evidence from Dyson by declarations and  
 12 testimony of three witnesses. Cornucopia offered no witnesses at the hearing.

13 **II. THE TECHNOLOGY AT ISSUE**

14 **A. The Japanese Patent**

15 In 1981, the Japanese patent office issued patent number S56-167897. All parties  
 16 agree that this Japanese patent discloses a “bladeless fan,” depicted in the patent through  
 17 the following three figures:



1           Figure 1 depicts a cross-section of the entire fan, which is not truly bladeless. The  
2 trapezoid shapes towards the bottom of the fan (items 5) are fan blades driven by a motor  
3 (item 2). The fan blades draw air from underneath the base, as denoted by the arrowed  
4 lines surrounding the number 8, and push it through the fan's neck (item 1b) into what  
5 the patent calls — according to Cornucopia's translation — the “wind discharge ring”  
6 (item 13), where one might expect a traditional fan's blades to be located. The parties  
7 refer to this ring as a “nozzle.”

8           Figure 2 is a cutaway view of the nozzle. As figure 2 shows, the nozzle is a tube  
9 with an annular slit (item 14) — as if one had taken a hose, sliced it open lengthwise,  
10 rolled it back into a hose shape with one side of the slice slightly overlapping the other  
11 side, and then curled the entire thing into the shape of a ring. As the fan inside the base  
12 fills the nozzle with air, the air escapes from the nozzle through the slit (and presumably  
13 toward the user), as depicted by the two shorter arrowed lines in figure 2 (and the inward-  
14 pointing arrows arranged radially over item 13 in figure 1).

15           The four longer arrowed lines in figure 2 appear to depict air from behind the fan  
16 being pulled into the open ring and forward. According to Cornucopia's translation of  
17 the Japanese patent, “the actual amount of wind [generated by the fan] is much higher  
18 than the amount of wind directly discharged from the slit.” (Doc. 1 ¶ 12 (bracketed  
19 material inserted).)

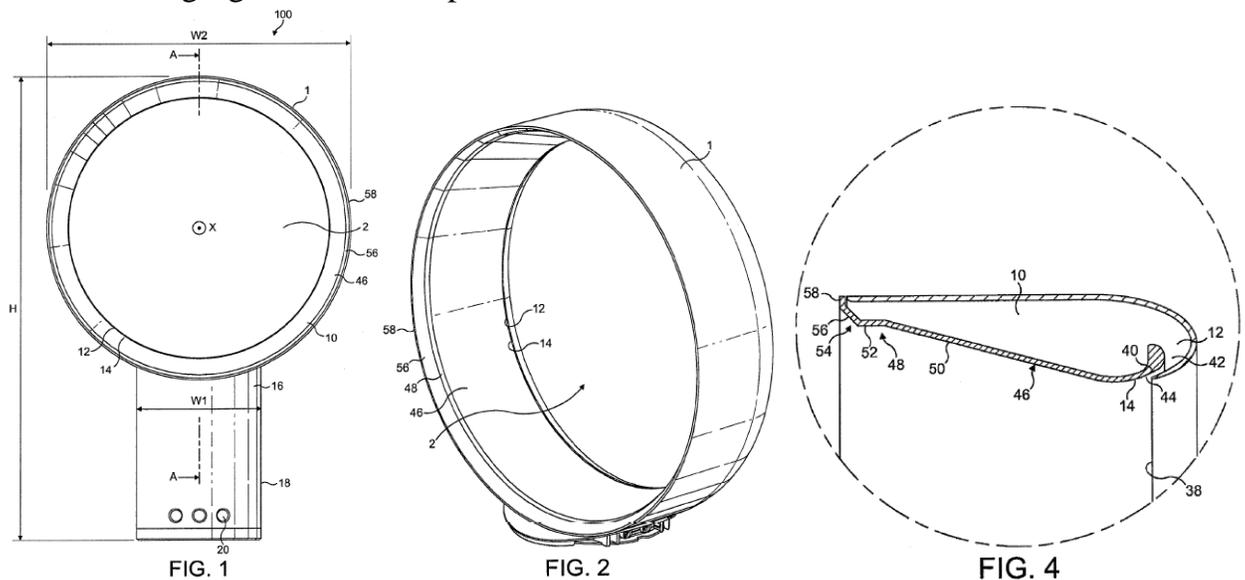
20           How the fan accomplishes this feat is somewhat in question. Cornucopia's  
21 complaint claims that the Japanese fan induces the “Coanda effect.” (*See id.*) The  
22 Coanda effect is “[t]he tendency of a gas or liquid coming out of a jet to travel close to  
23 the wall contour even if the wall's direction of curvature is away from the jet's axis.”  
24 *McGraw-Hill Dictionary of Scientific and Technical Terms* 416 (6th ed. 2003). The  
25 Coanda effect can supposedly “entrain” — grab and pull along — surrounding air, thus  
26 increasing the flow of air beyond what is being pushed out of the “jet.”

27           The Coanda effect necessarily requires a curved surface downstream from the  
28 “jet” — in this case, downstream from the slit through which air escapes the nozzle. The

1 Japanese patent's figures do not disclose such a surface, nor does Cornucopia quote any  
 2 text from the Japanese patent regarding the Coanda effect. As far as the figures disclose,  
 3 it appears that the nozzle and slit are designed to push air both forward and inward, with  
 4 nothing downstream from the slit. Conceivably, this could create a low-pressure zone  
 5 within the nozzle, thus pulling air from behind the nozzle forward. However, nothing in  
 6 the figures discloses the necessary physical shape downstream from the slit to take  
 7 advantage of the Coanda effect.

### 8 B. Dyson's '449 Patent

9 In April 2011, the Patent Office issued a utility patent to Dyson, numbered  
 10 7,931,449 ("449 patent"). Though not directly at issue in these preliminary injunction  
 11 proceedings, the '449 patent is relevant to questions of functionality discussed below.  
 12 The following figures from that patent will assist this discussion:



23 Figure 1, although a front view and not a cross-section, roughly corresponds to figure 1  
 24 of the Japanese patent, showing a base and a ring-shaped nozzle. Like the Japanese  
 25 patent, a fan (which Dyson calls an impeller) hides within the base of Dyson's preferred  
 26 embodiment and pushes air into the nozzle (figs. 1 and 2, item 1), which escapes from an  
 27 annular slit (fig. 4, item 38; *see also* fig. 2, items 12 and 14) and can therefore create a  
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1 low-pressure zone by “which air from outside the fan assembly is drawn by the air flow  
2 emitted from the mouth [*i.e.*, the slit in the nozzle].” ’449 Patent, col. 9, ll. 7–9.

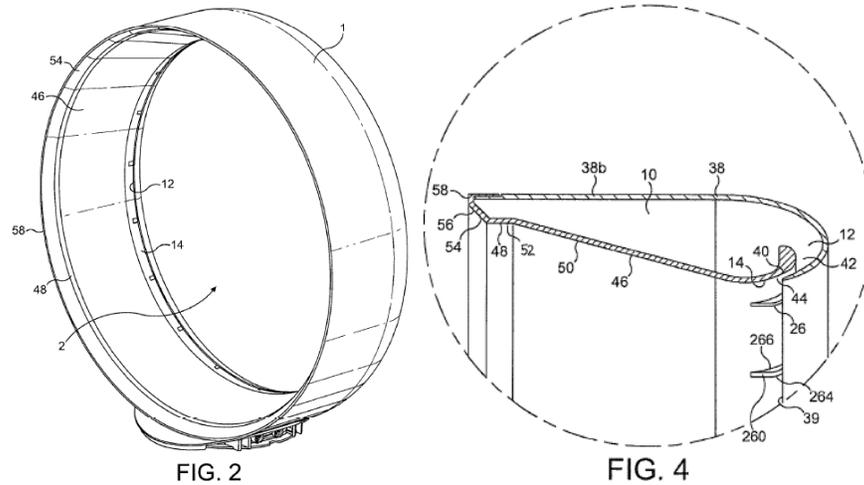
3 The nozzle is depicted from the outside in figure 2 and in cutaway in figure 4. Its  
4 cross-section resembles an inverted airfoil. A part of this airfoil shape — the angles  
5 formed by items 38, 46, 48, 50, 52, 54, 56, and 58 in relation to each other and in relation  
6 to the nozzle’s axis (fig. 1, item x) — is not only a preferred embodiment but also  
7 comprises a “diffuser” claimed as part of the invention. This shape supposedly focuses,  
8 smoothes, and accelerates the airflow emerging from the slit (fig. 4, item 38).  
9 Cornucopia’s fan does not practice the diffuser shape on the interior of the nozzle as  
10 claimed in the ’449 patent.

11 The ’449 patent’s specification — although not the claims — also discusses the  
12 potential for a “Coanda surface” upstream from the “diffuser” but downstream from the  
13 slit. Figure 4, item 14, represents such a surface — a curvature sloping away from the  
14 direction in which air escaping the slit would most naturally travel. According to the  
15 specification: “Through the use of a Coanda surface, an increased amount of air from  
16 outside the fan assembly is drawn through the opening by the air emitted from the [slit in  
17 the nozzle].” *Id.*, col. 3, ll. 15–18.

### 18 **C. Dyson’s ’166 Patent**

19 In January 2012, the Patent Office issued a utility patent to Dyson, numbered  
20 8,092,166 (“’166 patent”). The ’166 patent is not directly at issue in these preliminary  
21 injunction proceedings, but it too is relevant to questions of functionality discussed  
22 below.

23 The figures disclosed in the ’166 patent are almost identical to those in the ’449  
24 patent. The most significant difference for present purposes is the addition of “spacers”  
25 — tiny tabs that keep the two sides of the nozzle’s slit a uniform distance apart, as  
26 depicted in the following figures (fig. 4, items 26, 260, 266; also visible in fig. 2):  
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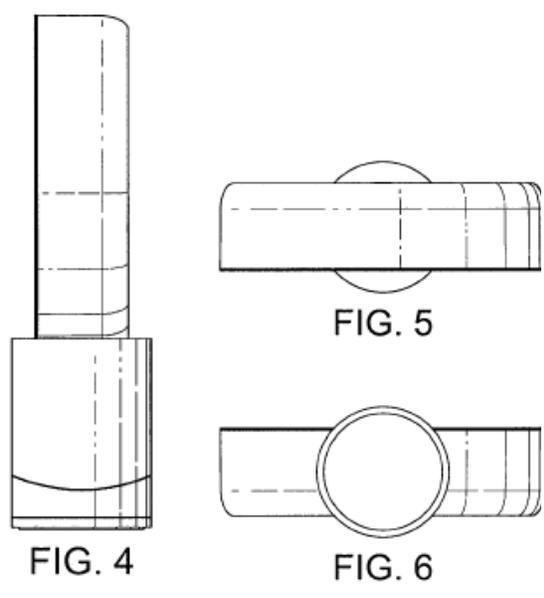
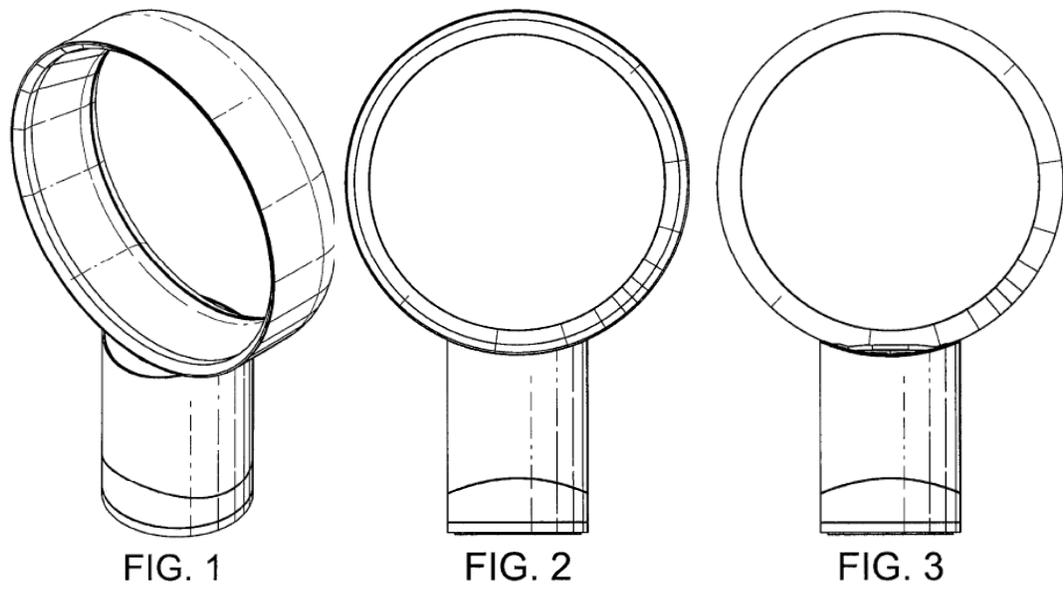
10 Similar to the '449 patent, the '166 patent calls for a “nozzle defining an opening  
11 through which air from outside the fan assembly is drawn by the air flow emitted from  
12 the mouth.” '166 Patent, col. 10, ll. 32–34. Unlike the '449 patent, however, the '166  
13 patent makes no claims based on the angles formed by what the '449 patent calls a  
14 “diffuser.” Also unlike the '449 patent, the '166 patent contains a claim based on the  
15 Coanda effect, calling for “a Coanda surface located adjacent to the [slit] and over which  
16 the [slit] is arranged to direct the air flow.” *Id.*, Claim 15. (See also figs. 2 and 4, item  
17 14.)

18 **D. Dyson’s D143 Patent**

19 On October 13, 2009, the Patent Office issued to Dyson a design patent, numbered  
20 D602,143 (“D143”). Titled “fan,” the design patent claims the following design through  
21 six figures — a perspective view (fig. 1), a front view (fig. 2), a rear view (fig. 3), a side  
22 view (fig. 4), a top view (fig. 5), and a bottom view (fig. 6):

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This design essentially mimics the preferred embodiment of the '449 and '166 patents.

**E. The D748 Patent**

On December 8, 2009, the Patent Office issued to Dyson a design patent, numbered D605,748 (“D748”). Also titled “fan,” the design patent claims the following design through the same six figures used in the D143 patent, except that all lines representing the cylindrical base were changed from solid to dashed, such as in this perspective view:

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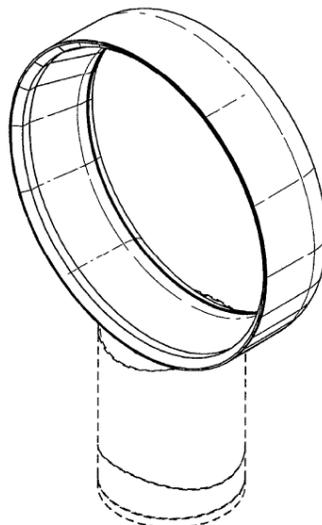


FIG. 1

In other words, the D748 patent claims the design of the nozzle only, not the design of the entire fan.

**F. Dyson’s Fan**

Dyson claims that its AM01 “Air Multiplier” fan embodies the design disclosed in the D143 and D748 patents. The following is a photograph of the AM01:



Dyson began marketing these fans in Australia in October 2009, and first introduced them in the United States in March 2010.

1           **G.    Cornucopia’s Fan**

2           In January 2012, Cornucopia began marketing a competing fan. The following  
3 photographs show perspective, front, and top views of Cornucopia’s fan:



13           **III. ANALYSIS**

14           A plaintiff seeking a preliminary injunction must establish: (1) likelihood of  
15 success on the merits, (2) likelihood of irreparable harm absent preliminary relief, (3) that  
16 the balance of equities tips in its favor, and (4) that an injunction is in the public interest.  
17 *Winter v. Natural Res. Defense Council*, 555 U.S. 7, 20 (2008). A full analysis of these  
18 four factors is only necessary as to the D143 patent, which claims the design of the entire  
19 fan, as opposed to the D748 patent, which claims only the nozzle. There is a substantial  
20 question of invalidity of the D748 patent and of the D143 patent as to the nozzle, which  
21 will be discussed together in the context of the D143 patent. However, a preliminary  
22 injunction is appropriate as to other likely infringement of the D143 patent.

23           **A. Likelihood of Infringement**

24                   **1. Legal Standard**

25           With respect to design patents, infringement comes down to whether, “in the eye  
26 of an ordinary observer, giving such attention as a purchaser usually gives . . . [the]  
27 resemblance [between the claimed design and the accused product] is such as to deceive  
28

1 such an observer, inducing him to purchase one supposing it to be the other.” *Gorham*  
2 *Co. v. White*, 81 U.S. 511, 528 (1871). This “ordinary observer” test is somewhat  
3 artificial. For example, labeling usually may not be considered. The company logo  
4 undoubtedly helps ordinary observers distinguish products, but design patent protection  
5 would essentially collapse if putting one’s own logo on an otherwise identical product  
6 could defeat the ordinary observer test. *See L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988  
7 F.2d 1117, 1126 (Fed. Cir. 1993) (one cannot avoid design patent infringement by  
8 labeling). In addition, the ordinary observer is one who compares the accused product to  
9 the claimed design “as a whole,” rather than making a feature-by-feature comparison.  
10 *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 679–80 (Fed. Cir. 2008) (en banc).  
11 Finally, the ordinary observer is assumed to be familiar with the prior art — *i.e.*, all  
12 relevant preexisting designs for similar products. *Id.* at 677.

## 13 2. Claim Construction

14 Before evaluating an accused product, the scope of the patent must first be settled.  
15 Questions of functionality often predominate in this analysis because design patents  
16 protect only “the novel, ornamental features of the patented design,” not the functional  
17 elements. *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1405 (Fed. Cir. 1997).  
18 “Where a design contains both functional and non-functional elements, the scope of the  
19 claim must be construed in order to identify the non-functional aspects of the design as  
20 shown in the patent.” *Egyptian Goddess*, 543 F.3d at 680.

21 If a given “configuration is made imperative by the elements which it combines  
22 and by the utilitarian purpose of the device,” that configuration is functional and not  
23 protected by a design patent. *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed.  
24 Cir. 1988). If, on the other hand, “there are several ways to achieve the function of an  
25 article of manufacture, the design of the article is more likely to serve a primarily  
26 ornamental purpose.” *L.A. Gear*, 988 F.2d at 1123.

27 Other appropriate considerations [when evaluating the  
28 functional/ornamental distinction] might include: whether the

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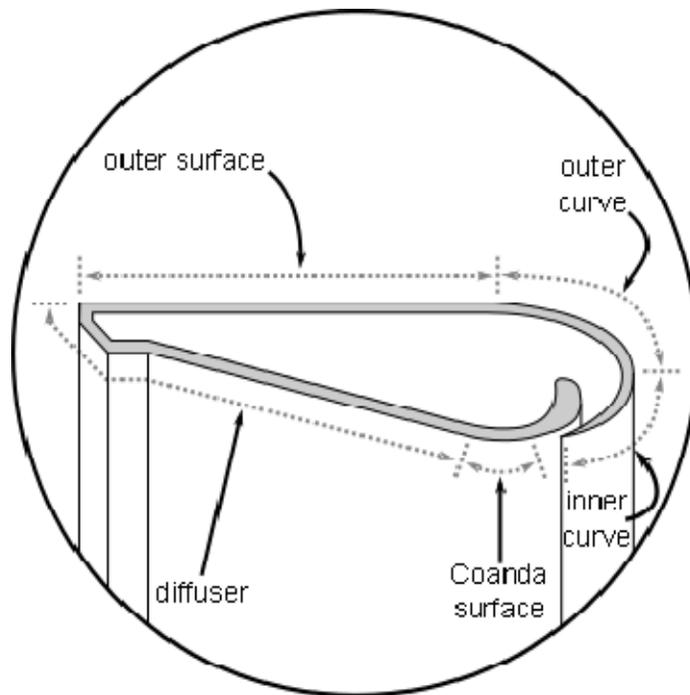
protected design represents the best design; whether alternative designs would adversely affect the utility of the specified article; whether there are any concomitant utility patents; whether the advertising touts particular features of the design as having specific utility; and whether there are any elements in the design or an overall appearance clearly not dictated by function.

*Berry Sterling Corp. v. Pescor Plastics Inc.*, 122 F.3d 1452, 1456 (Fed. Cir. 1997).

Here, Cornucopia raises a question of functionality as to nearly every aspect of the D143 design. This analysis can be reduced to four categories: (1) the shape of the nozzle's cross-section, (2) the nozzle's circularity, (3) the nozzle's depth, and (4) the shape of the base. Each will be discussed in turn.

**a. The Nozzle's Cross-Section**

The first aspect of the nozzle that raises a functionality question is the shape of its cross-section. The following cutaway illustration (based on figure 4 of the '449 patent) will assist this discussion:



1 For purposes of this preliminary injunction, the Court finds that the portions  
2 labeled here as “Coanda surface” and “diffuser” (the interior surface of the nozzle) are  
3 functional for two reasons. First, this configuration is claimed as novel in Dyson’s utility  
4 patents. Specifically, the ’449 utility patent claims the diffuser’s general shape (although  
5 not the length of the various faces) as follows: “a diffuser portion tapering away from  
6 [the nozzle’s] axis, a guide portion downstream from the diffuser portion and angled  
7 inwardly relative thereto, and a tapering portion downstream from the guide portion and  
8 angled outwardly relative thereto.” ’449 Patent, col. 9, ll. 14–18. A dependent claim  
9 calls for an embodiment “wherein the angle subtended [*i.e.*, formed] between the diffuser  
10 portion and the [nozzle’s central] axis is in the range from 7° to 20°.” *Id.*, col. 9, ll. 19–  
11 21. And the ’166 utility patent claims the Coanda surface. ’166 Patent, claim 16.

12 Second, Peter Gammack, Dyson Technology’s concept design director and one of  
13 the named inventors of the D143, D748, and ’449 patents, testified that the shape of the  
14 diffuser and Coanda surface are “functional to achieve specifically what we are trying to  
15 achieve as a velocity and a flow.” (Doc. 54 at 36.) Accordingly, given the functionality  
16 of the diffuser and Coanda surface, Dyson’s D143 and D748 patents do not protect those  
17 features.

18 As to the outer surface and outer curve, however, Gammack testified that they are  
19 not functional. He stated that, for example, the outer surface could bulge upward (rather  
20 than running parallel to the nozzle’s axis), or the outer curve could form a right angle  
21 rather than a curve, without affecting the fan’s performance.

22 At this stage of the proceedings and the evidence, the Court is not persuaded that  
23 performance would be unaffected by a different design on the outer surface and outer  
24 curve. For example, if the outer surface dipped inward (rather than bulged outward), thus  
25 creating a “pinch” within the nozzle, undesirable air pressure effects might result. An  
26 outer bulge in the surface of the ring would increase the interior volume of the nozzle and  
27 the air to be driven through it, which could dissipate some of the fan’s energy in  
28 compressing air in dead space rather than driving it through the discharge ring with

1 maximum force. For many customers, a bulkier nozzle would reduce convenience,  
2 especially on a surface, like a table or desk, shared with other objects.

3 The outer and inner curves directing airflow to the air discharge slit are also  
4 functional. Together, their appearance discloses the function they perform. A competitor  
5 need not disguise obvious function, and the design patentee cannot own the look of  
6 function. *Cf.* U.S. Patent & Trademark Office, *Manual of Patent Examination Procedure*  
7 § 1504.01(c) (8th ed. 2001, rev. 2010) (“An ornamental feature or design [worthy of  
8 design patent protection] . . . cannot be the result or ‘merely a by-product’ of functional  
9 or mechanical considerations.”). Thus, for preliminary injunction purposes, the shape of  
10 the outer surface, outer curve, and inner curve is not appropriately claimed in the D143 or  
11 D748 patents.

#### 12 **b. The Nozzle’s Circularity**

13 The second question of functionality arises from the circularity of Dyson’s nozzle.  
14 It could be shaped differently, *e.g.*, as a square, which the Japanese patent proposed. But  
15 it cannot be disputed that a circle is the only design that will achieve the sort of air  
16 discharge pattern and effectiveness normally associated with a table fan. Indeed, none of  
17 Dyson’s various bladeless fans has a shape other than a circle or a vertically oriented  
18 racetrack shape (mimicking the now-popular “tower fan”). (*See* Doc. 55 at 15.) It is  
19 unworthy of belief to say that this was purely an aesthetic, ornamental choice.

20 In addition, the ’449 utility patent claims circularity in its dependent claims, *see*  
21 ’449 Patent, claims 8–10, as does the ’166 utility patent, *see* ’166 Patent, claims 7–9, 18,  
22 22–24. Whether that claim is valid or invalid, it concedes functionality of the circle and  
23 precludes a design patent on the same feature.

24 Finally, even if circularity were not functional, it is anticipated by the Japanese  
25 patent, which proposes — like the D143 patent — a circular nozzle sitting on a base that  
26 is thinner than the nozzle’s diameter at the point where the nozzle attaches to the base.  
27 Thus, Dyson’s claim of ownership of the look of a circle raises substantial questions of  
28 invalidity. The D143 and D748 patents thus do not appropriately claim the nozzle’s

1 circularity as such. In the case of the D143 patent, its combination with other elements  
2 may nonetheless be protectable, as discussed below.

3 **c. The Nozzle's Depth**

4 The D143 and D748 patents disclose a nozzle of a certain depth. On cross  
5 examination, Gammack testified that reducing the depth of the nozzle by half “might  
6 affect” air flow and velocity. (Doc. 54 at 25.) This point was not explored in any greater  
7 detail. However, the fact that Dyson’s nozzle has depth downstream from the air  
8 discharge slit is certainly functional. It is necessary to Dyson’s claim to have harnessed  
9 the Coanda effect to improve airflow. Even if the Coanda effect is illusory, the nozzle’s  
10 depth reduces peripheral diffusion in favor of airflow in the axis and the plain of the  
11 nozzle. It is likely that a bladeless fan nozzle with little or no depth (as in the Japanese  
12 patent) would be less effective than a nozzle with a few inches of depth (as in Dyson’s  
13 design). Indeed, the addition of such depth — through a “diffuser” — is one of the ways  
14 in which Dyson’s ’449 utility patent claims to differ from the prior art. Thus, the D143  
15 and D748 patents do not appropriately claim *any* nozzle with depth. As discussed below,  
16 however, the D143 patent may appropriately claim that depth relative to other  
17 proportions disclosed by that patent.

18 **d. The Shape of the Base**

19 Cornucopia argues that the cylindrical shape of the base, and its height relative to  
20 the rest of the fan, is functional. Gammack countered with drawings of various shapes he  
21 explored for Dyson’s bladeless fans, including square, cylindrical but bulbous, and  
22 cylindrical tapering into a dome shape at the top. Where a taller stand is needed, there  
23 could also be a “neck” component — a transition between the base and the nozzle that is  
24 narrower. Dyson markets such a model, although it is not at issue here.

25 The function of the base is as a platform for the concealed fan that draws air from  
26 around the base and forces it into the nozzle for discharge. Since exposed fan blades are  
27 an obvious safety hazard, some sort of housing is necessary. And since the fan blades  
28 rotate in circular fashion, any sort of housing will, at a minimum, be cylindrical.

1           The cylindrical shape of such housing is not just one among many equally useful  
2 shapes. Rather, function requires cylindrical housing of the fan, or air and pressure  
3 would be lost between the blades and the housing. Thus, Gammack was right that  
4 numerous designs could accommodate the impeller and ducting inside the base without  
5 changing the fan’s performance or stability — but only in the sense that the operating  
6 internal cylindrical shape could be hidden with an additional external covering of any  
7 shape. The question here is whether Dyson can monopolize the look of a cylindrical  
8 form that is functional. The answer in general is no. The look of a cylinder is not  
9 arbitrary or decorative; it is the look of operation. Like everyone else, Dyson can  
10 monopolize in a design patent only an arbitrary shape. Accordingly, the D143 patent  
11 does not appropriately claim all circular bladeless fan bases.

12                           **e. Specific Proportions**

13           “[T]hat elements of the [patented] design[ have a utilitarian purpose] does not mean  
14 that . . . the combination of these elements into the patented design[] is dictated by  
15 primarily functional considerations.” *See L.A. Gear*, 988 F.2d at 1124. Here, by contrast,  
16 each portion of the design and its combination with other portions appears to have a  
17 functional purpose.

18           At oral argument, however, Dyson’s counsel relied heavily on the overall  
19 proportions disclosed in the D143 design. (*See* Doc. 54 at 74 (“[t]he dimensions, the  
20 proportions, the overall proportions of the width to the height of the fan is worthy of  
21 design protection”); *id.* at 77 (“[T]here are proportions . . . . When you look at the  
22 [perspective] view, you see relevant proportions between the diameter of the fan and the  
23 width of the nozzle.”); *id.* at 78 (“[T]he proportions are in the [D143 patent’s] figures.  
24 The proportions are relevant.”); *id.* at 79 (“the patent has perspective views that show all  
25 the proportions”).) The Court is persuaded that although a substantial question exists  
26 whether the combination of shapes and their orientation to each other is functional, the  
27 proportions of the various components in relation to each other is ornamental.  
28

### 3. Comparison to Cornucopia's Fan

The D143 patent appropriately claims a bladeless fan design with a cylindrical base of a certain diameter and height in proportion to a ring-shaped nozzle of a certain diameter and depth. Cornucopia's fan precisely embodies these limitations. Distinguishing features also exist, but they do not alter the overall impression as compared to the D143 patent. For example, like Dyson's AM01 fan, Cornucopia's adds buttons, air intake grilles, and a power cord, all of which are necessary. Also, the foot of Cornucopia's base flares out to a square pedestal. The D143 patent discloses none of these features. But the Cornucopia fan otherwise mimics the valid design precisely. Indeed, the proportions are mimicked with such exactness that the Cornucopia fan's nozzle is interchangeable with the Dyson AM01 base.

Despite the minor the differences, the overall impression of the Cornucopia fan is deceptively similar to the D143 patent in the eye of the "ordinary observer." The Cornucopia fan's pedestal, in particular, does not materially distinguish Cornucopia's fan from Dyson's valid design. Rather, the overall impression made by the Cornucopia fan is as if one simply set the Dyson design on a pedestal. On balance, such a difference does not vitiate Dyson's likelihood of success on the merits. *Cf. Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1303–04 (Fed. Cir. 2010) (reversing ITC's finding of non-infringement because, among other things, it "concentrate[ed] on small differences in isolation" and was thus "distracted from the overall impression of the claimed ornamental features"); *Int'l Seaway Trading Corp. v. Walgreens Corp.*, 589 F.3d 1233, 1243 (Fed. Cir. 2009) (affirming district court's conclusion that slight changes and additions to a patented design do not detract from the overall impression); *Payless Shoesource, Inc. v. Reebok Int'l Ltd.*, 998 F.2d 985, 990–91 (Fed. Cir. 1993) (reversing denial of preliminary injunction because district court "focus[ed] on a single difference as opposed to the entirety of the patented design"); *Litton Sys., Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 1444 (Fed. Cir. 1984) ("minor differences between a patented design and an accused

1 article’s design cannot, and shall not, prevent a finding of infringement”); *E. Am. Trio*  
2 *Prods., Inc. v. Tang Elec. Corp.*, 97 F. Supp. 2d 395, 407–08 (S.D.N.Y. 2000)  
3 (“differences in the detail of the design will not defeat infringement where two designs  
4 give substantially the same impression to an ordinary observer”). Dyson is therefore  
5 likely to persuade the trier of fact that the “ordinary observer” would consider  
6 Cornucopia’s fan materially indistinguishable from the D143 design. Dyson has  
7 therefore satisfied the first element of the preliminary injunction test.

### 8 **B. Irreparable Harm**

9 Although submitted through declarations and based on hearsay, the Court accepts  
10 for purposes of these proceedings Dyson’s evidence regarding consumer response to its  
11 AM01 fan. *Johnson v. Couturier*, 572 F.3d 1067, 1083 (9th Cir. 2009) (“A district court  
12 may . . . consider hearsay in deciding whether to issue a preliminary injunction.”). The  
13 design of the AM01, which substantially embodies the D143 patent, is the single most  
14 important driver of consumer demand for that product. (Doc. 32-3 at 4 (sealed).)  
15 Cornucopia’s fan was obviously created to provide consumers with almost exactly the  
16 same overall appearance, but at a much lower price. While Dyson’s 12-inch AM01 fan  
17 carries a suggested retail price of \$329, Cornucopia’s equivalent fan retails at Bed Bath &  
18 Beyond — one of Dyson’s top retail distributors — for \$79.99.

19 Some retailers are reluctant to stock or continue to carry Dyson’s fan due to its  
20 high price. Greg Forrest, sales director for Dyson Inc., testified that a retailer in the “DIY  
21 channel”<sup>1</sup> recently informed Dyson it was considering no longer stocking Dyson fans due  
22 to price. (Doc. 54 at 51–52.) Dyson submitted no evidence that the Cornucopia fan had  
23 anything to do with this retailer’s deliberations, but it illustrates that retailers, like  
24 consumers, can be put off by Dyson’s price — from which it is a persuasive inference  
25 that retailers would more readily stock a much less expensive version of the fan with

---

26  
27 <sup>1</sup> The Court presumes “DIY channel” refers to do-it-yourself home improvement  
28 stores such as Lowe’s and The Home Depot.

1 essentially the same function and design. Indeed, Dyson has photographed a Bed Bath  
2 & Beyond store in California where both the Dyson and Cornucopia fans were displayed  
3 side-by-side, but only Cornucopia's fans were available for sale (Doc. 54 at 49–50),  
4 suggesting that the store was shifting its focus to marketing Cornucopia's fan. Bed Bath  
5 & Beyond has also recently asked Dyson to lower its price. (*Id.* at 57.)

6 Cornucopia's fan and pricing will likely cause price erosion in Dyson's fan. If  
7 retailers become accustomed to stocking and selling an equivalent-appearing fan at a  
8 fraction of the price, these retailers may then be able to demand price concessions from  
9 Dyson. Likewise, some consumers who would have seriously considered buying a  
10 Dyson fan at the original price will choose the much cheaper competitors, or hold out,  
11 expecting Dyson to lower its price in response. Accordingly, the Court finds that  
12 Cornucopia's infringing fan is likely to cause Dyson harm.

13 Whether the harm is irreparable is a separate question. Irreparable harm may be  
14 found where “[t]he nature of the plaintiff’s loss may make damages very difficult to  
15 calculate.” *Roland Machinery Co. v. Dresser Indus., Inc.*, 749 F.2d 380, 386 (7th Cir.  
16 1984). In this case, the novelty of bladeless fans — having only been available in the  
17 U.S. market since 2010 — creates a volatile market, especially in light of lower-cost  
18 competition like Cornucopia's fan. Thus, it is difficult to predict Dyson's damages,  
19 which would be at least a reasonable royalty, and perhaps compensation for price erosion.  
20 The price erosion, in particular, may be irreversible regardless of an ultimately favorable  
21 outcome for Dyson — creating a significant uncertainty as to amount of damages and a  
22 probability of a large damage award for continuing price erosion. Accordingly, Dyson  
23 has established irreparable harm if Cornucopia can continue to market its bladeless fan  
24 during the course of this litigation.

### 25 **C. Balance of Equities**

26 The balance of equities weighs in favor of Dyson. Even assuming no utility patent  
27 protection, as Dyson posits this motion by not moving on its utility patents, Dyson still  
28 invested substantial resources in developing its patented design and bringing its AM01

1 fan to market. (Doc. 32-7 at 3–4 (sealed).) Cornucopia, by contrast, slavishly copied  
2 Dyson’s fan, including the infringing design feature. Dyson’s design patents may  
3 overreach, but the potentially overreaching portions are not the basis for the relief granted  
4 here. And Cornucopia may have easily made a fan with the same functions and the same  
5 look of those functions that would not infringe the purely design feature of Dyson’s fan.  
6 But it did not. Cornucopia’s overreach remains seriously damaging and warrants  
7 prevention. The balance of equities thus tips toward Dyson.

#### 8 **D. Public Interest**

9 The public interest also favors Dyson. In many cases, as in this one, the factor of  
10 public interest tracks the likelihood of success, as the predominant public interest lies in  
11 enforcing valid private rights, or freedom to compete, whichever has the better of it. In  
12 some cases the public interest has an additional and distinct import. This case is not of  
13 that second variety, but the public interest in favor of private property rights is  
14 nonetheless sufficient.

15 Cornucopia’s counterargument largely rests on its antitrust claim, asserting that  
16 Dyson should fail in its attempt to monopolize the bladeless fan market by sham litigation  
17 and by enforcing patents obtained by fraud. By separate order, those claims have been  
18 dismissed for failure to state a claim upon which relief can be granted. Thus, they carry  
19 no weight in this preliminary injunction inquiry. The public interest therefore favors  
20 Dyson.

#### 21 **IV. BOND**

22 The preliminary injunction must be conditioned on Dyson posting security “in an  
23 amount that the court considers proper to pay the costs and damages sustained by any  
24 party found to have been wrongfully enjoined or restrained.” Fed. R. Civ. P. 65(c). The  
25 amount of the bond is within the Court’s discretion. *See Save Our Sonoran, Inc. v.*  
26 *Flowers*, 408 F.3d 1113, 1126 (9th Cir. 2005).

27 Neither party provided any evidence to support a reasoned bond amount. The  
28 Court therefore draws upon its experience in light of the nature of Cornucopia’s single-

1 product business and the range of likely harm from suspending that business until this  
2 action is concluded. A bond will be required in the amount of \$500,000.00.

### 3 **V. FORM OF THE INJUNCTION**

4 Dyson's proposed injunction language is not entirely acceptable. The following  
5 reproduces Dyson's proposed language with the Court's insertions (underline) and  
6 deletions (~~strikeout~~):

7 IT IS THEREFORE ORDERED that Cornucopia Products,  
8 LLC, its officers, ~~directors, partners,~~ agents, servants,  
9 employees, attorneys, ~~subsidiaries,~~ and those acting in concert  
10 other persons who are in active concert or participation with  
11 any of them, are enjoined from making, using, offering to  
12 sell, or selling within the United States, or importing into the  
13 United States, or exporting from the United States,  
14 Cornucopia's 12-inch bladeless fan, ~~which is depicted in~~  
15 ~~Dyson's moving papers (model no. D8600-12),~~ and any  
16 product that is no more than colorably different from that  
17 product ~~and embodies any design contained in U.S. Patent~~  
18 ~~nos. D605,748 or D602,143.~~

15 IT IS FURTHER ORDERED that, within ~~three (3) business~~  
16 days seven (7) calendar days of the entry of this order,  
17 Cornucopia shall disclose to Dyson the names of all retailers  
18 and/or wholesalers to whom Cornucopia has sold or provided  
the Cornucopia 12-inch bladeless fan.

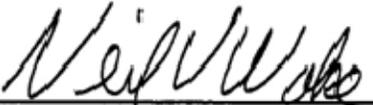
19 The model number has been inserted in place of "which is depicted in Dyson's  
20 moving papers" because it is more precise. To the extent Dyson worries that Cornucopia  
21 might market the same fan under a different model number, the "no more than colorably  
22 different" language would provide relief. *See, e.g., Acumed LLC v. Stryker Corp.*, 525  
23 F.3d 1319, 1324 (Fed. Cir. 2008) ("no more than colorably different" satisfied when  
24 accused device and new device are "essentially the same").

25 The "embodies any design" phrase is deleted for two reasons. First, the D748  
26 patent is not enforced, and the D143 patent is not enforced in its entirety. Second, the  
27 language could be misread to say that the legal status of any Cornucopia fan that comes  
28 close to Dyson's patented designs can be adjudicated through contempt. That is not the

1 case. If (i) Cornucopia begins to market another fan similar to Dyson's patented designs,  
2 (ii) Dyson in good faith believes the fan is no more than colorably different from the  
3 D8600-12, (iii) Dyson brings a contempt motion, and (iv) the Court agrees that the new  
4 fan is no more than colorably different from the D8600-12, then the status of  
5 Cornucopia's new fan could be adjudicated in contempt proceedings, at which point the  
6 Court would reach the question of infringement. *TiVo Inc. v. EchoStar Corp.*, 646 F.3d  
7 869, 881-84 (Fed. Cir. 2011) (en banc). But if the Court disagrees, Cornucopia is  
8 entitled to have the infringement question adjudicated in a separate lawsuit. *Id.* Thus,  
9 confining the injunction to the currently accused product and those no more than  
10 colorably different appropriately expresses the restrictions the injunction will impose on  
11 Cornucopia.

12 IT IS THEREFORE ORDERED that Dyson's Motion for a Preliminary Injunction  
13 (Doc. 33) is GRANTED, conditioned upon Dyson posting a bond in the amount of  
14 \$500,000.00.

15 Dated this 27<sup>th</sup> day of July, 2012.

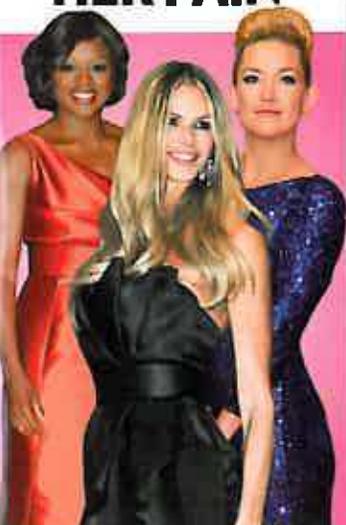
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19 \_\_\_\_\_  
20 Neil V. Wake  
21 United States District Judge  
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# Exhibit 6

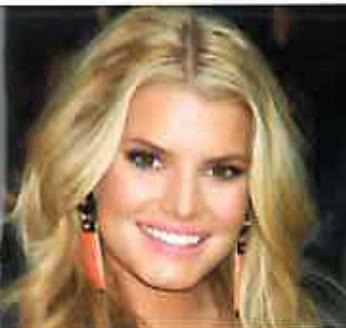
# People



**ASHTON & DEMI**  
**HIS FLINGS, HER PAIN**



**White House**  
**Dinner's**  
**BEST DRESSES**



**JESSICA SIMPSON**  
**All About Baby Girl Maxwell!**

**KHLOE SPEAKS OUT**

# FIGHTING FOR MY MARRIAGE

**WHY SHE PULLED THE PLUG ON HER TV SHOW**

Khloé Kardashian Odom explains why she's putting husband Lamar first: 'Divorce is not an option'

**People**  
**EXCLUSIVE INTERVIEW**

7 25274 10227 3

7 25274 10227 3

20

3

# 20% off all Dyson machines

Now through Mother's Day  
At participating retailers and [dyson.com](http://dyson.com)



**dyson**

For detailed terms, conditions and exclusions, visit [dyson.com](http://dyson.com)

# Exhibit 7

# TIME



# THE LAST DAYS OF OSAMA BIN LADEN

**SPECIAL REPORT**

**ON THE GROUND**  
By Peter Bergen

**IN THE ROOM**  
By Graham Allison

# 20% off all Dyson machines

Now through Mother's Day  
At participating retailers and [dyson.com](https://www.dyson.com)



**dyson**

For detailed terms, conditions and exclusions, visit [dyson.com](https://www.dyson.com)

# Exhibit 8

# ARCHITECTURAL DIGEST

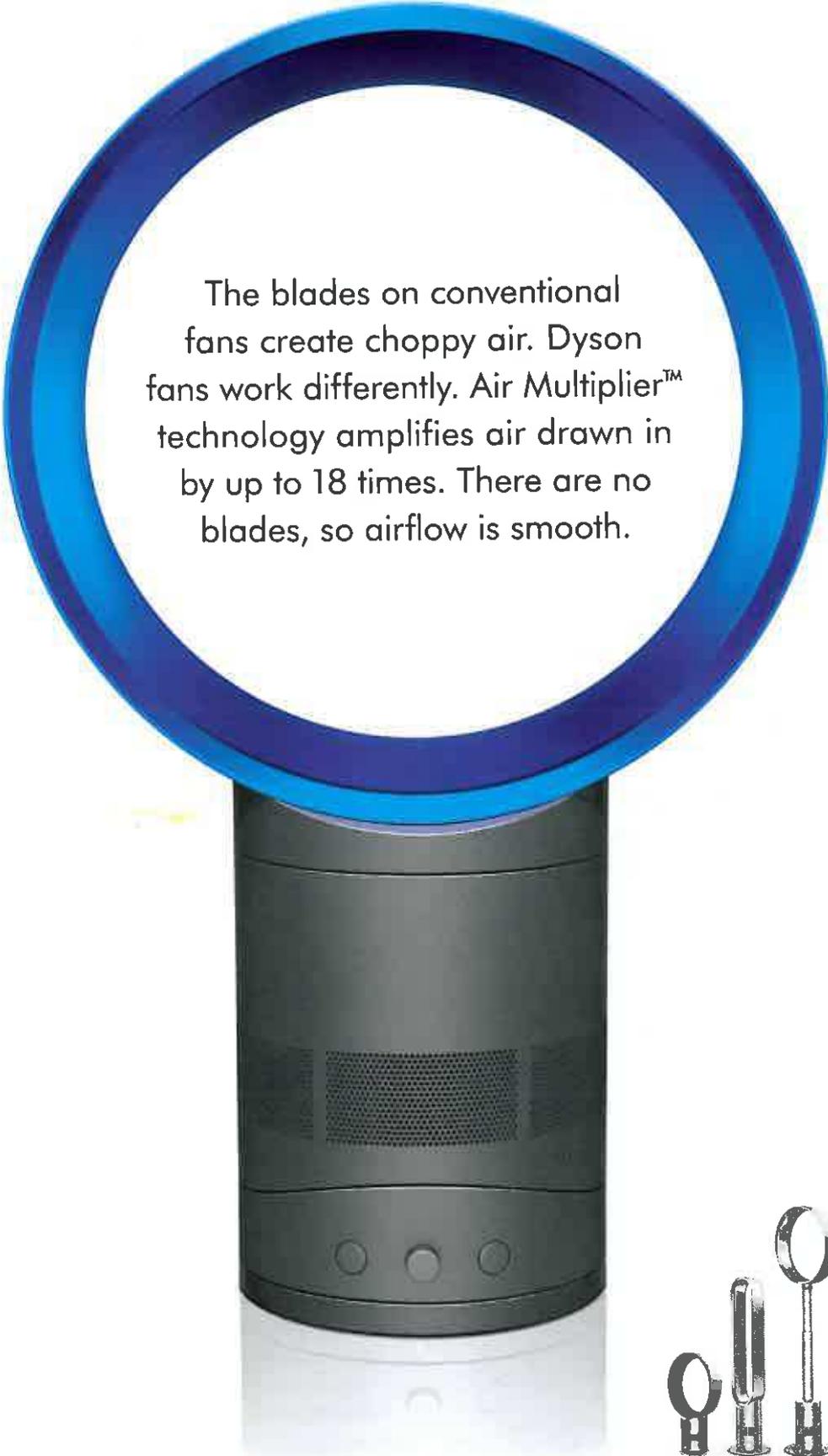
THE INTERNATIONAL DESIGN AUTHORITY

MAY 2012

## Grand Tour

Ravishing Homes Around the World





The blades on conventional fans create choppy air. Dyson fans work differently. Air Multiplier™ technology amplifies air drawn in by up to 18 times. There are no blades, so airflow is smooth.



**dyson air multiplier**

No blades. No buffeting.



Learn more at [dyson.com/cooling](https://www.dyson.com/cooling)

# Exhibit 9

# InStyle

**Charlize Theron!**  
On Fame,  
Fashion & Her  
New Family!

**15**  
**SUMMER  
OUTFIT  
ESSENTIALS**

What's  
In Your  
Closet  
Already?

**GET  
SEXY  
NOW!**

**WHAT'S IN  
WHAT'S OUT  
WHAT WILL  
WORK FOR YOU**

**38**  
**MIRACLE  
BRAS**  
A Solution  
For Every  
Problem

**LOVE  
YOUR  
BODY  
FAST!**

**Fit or Fake-it  
Tricks of the Stars**

**WHAT  
TO WEAR**  
Fresh Ideas for  
Any Occasion

JUNE 2012 INSTYLE.COM

**InStyle**

\$4.99US \$6.99CAN

06>



0 70992 10645 5

The blades on conventional fans create choppy air. Dyson fans work differently. Air Multiplier™ technology amplifies air drawn in by up to 18 times. There are no blades, so airflow is smooth.



Learn more at [dyson.com/cooling](https://www.dyson.com/cooling)



**dyson** air multiplier

No blades. No buffeting.

# Exhibit 10

# ELLE DECOR

EAST  
SUMMER  
STYLE

SUNNY BEACH  
HOUSES  
RUSTIC RETIREMENT

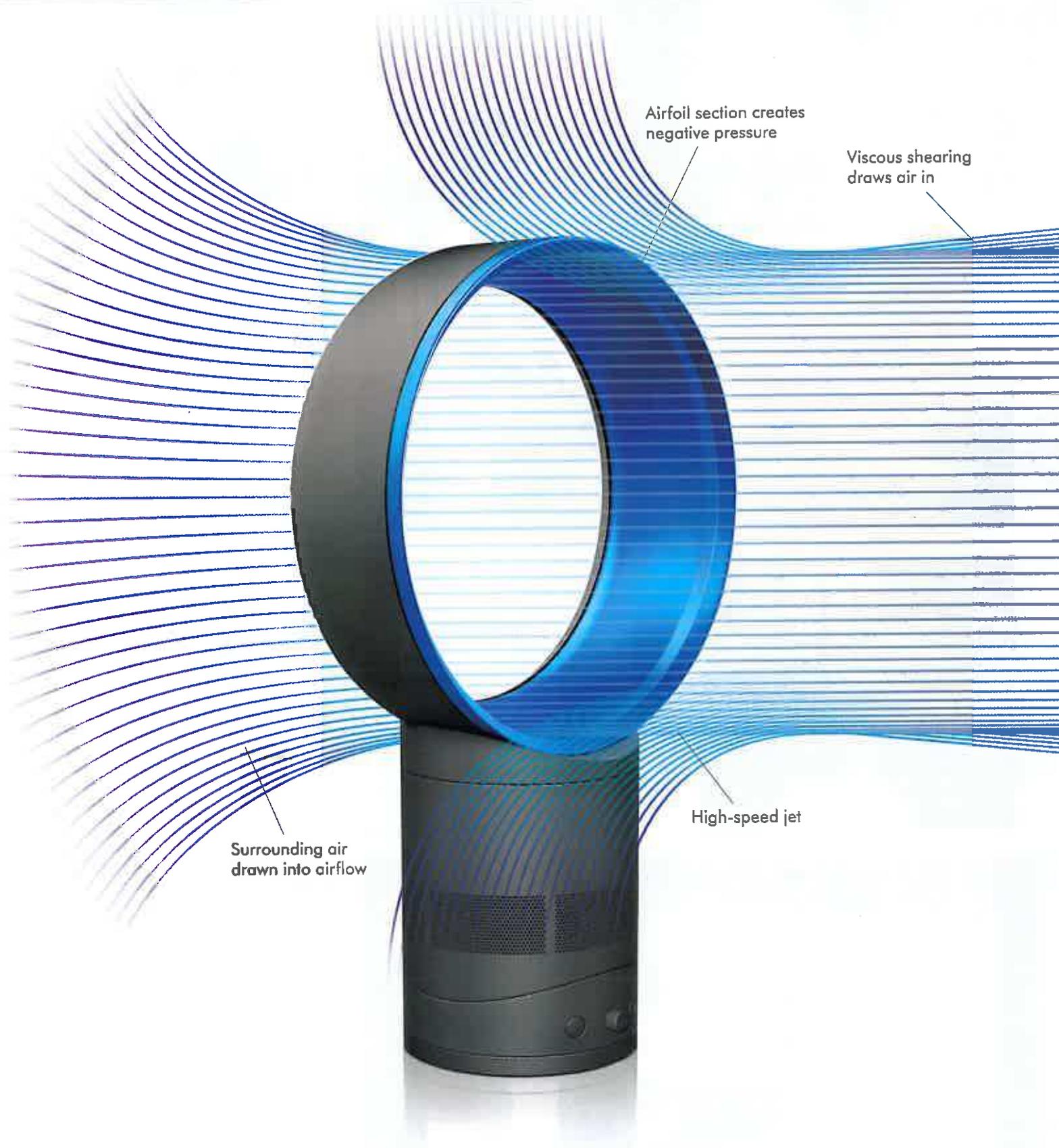
42 PERCENT  
WEEKEND GARDENING

**SANDRA LEE**  
FIRST LOOK  
AT HER NEW HOME &  
NEW LIFE

ALL-AMERICAN  
PLEASURE



JULY/AUGUST 2012  
USA \$5.99  
ELLEDECOR.COM



Airfoil section creates negative pressure

Viscous shearing draws air in

Surrounding air drawn into airflow

High-speed jet

Discover more at [dyson.com/fans](https://www.dyson.com/fans)

**dyson** air multiplier

No blades. No buffeting.

# Exhibit 11

# surface



THE BUSINESS ISSUE

## Power + Potential

- *Moooi's Second Act - Dedon Takes a Holiday*
- *A New Bohemian Powerhouse - Nike Wastes Not*
- *W Hotels Redux - The Rules of Renato Preti*

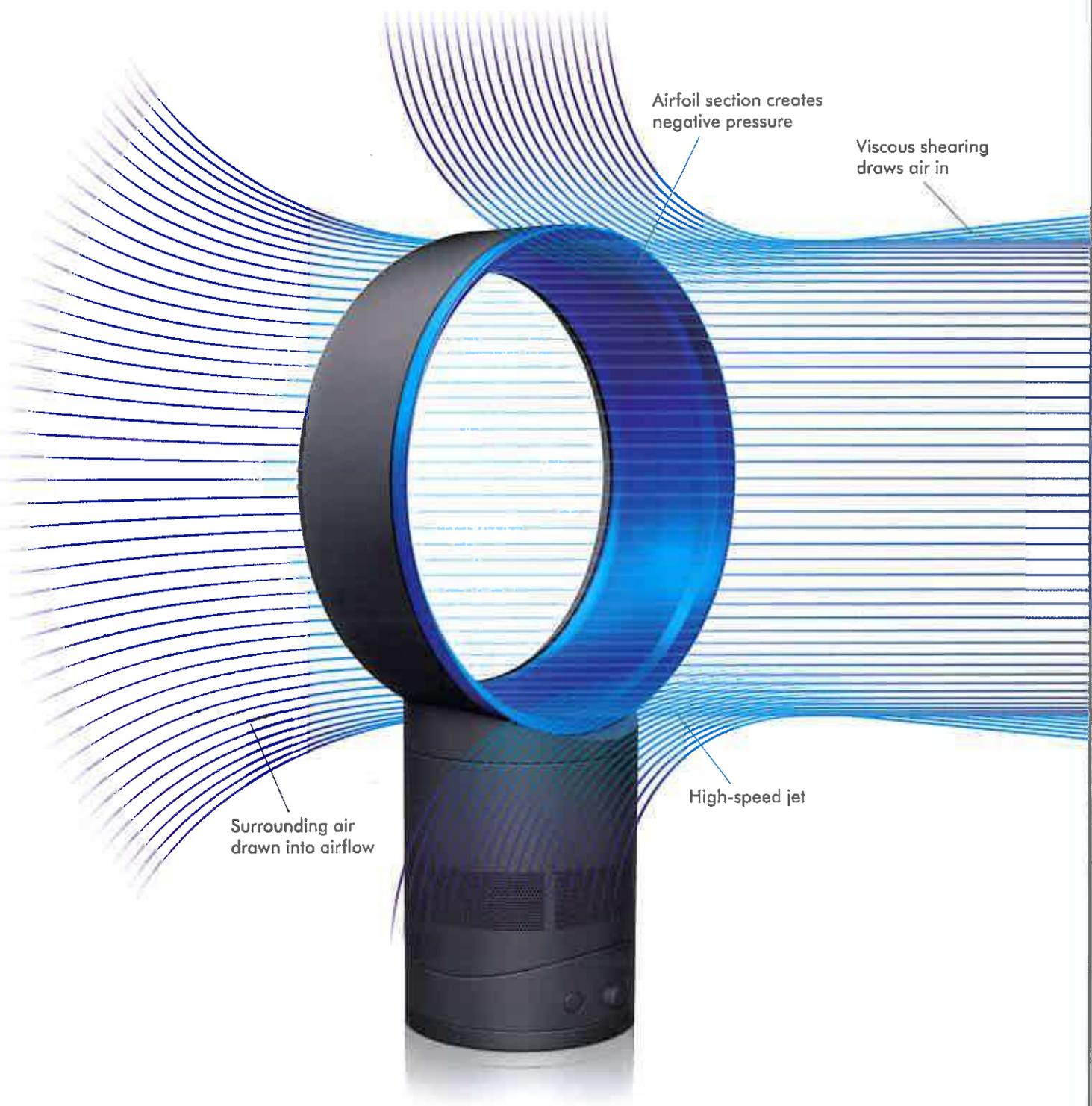


JULY/AUG 2012  
DISPLAY UNTIL SEPT 03



\$6.99

08



Airfoil section creates negative pressure

Viscous shearing draws air in

Surrounding air drawn into airflow

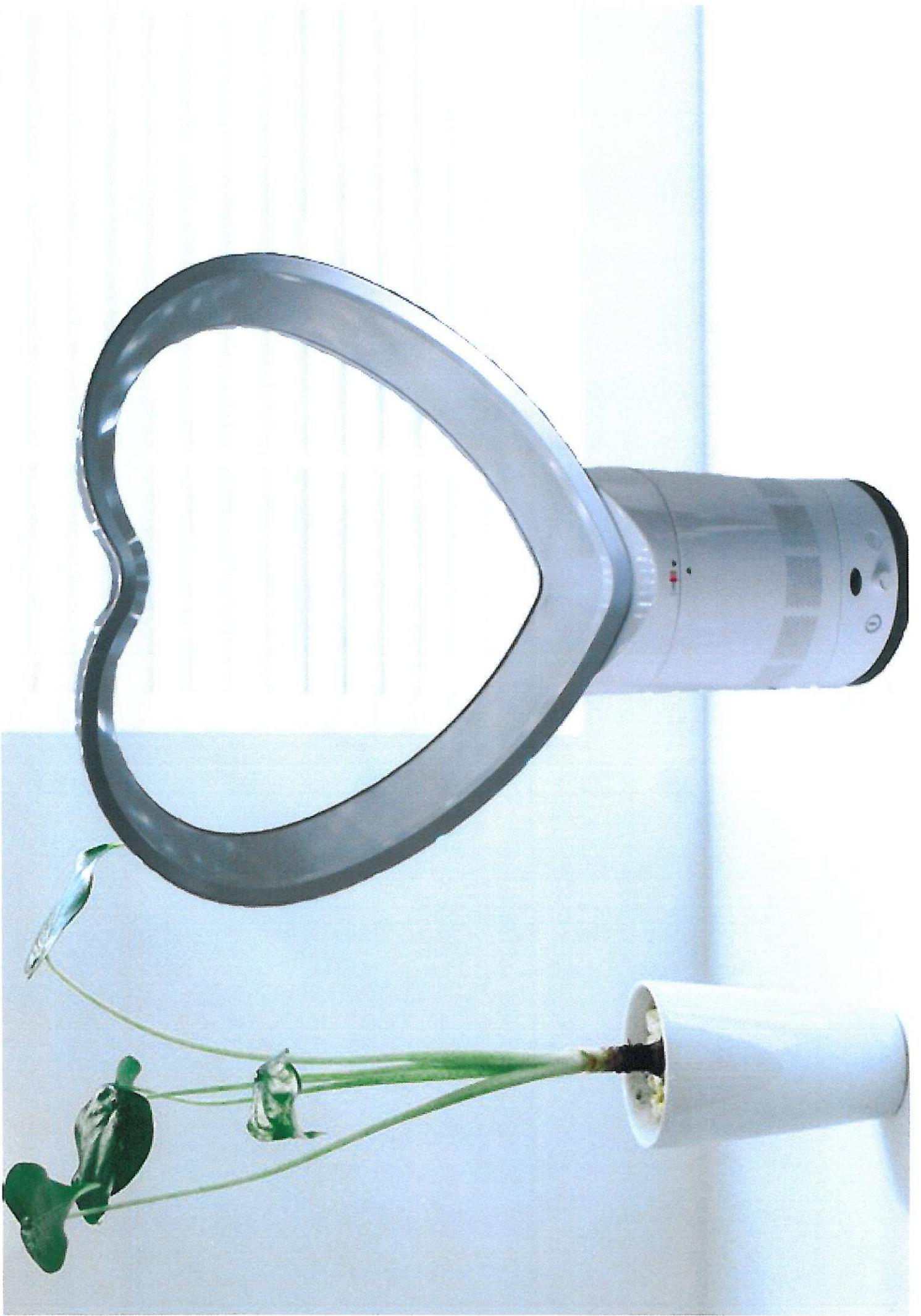
High-speed jet

Discover more at [dyson.com/fans](http://dyson.com/fans)

**dyson air multiplier**

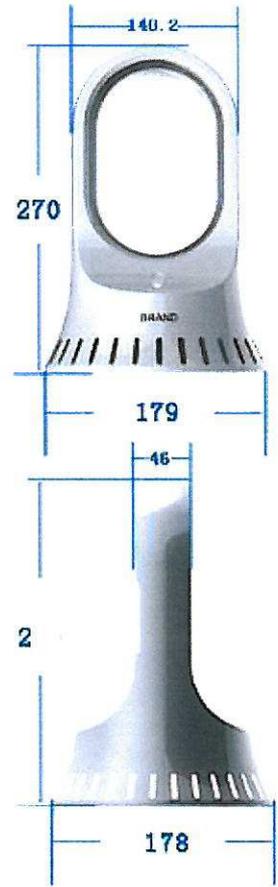
No blades. No buffeting.

# Exhibit 12



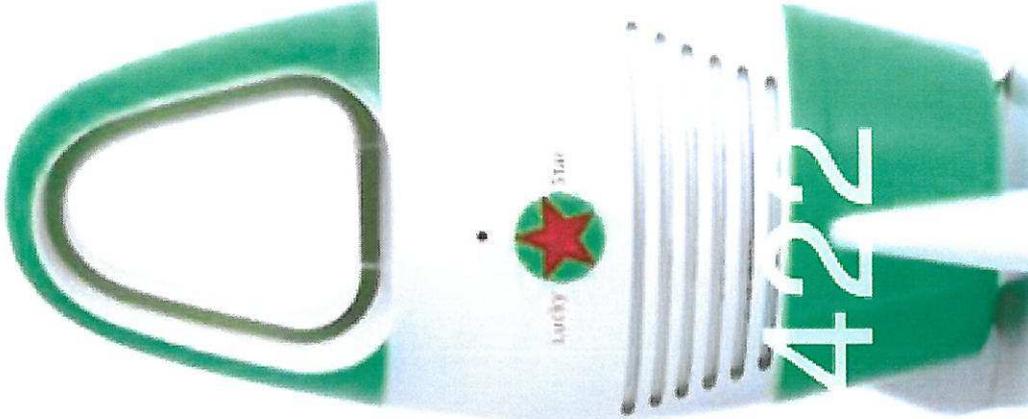
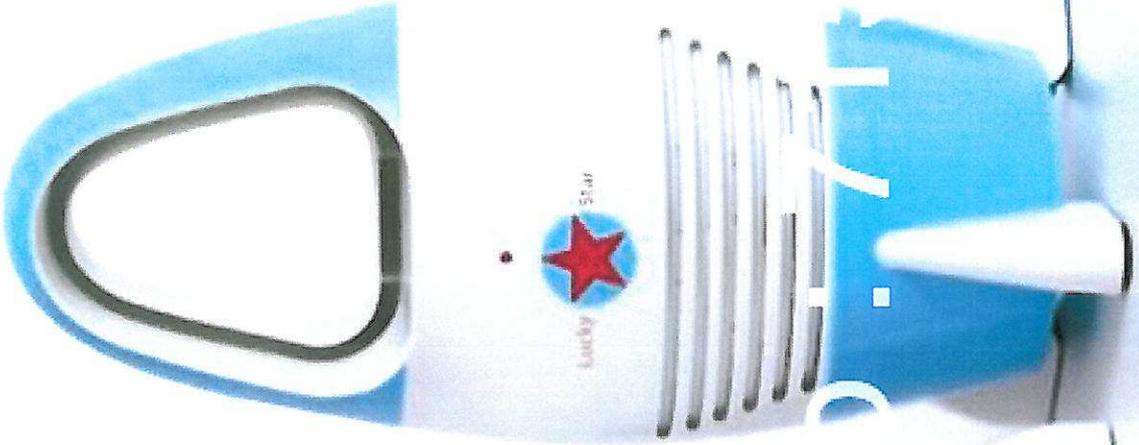






hcn.en.alibaba





store: 011-422

















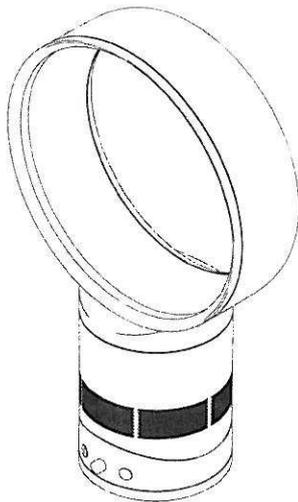
# Exhibit 13

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Dyson Limited

Mark:



Serial No.: 85/708,119

Filing Date: August 20, 2012

Trademark Atty: Doritt Carroll

Law Office: 116

**DECLARATION OF GILLIAN RUTH SMITH**

I, Gillian Ruth Smith, declare as follows:

1. I am the Group IP Director for Dyson Limited (“Applicant”), and I am authorized to make this declaration on Applicant’s behalf.

2. For the reasons given below, I believe that the above-referenced mark, which consists of the three-dimensional configuration of electric fans, electric freestanding fans, electric fans for personal use, and air cooling apparatuses, is not functional in connection with these products.

3. Dyson does not own any utility patents, or applications for utility patents, whose claims are directed to the utilitarian advantages of the applied-for design as a whole. Dyson has applied for, and in some cases secured, utility patents in the U.S. for a number of features of the product which embodies the three-dimensional configuration shown above. However, the majority of these patents and applications are directed to internal features of the products which are not visible to the user. Of the remaining patents and applications, five relate to features of the inner surface of the nozzle only and two relate to the depth dimension of the base in comparison to that of the nozzle. They are:

Interior surface of nozzle:

- U.S. Patent No. 8,308,445 – filed Sept. 3, 2008 and granted Nov. 13, 2012;
- U.S. Patent No. 8,403,650 – filed Sept. 3, 2008 and granted Mar. 26, 2013 - continuation of 8,308, 445;
- US Patent Application Serial No. 13/799,285 – filed Sept. 3, 2008, not yet published - continuation of 8, 403, 650;
- U.S. Patent No. 7,931,449 - filed Sept. 15, 2009 and granted April 26, 2011;
- U.S. Patent No. 8,348,629 - filed Sept. 15, 2009 and granted Jan. 8, 2013 - continuation of 7,931,449.

Depth dimensions:

- U.S. Patent Application Serial No. 12/230,613 (Publication No. US2009/0060711 A1) - filed Sept. 2, 2008 and published Mar. 5, 2009;
- U.S. Patent Application Serial No. 12/945,558 (Publication No. US2011/0058935 A1) - filed Sept. 2, 2008 and published Mar. 10, 2011 - continuation of 12/230,613.

Two further applications are directed to a tilt-function of the product which embodies the three-dimensional configuration shown above and the claims of these applications specify that two adjacent parts of the base lie flush with one another when the product is in the un-tilted position. They are:

- U.S. Patent Application Serial No. 12/716,749 (Publication No. US2010/0226787 A1) - filed Mar. 3, 2010 and published Sept. 9, 2010;
- U.S. Patent Application Serial No. 13/314,974 (Publication No. US2012/0082561 A1) - filed Mar. 3, 2010 and published Apr. 5, 2012 – continuation of 12/716,749.

Corresponding patents and applications exist in other territories.

4. The shapes of the various elements of the three-dimensional configuration shown above are not dictated by function and Dyson has not made any claim in any utility patent or application to that effect.

5. Dyson owns the following design registrations and design patents for the applied-for design or features thereof:

- Australian Design Registration No. 325225, filed on November 19, 2008 and granted on March 24, 2009;
- Australian Design Registration No. 325226, filed on November 19, 2008 and granted on March 24, 2009;
- Canadian Industrial Design Registration No. 128793, filed on December 2, 2008 and granted on December 31, 2009;
- Canadian Industrial Design Registration No. 128797, filed on December 2, 2008 and granted on December 31, 2009;

- Chinese Design Patent No. 200830269400.8, filed on November 24, 2008 and granted on October 7, 2009;
- Community Registered Design No. 001039911-0001, filed on November 17, 2008 and granted on November 28, 2008;
- Community Registered Design No. 001039929-0001, filed on November 17, 2008 and granted on December 3, 2008;
- United Kingdom Design Registration No. 4007841, filed on June 6, 2008 and granted on May 18, 2009;
- United Kingdom Design Registration No. 4007842, filed on June 6, 2008 and granted on May 18, 2009;
- Indian Design Registration No. 219831, filed on November 24, 2008 and granted on January 15, 2010;
- Japanese Design Registration No. 1376284, filed on December 8, 2008 and granted on November 20, 2009;
- Japanese Design Registration No. 1392128, filed on December 8, 2008 and granted on June 11, 2010;
- Russian Design Registration No. 73877, filed on November 28, 2008 and granted on January 16, 2010;
- U.S. Design Patent No. D602,143, filed on December 4, 2008 and granted on October 13, 2009;
- U.S. Design Patent No. D605,748, filed on December 4, 2008 and granted on December 8, 2009; and

- South Africa Design No. 2028, filed on July 17, 2011 and granted on February 12, 2012.

6. The registered designs and design patents listed in Paragraph 5 above illustrate that various governmental authorities, including the USPTO, have found that the applied-for design is worthy of protection as a design.

7. Dyson's advertisements for its fans in the shape of the applied-for design do not emphasize the utilitarian advantages of the applied-for design as a whole. Attached as Exhibit 1 are true and correct copies of representative advertisements for products in the shape of the applied-for design. Some of these advertisements merely display images of the product itself with promotional information regarding special product sales. Other advertisements note some of the utilitarian features of the product, but these features do not dictate the design of the product as a whole.

8. In addition, there are multiple alternative designs available for bladeless electric fans. A simple Google image search for bladeless electric fans returns revealed a myriad of alternative designs for bladeless electric fans. Attached as Exhibit 2 is a selection of true and correct copies of images of alternative designs for bladeless electric fans.

9. Moreover, the applied-for design does not result from a comparatively simple or inexpensive method of manufacture for electric fans. Dyson invests significant amounts of time, effort, and money into researching and developing designs for its products, including its electric fans. Furthermore, Dyson's electric fans are specially manufactured from customized parts; as a result, these fans are not cheaper or easier to manufacture compared to other products.

The undersigned, being hereby warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001, and that such willful false statements and the like may jeopardize the validity of the application or any resulting registration, declares that she is properly authorized to execute this document on behalf of the applicant; the facts set forth in this application are true; all statements made of her own knowledge are true; and all statements made on information and belief are believed to be true.

Signed at Malmesbury, England, this 19<sup>th</sup> day of June, 2013.

A handwritten signature in blue ink, appearing to read 'G.R. Smith', written over a horizontal line.

Gillian Ruth Smith