Neutral Citation Number:[2023] EWHC 2417 (Pat)

Claim No: HP-2022-000033

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURT
INTELLECTUAL PROPERY LIST
PATENTS COURT
SHORTER TRIALS SCHEME

Judgment date: 5th October 2023

Before:

Sir Anthony Mann, sitting as a judge of the High Court

- -

Between :

CHIARO TECHNOLOGY LIMITED	**Claimant**
- and -	
MAYBORN (UK) LIMITED	**Defendant**

- -
- -

Lindsay Lane KC (instructed by Pinsent Masons LLP) for the **Claimant**
Hugo Cuddigan KC and **Mitchell Beebe** (instructed by CMS Cameron McKenna Nabarro Olswang LLP) for the **Defendant**

Hearing dates: 29th & 30th June and 3rd & 13th July 2023

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APPROVED JUDGMENT

Remote hand-down: This judgment will be handed down remotely by circulation to the parties or their representatives by email and release to The National Archives. A copy of the judgment in final form as handed down should be available on The National Archives website shortly thereafter.

SIR ANTHONY MANN

Introduction

1. This is a claim for infringement of registered designs, pursuant to the Registered Designs Act 1949 ("the Act"), in respect of designs for breast pumps. The claimant ("Chiaro") is the registered owner of the designs in question, and it is alleged that the defendant ("Mayborn") has infringed those designs by virtue of its sales of a product marketed under the Tommee Tippee brand and called the "Made for Me Wearable Breast Pump" - in this judgment called the "MFM product". Chiaro has incorporated its design, or at least most of the features of it, into its own product call the Elvie pump.

2. As will appear when I consider the design corpus appropriate to this case, breast pumps are of various types. They are all designed to enable a nursing mother who, on any particular occasion, cannot or does not wish to breastfeed her child, to express her milk with the assistance of a pump into a separate container so that the milk can be gathered and fed to the infant later. They all necessarily have some sort of interface with the breast, but beyond that there are different approaches. Some have tubes going off to a separate pump and container unit. Others have the pump and containers separate. The registered designs and the MFM product are of a different type. They are intended to be worn and operated within the brassiere of the mother, so that the pump and milk collection vessel ("MCV") are all within the same unit. This can be seen in the photographs which put the registered designs and photographs of the MFM product side by side and which appear in Annexe 1 to this judgment.

3. The first design is of the pump as a whole – registered design number 90052927030010 - I will call it the 0010 design. In accordance with convention, the dotted lines are ignored for these purposes as not being part of the design. The second is the front housing of the design alone – design number 90052927030002 – the 0002 design or the "housing design". The third is the milk collection vessel ("MCV") which sits at the bottom of the design – registered design no. 90052927030003 – the 0003 design, or the "MCV design".

4. One further explanation is required in relation to these comparisons. I have applied additional labels to the MCV designs in oblong text boxes – those words are not part of the registration. Those labels reflect a dispute between the parties as to what the designs I have labelled 0003A and 0003B actually are. Chiaro pleaded, and seemed to maintain at trial, the 0003A design represents the front of its MCV design, and 0003B the back. Mr Hugo Cuddigan KC, who represented Mayborn, said that that was wrong – 0003A was the back and 0003B the front and Chiaro had got them the wrong way round. Ms Lindsay Lane KC for Chiaro did not accept that and seemed to persist in her client's interpretation of the drawings and, therefore, her comparisons with the corresponding faces of the MFM product. It seems to me that Mr Cuddigan is correct and Chiaro have misinterpreted their own drawings. That is apparent enough just looking at the designs, but it is more apparent when one looks at the product which Chiaro have made from their

designs – the Elvie pump. I shall therefore carry out the necessary comparison using the correct interpretation, and that is reflected in Annexe 1.

Witnesses

5. I received witness statements from both sides on questions of fact. Neither side sought to cross-examine the factual witnesses of the other side. I also received expert evidence from one witness on each side, and those witnesses were cross-examined. In brief the witnesses were as follows.

6. **Ms Aoife Nally**. She is the Chief Commercial Officer at Chiaro. She provided evidence of market considerations in the choice of type of breast pump and positioned the Elvie pump, made to the design of the registered designs in this case, as a "luxury" product towards the top end of the market. There is evidence about issues facing women using breast pumps and of the launch of the Elvie product, most of which does not go to the issues in this case.

7. **Mr Daniel Nener.** He is a partner in Pinsent Masons, solicitors to the claimant. He produced a tabulated table showing various breast pumps on the market as identified by the defendant's expert Mr Fischer. His evidence was uncontentious.

8. **Kirsteen Beverloo.** She is in-house legal counsel to the claimant and produced some further limited evidence about the marketing dates of products referred to by Mr Fischer.

9. **Ms Cherie Stedman**. She is a Commercial Director at Chiaro and provided further evidence about the market in and availability of certain breast pumps.

10. **Mr James O'Toole**. He is a designer who has had various important roles in Chiaro in relation to the development of products and has had responsibility for the development of the Elvie pump, amongst other things. He currently has a part time role at Chiaro as a Product Advisor. He provided two witness statements. The first was as to matters of fact. He described Chiaro's competitors' products at the time of the Elvie pump development and the design objectives when it was designed. His second was provided as an expert witness for Chiaro, responding to a report from Mr Fischer, Mayborn's expert. Mr Cuddigan's opening skeleton acknowledged that it was open to Chiaro to use Mr O'Toole as a witness notwithstanding his relationship with them, but indicated possible prejudice to his true independence for these purposes. However, having cross-examined him Mr Cuddigan did not suggest that his honest expressions of view were compromised by his association. I found him to be a careful and honest witness who properly discharged his function as an expert.

11. **Mr Josh Hume**. Mr Hume is a senior product development manager at Mayborn and responsible for the MFM product. He gave some evidence about the market for, and functionality of, breast pumps and the development of the MFM product.

12. **Mr René Fischer.** He is an engineer who has been responsible for developing the breast pumps of a competitor to Chiaro and Mayborn (namely Medela). He was Mayborn's expert witness and performed his function well and clearly.

The statutory provisions and the applicable caselaw

13. The important provisions of the Act, as amended, are as follows:

"s7(1) The registration of a design under this Act gives the registered proprietor the exclusive right to use the design and any design which does not produce on the informed user a different overall impression.

(2)…

(3) In determining for the purposes of subsection (1) above whether a design produces a different overall impression on the informed user, the degree of freedom of the author in creating his design shall be taken into consideration.

s1C(1):

A right in a registered design shall not subsist in features of appearance of a product which are solely dictated by the product's technical function.

…"

14. A useful approach to the final judgment of "overall impression" was set out in *Marks and Spencer v Aldi* [2023] EWHC 178 (IPEC). It is as follows:

"18. Both M&S and Aldi followed the approach to the comparison of a registered design to an accused design set out in *Cantel Medical (UK) Limited v ARC Medical Design Limited* [2018] EWHC 345 (Pat). This comprises four stages taken from the judgment of the General Court in Case T-525/13 *H&M Hennes & Mauritz BV & Co KG v OHIM* (Case T-525/13) EU:T:2015:617, plus two considerations drawn from other authorities discussed in an earlier section of the judgment in *Cantel*:

"[181] I here adapt the four-stages prescribed by the General Court in *H&M Hennes* for assessing the individual character of a Community design to the comparison of an RCD with an accused design, adding other matters relevant to the present case. The court must:

(1) Decide the sector to which the products in which the designs are intended to be incorporated or to which they are intended to be applied belong;

> (2) Identify the informed user and having done so decide (a) the degree of the informed user's awareness of the prior art and (b) the level of attention paid by the informed user in the comparison, direct if possible, of the designs;
>
> (3) Decide the designer's degree of freedom in developing his design;
>
> (4) Assess the outcome of the comparison between the RCD and the contested design, taking into account (a) the sector in question, (b) the designer's degree of freedom, and (c) the overall impressions produced by the designs on the informed user, who will have in mind any earlier design which has been made available to the public.
>
> [182] To this I would add:
>
> (5) Features of the designs which are solely dictated by technical function are to be ignored in the comparison.
>
> (6) The informed user may in some cases discriminate between elements of the respective designs, attaching different degrees of importance to similarities or differences. This can depend on the practical significance of the relevant part of the product, the extent to which it would be seen in use, or on other matters."
>
> 19. Points (5) and (6) were not intended to be sequential stages following (1) to (4) but further matters to be taken into account when conducting the comparison in stage (4). They may have been better labelled (4)(d) and (e)."

15. I shall start down that route, but take those points in a slightly different order, as will appear. However, by the end of this judgment I will have covered all of them, so far as relevant.

The sector

16. Deciding the "sector" is the first step. Ms Lane said that the informed user had some part to play in identifying the sector, but recognised the circularity of her argument because the informed user can only be determined when one has identified the sector. In my view the court has to identify the sector for itself, on the basis of the evidence presented to it. I do not see how it can be done by reference to the informed user.

17. This identification is of potential significance in this case because Ms Lane submits that the sector defines the "design corpus". She defines both widely and relies on the result to generate a wide degree of design freedom which, she says, enables her to seek wide protection for the registered designs. Mr

Cuddigan placed less emphasis on this particular point because of his approach to design freedom (which appears below) but so far as necessary defined the sector narrowly.

18. In *Dyson Ltd v Vax Ltd* [2011] EWCA Civ 1206 Jacob LJ considered a debate about the scope of the design corpus as "sterile" (paragraph 11), and I tend to think that that is true in the present case, at least in relation to defining the "sector" insofar as it is the same thing. However, I will make brief findings about it.

19. The registration of the designs have an "Indication of product", which is "Breast pumps (part of-), Breast pumps for nursing mothers (part of-)". It is, not surprisingly, permissible on the authorities to take it into account – see *Grupo Promer v OHIM* (T-9/07) at paragraph 56. Without it it would probably not be apparent what the design was for at all. So that is at least a starting point for a consideration of the sector, and the appropriate design corpus. The same authority indicates that one also has to look to the design in order to define the sector.

20. At the time of the registration (1st June 2018) breast pumps came in a variety of types. There are two major overall types – manual and electrical. "Manual" pumps are those in which the user has to bring about the pumping herself. They have little to do with this case and can be largely ignored. The others are electrical in which the necessary pumping mechanism is an electrically-driven one. Mr Hume divided those into 5 categories. It was not accepted by Ms Stedman (of Chiaro) that consumers divided the perceived market in this way, but it will be useful nonetheless to describe them so as to give an idea of the market and designs available (though the number of models available on the market was rather less then than it is now). Ms Lane used the categorisation for the purposes of some of her arguments. I have set out examples of each of Mr Hume's category in Annexe 2 to this judgment. They are as follows:

(a) Tabletop electric breast pumps that need to be connected to mains power whilst in use. The pump unit connects to a bottle and flange assembly that sit outside the bra of the mother. An example is the Medela Symphony pump, pictured at Annexe 2. These pumps tend to be more powerful, and therefore quicker, than non-mains connected pumps.

(b) Portable electric breast pumps that are battery-powered/rechargeable, and thus not connected to mains power while in use, but having the same flange and bottle assembly as the mains connected pumps. An example is the Medela Freestyle Flex. Some have specially adapted brassieres which hold the flange/bottle assembly; others have to be hand held. They allow mobility while in use, to a degree, at least compared with mains-tethered pumps.

(c) Hybrid wearable electric breast pumps that have cups that sit within the bra to collect milk, which are connected via an airline to a remote pump that is either mains connected or portable. An example is the Medela Freestyle Wearable breast pump.

(d) Above-bra wearable breast pumps that have a milk collection vessel that sits within the bra and a pump unit that is attached to the cup but sitting outside the bra, for example the Momcozy S12 Pro Wearable breast pump.

(e) Self-contained in-bra, hands-free wearable breast pumps, which have a milk collection container and a pump unit that sit within one fully integrated unit inside the bra cup. This is the category to which the Elvie pump and the defendant's MFM product belong. At the time of registration in 2018 there was only one other product on the market falling within this category, namely the Willow, pictured in Annexe 2. (It is worth pointing out at this stage that the milk collection vessel on this product is a horse-shoe shaped bag behind and within the front housing, with the open end of the horse-shoe towards the top.) This type of pump offers maximum discretion and mobility while in use because it is (or is intended to be) completely within the brassiere which supports it, unlike the other pumps.

21. Ms Lane submitted that the "sector" was breast pumps; her design corpus was more limited but extended to all electrical pumps. Mr Cuddigan submitted that the sector was wearable in-bra breast pumps. I consider that neither is right. Mr Cuddigan's is far too narrow. At the time of the registration there was only one pump on the market which complied with his "sector", namely the then recently launched Willow. That is not enough to create a sector which had hitherto not existed. Ms Lane's is probably too wide because it would include manual pumps, of which the Elvie design can be seen not to be one. I think that the sector is electrical breast pumps (as opposed to manual), having considered the very limited evidence in the case, including some limited views of the experts expressed in cross-examination.

22. Having said that, I do not think that there is a material difference for these purposes between Ms Lane's position and my determination. At this point the only real significance of the sector is to determine the identity of the informed user, and since that user is agreed there is little more work for the "sector" to do. I do not consider that it governs the question of the design corpus, as will appear.

The informed user and her awareness

23. The notional key person who has to carry out the comparison exercise is the "informed user" who has the following attributes (per HHJ Birss QC in *Samsung Electronics (UK) Ltd v Apple Inc* [2012] EWHC 1882 (Pat)):

> "34. Samsung submitted that the following summary characterises the informed user. I accept it and have added cross-references to the cases mentioned:
>
> > i) He (or she) is a user of the product in which the design is intended to be incorporated, not a designer, technical expert, manufacturer or seller (***PepsiCo*** paragraph 54 referring to ***Grupo Promer*** paragraph 62; ***Shenzen*** paragraph 46).

ii) However, unlike the average consumer of trade mark law, he is particularly observant (***PepsiCo*** paragraph 53);

iii) He has knowledge of the design corpus and of the design features normally included in the designs existing in the sector concerned (***PepsiCo*** paragraph 59 and also paragraph 54 referring to ***Grupo Promer*** paragraph 62);

iv) He is interested in the products concerned and shows a relatively high degree of attention when he uses them (***PepsiCo*** paragraph 59);

v) He conducts a direct comparison of the designs in issue unless there are specific circumstances or the devices have certain characteristics which make it impractical or uncommon to do so (***PepsiCo*** paragraph 55)."

35. I would add that the informed user neither (a) merely perceives the designs as a whole and does not analyse details, nor (b) observes in detail minimal differences which may exist (***PepsiCo*** paragraph 59)"

24. Those are the qualities of the user. It was common ground in this case that the type of user is a nursing mother or wet nurse. That factor means that the identification of the relevant sector is of less significance than might otherwise have been the case. This would be an appropriate informed user whether one adopts one of counsel's proposals or my finding.

25. Such a user would have a consumer's view of the prior art, that is to say the other electrical pump products on the market, because she would be likely to try to understand the products which are available. She would apply a consumer's eye, rather than a designer's eye, but would generally be interested in general terms in the features that each product presented, in both operational and aesthetic terms. It would not be impractical for her to see the whole or most of the designs on the market because she would be able to get easy access to those designs, or material designs, via the internet or in retail shops. In saying that I am saying nothing about the actual design corpus at this stage.

Technical function

26. This is a point arising out of section 1C(1) of the Act which figured heavily in this case. Mr Cuddigan placed particular reliance on it as excluding important features of the design, leaving little left to be compared to the MFM product.

27. The following relevant points emerge from the authorities.

28. An aspect of design will fall within the section if it is an aspect which is dictated by function even if the function might be achieved by another design. It does not require that the design is the only means by which the product's technical function can be achieved – the so called "multiplicity of forms" theory. So one looks at the design and decides whether it, or the relevant

aspect, is required for functionality. See Arnold J in *Dyson v Vax*; and *Doceram GmbH v Ceramtec GmbH* [2018] ECDR 13.

29. Mr Cuddigan and Ms Lane did not agree as to whether the subjective intentions of the designer in this respect could be taken into account. Ms Lane (with some degree of equivocation) said they could; Mr Cuddigan said they could not. Much of the debate about this took place in the context of considering the position of patents as part of the design corpus, in which context, as will appear, Mr Cuddigan seemed to be adopting an inconsistent stance. Mr O'Toole also gave evidence about Chiaro's actual design objectives, to which this point may be relevant.

30. The caselaw on this point is not clear. In *Doceram (supra)* the ECJ had to consider whether the "reasonable observer" had any part to play in the assessment of technical function and concluded that he/she did not. In the paragraphs which followed there was strong emphasis on "the objective circumstances":

> "36. In that connection, having regard to the objective pursued by Regulation 6/2002,which, as is clear from [28] of the present judgment, consists, in particular, in creating a Community design directly applicable and protected in all the Member States, it is for the national court, in order to determine whether the relevant features of appearance of a product are covered by art.8(1) thereof, to take account of all the objective circumstances relevant to each individual case.
>
> 37 As the Advocate General stated in essence, in [AG66] and [AG67] of his Opinion, such an assessment must be made, in particular, having regard to the design at issue, the objective circumstances indicative of the reasons which dictated the choice of features of appearance of the product concerned, or information on its use or the existence of alternative designs which fulfil the same technical function, provided that those circumstances, data, or information as to the existence of alternative designs are supported by reliable evidence.
>
> 38 Having regard to the foregoing considerations, the answer to the second question is that art.8(1) of Regulation 6/2002 must be interpreted as meaning that, in order to determine whether the relevant features of appearance of a product are solely dictated by its technical function, within the meaning of that provision, the national court must take account of all the objective circumstances relevant to each individual case. In that regard, there is no need to base those findings on the perception of an "objective observer."

31. However, a degree of equivocation is introduced by the adoption of paragraph 67 of the Opinion of the Advocate General, which seems to allow the admissibility of the subjective intention of the designer (though not its conclusiveness):

> "AG 67. It is not impossible that criteria which, in my view, cannot in themselves show that features of appearance of a product have been dictated solely by its technical function within the meaning of art.8(1) of Regulation 6/2002, such as the subjective intention of the designer or the existence of alternative forms, may nevertheless be included in the body of specific evidence which courts must take into consideration in order to form their own opinion regarding the application of that provision."

32. The decision of the Board of Appeal in *Nintendo Co Ltd v Compatinet SLU* (R 1772/2012-3) is, subject to one possible point, rather less equivocal. At paragraph 23 the Board said:

> "23. It follows from the above that art.8(1) CDR denies protection to those features of a product's appearance that were chosen exclusively for the purpose of designing a product that performs its function, as opposed to features that were chosen, at least to some degree, for the purpose of enhancing the product's visual appearance. It goes without saying that these matters must be assessed objectively: it is not necessary to determine what actually went on in the designer's mind when the design was being developed. The matter must be assessed from the standpoint of a reasonable observer who looks at the design and asks himself/herself whether anything other than purely functional considerations could have been relevant when a specific feature was chosen …."

33. The possible qualification to this comes from the fact that the Board then immediately went on to ascertain "more precise information about the nature of the product into which the design is incorporated" by looking at the design owner's own patent for the product in order to assess the functional qualities of the design in question. It might be thought that that is taking into account the subjective views of the designer. However, it seems that the Board did not place particular emphasis on the patent as expressing the views of the designer, but relied on the fact that it was part of the design corpus (see paragraph 33). I therefore do not think that there is a real qualification of the clearly expressed principle.

34. Other authorities point the same way. In *Pulseon OY v Garmin* [2018] EWHC 47 (Ch) Mr Roger Wyand QC, sitting as a deputy High Court Judge, said:

> "The test is for the reasonable observer and the subjective intention of the designer is not relevant."

And in *Benmore Ventures Ltd v 2WF Société* (Case R1341/2015-3) the Board of Appeal expressed themselves similarly in relation to the matters going to this point:

> "19. … It goes without saying that these matters must be assessed objectively; it is not necessary to determine what actually went on in the designer's mind when the design was being developed".

35. Against that is part of the finding of Arnold J in *Dyson v Vax* at first instance. Two sentences of paragraph 59 seem to indicate that Arnold J considered the evidence of Mr Thomson, the designer, and took it into account (against the design's proprietor):

> "His evidence was that the clear bin was chosen for a mixture of technical and aesthetic reasons. Considering the matter objectively, I accept that both technical and aesthetic factors are relevant."

36. Approaching the question as a matter of principle, it seems to me to be right that the necessary objectivity of the approach prevents the subjective intentions of the designer from being taken into account as such. A third party ought to be able to consider the question of whether his/her product or proposed product infringes by looking at the designs and deciding the question from that and from other objectively available evidence. It ought not to be the case that the answer could be swayed by the subjectively expressed intentions of the designer which would not normally be available to that third party. The objective view, which does not take into account the subjective views of the creator of the designer, is more consistent with principle, and with the bulk of the caselaw. I shall apply it.

The significance of patents

37. This is another question which was made to arise in this case because Mr Cuddigan relied on patents to demonstrate the functionality of various designs in order to support his case on section 1C(1). Several patents were relied on as being part of the design corpus relevant to this case. Mr Cuddigan certainly propounded that they were, and Ms Lane did not dispute that, as a matter of principle, patents could be part of the design corpus (though she disputed that some of the patents in this case actually were). A point arises as to how much emphasis should be given to them.

38. Mr Cuddigan's point had two elements. They started from the correct premise that patents were intended to deal with technical matters, not design matters. Therefore if there was a feature appearing in a patent which also appeared in the registered design, then that was a good indication that the feature was functional. He seemed to go further and rely on a patent of the registered design owner, which was a patent equivalent of the design, as demonstrating

almost conclusively, or perhaps actually conclusively, that the features covered by the patent were functional for the purposes of the sub-section. As he put it in his oral final submissions:

> "You cannot say, when trying to get a patent, this is an exclusively functional product and then deny that statement when trying to hold on to a registered design."

This is the inconsistency in his approach to subjective evidence that I referred to above.

39. There seems little doubt that on the authorities it is right to look at appropriate patents when assessing aspects of a design for functionality. That happened in the *Nintendo* and *Benmore* cases referred to above. In those two cases the patents were actually patents of the registered design owner too. However, it would not seem that the cases go quite as far as Mr Cuddigan's submission. The Board in those two cases did not treat the patents as some sort of conclusive statement by the registered design owner as to the pure functionality of the features concerned. The Board seems to have treated the patent as some sort of strong evidence as to functionality.

40. I did not receive full argument on the point, but it seems to me that the proper course is to do what the Board did in those two cases, that is, to treat a patent describing the functionality of the patent as being evidence, and perhaps stronger evidence if it is the registered design owner's own patent. If one were to go further and say that the patent is to be taken as a statement of the design motivation of the designer one would be allowing in subjective evidence of the intention of the designer, which those two cases, and particularly *Benmore*, were at pains to point out was not permissible. The patent would only have the effect contended for by Mr Cuddigan if it were treated as subjective evidence of design intention.

41. It therefore seems to me that all the patents in this case (so far as relevant at all) amount to objective evidence of the functional qualities of what they describe, whether they are patents of the design owner or of a third party. In the end I do not think that the difference between that and Mr Cuddigan's apparent stance has much effect on the final outcome in any event.

Exclusively functional features - the technical function point

42. With those points in mind, I turn to the application of sub-section 1C(1), which I set out again here:

> "A right in a registered design shall not subsist in features of appearance of a product which are solely dictated by the product's technical function."

43. It was common ground that the correct approach is to consider to which, if any, of the features this applies, leaving the balance of the design to be considered by applying the section 7 test. At this stage I am considering the

application of the sub-section itself. Mr Cuddigan had further arguments on technical requirements when it came to considering design freedom, and I consider those later.

The outer (anterior) surface

44. First, there is the anterior (outward facing) face of the device. That is to say, the curved face which has been described as ovoid or tear-drop shaped. Mr Cuddigan's case is that this shape is dictated by the function of this device because it is intended to be worn in the bra, and has to co-operate with the interface of the bra so that it can be supported in the same way as a breast, and worn discreetly. Mr Fischer's evidence was to that effect. Mr Cuddigan further seeks to make his case by reference to 4 patents or patent applications (they were all called patents in the case, and I shall continue that nomenclature) which he says acknowledge and teach that the shape of an in-bra device has to conform for functional purposes with the bra itself, together with apparent concessions by Mr O'Toole that what was being described were functional features.

45. The first patent relied on (EP 1,404,393 B1) is one which corresponds to a product which came on the market (but is now no longer available) called Whisper Wear. Its profile is a dome shape, and that is how it is described in the claims in which it appears as part of the invention – "the housing is dome-shaped". The shape appears in Annexe 3. Paragraph 16 of the specification describes a "dome-shaped housing shell … [which] gives a natural appearance of the shape of a breast when the pump is concealed beneath the user's clothing. Paragraph 24 explains: "The pump 10 in turn is exclusively supported by the bra and the negative pressure created between the breast and the flange 30 by the servomotor mechanism 24 and the lever arm system 100." In his cross-examination Mr O'Toole accepted that the patentee had chosen a shape which is likely to to produce maximum discretion for the user, and that it was a fair shape in order to achieve that. He accepted the proposition that "this patent treats [the dome shape] as being [an] exclusively functional feature", but added "as it is a patent". By those last words he meant that that is what one would expect to find in a patent.

46. Next is the "Dao patent" (US 7,559,915), corresponding to a piece of prior art called the Freemie. The patented product has an "adaptor" which fits in the bra, and which contains a reservoir for collecting the milk, but the pumping part is external and connected via a tube. Drawings referred to in this patent appear in Annexe 3. There is no reference to the shape conforming to a brassiere in the claims, but there is in the specification, which says:

> "Fig 3A is a side view of an embodiment of the inventive device which has the shape of a human breast
> …
>
> The profile of the device 10 is such that it does not protrude extensively beyond that of a normal woman's breast profile and may give the user the appearance of wearing a figure enhancing brassiere."

47. Mr O'Toole agreed with the suggestion that the shape was being disclosed as a technical feature of the product.

48. Next is a patent described as the "Fischer patent", because Mr Fischer is one of the named inventors. It has also been referred to as the Medela patent. It is actually a US Patent Application publication (US 2013/0023821) and it plainly relates to a pump designed to be worn in-bra. Paragraph 32 says that "The breastshield unit according to the invention can be designed as a hands-free unit and worn under a bra." An exploded view appears in Annexe 3; the most significant part is the right-hand piece on the diagramme, marked as 6'. The shape is not claimed in the claims, but the application says of an alternative shape for that part (numbered 6) that it is "preferably dome-shaped or hemispherical" and later says:

> "Instead of the dome-shaped shell 6, however, a shell ring 6' is now present …."

49. Mr O'Toole accepted that the dome shape was a "good shape to use" for support from the bra, and allowed the product to be used discreetly.

50. The last patent (actually another application, dated 15th June 2018) is the "Elvie" patent – WO 2018/229504 A1. The applicant is Chiaro and one of the inventors is Mr O'Toole. The application essentially describes, and pictures, the Elvie pump. It refers to "fully integrated wearable breast pump systems [which] have begun to enter the market" and goes on:

> "Such devices can be provided with a substantially breast shaped convex profile so as to fit within a user's bra for discrete [sic] pumping, as well as pumping on-the-go without any tethers to electrical sockets or collection stations."

51. The invention is:

> "a wearable breast pump system including: a housing shaped at least in part to fit inside a bra;"

And that same wording is reflected in claim 1.

52. The reason for the "tear-drop" shape (as it is referred to in the specification – fuller at its base than at its top) is set out there (I omit cross-references to figures):

> "The housing (including the one or more pumps and a battery) and the container are provided as a unit with a convex outer surface contoured to fit inside a bra. The milk collection container is attached to the lower face of the housing and forms an integral part of the housing when connected, such that it can be held comfortably inside a bra.…

> As depicted in Figure 1, the housing and milk collection container form a substantially continuous outer surface, with a generally convex shape. This shape roughly conforms with the shape of a 'tear-drop' shaped breast. This allows the breast pump to substantially fit within the cup of a user's bra."

53. Mr O'Toole acknowledged that the purpose of the shape was to fit within the bra and acknowledged the "functional nature of an ovoid anterior face" as being to achieve that end. He acknowledged that the application told the reader that the tear-drop shape was preferred for technical reasons. The technical reason was "to fit in a stable manner within the cup of a user's bra". He did, however, from time to time make remarks saying that the functional purpose appeared in the document because it was a patent.

54. Ms Lane's response to this aspect of this case was to point out, as Mr O'Toole did, that one would expect to find technical justifications in a patent, but that did not rule out aesthetic considerations as playing a part in the design. I agree that that is true so far as it goes, but the problem with it is ascertaining what there is left for aesthetic consideration. She encouraged me to look at all the evidence (see *Doceram*) and pointed to the existence of alternative designs. At one point she suggested that I should look at the actual intentions of the designer, but it is not clear that in the end she pressed that point. In any event, I have already held that that would be inappropriate as a matter of principle.

55. Alternative designs, that is to say alternative methods of achieving the same functional effect, no longer stand in the way of a determination of technical function now that the "multiplicity of forms" theory has been ruled out. In the light of the evidence I find that the shape of the front of the design, both the upper casing and the front of the MCV which continues the shape, is one which is solely dictated by the device's function of having to co-operate with the shape and support of the bra. A wearable in-bra breast pump, if it is to work satisfactorily, has to co-operate with the brassiere, and obviously some shapes will not do that adequately – for example, a cubed shape, or a pyramid. That sort of principle is demonstrated by the patents, and was accepted by both the experts. It is quite apparent to me that the shape of the registered design and the Elvie pump is intended to achieve that co-operation. Its choice is functional, not aesthetic. That brings it within the sub-section, even if other shapes (domes or hemispheres) might have fulfilled the same function. That means that it cannot be the basis of an infringement claim and has to be left out of consideration when carrying out that section 7 assessment exercise.

The posterior (inner) surface - the breast shield

56. The breast shield is a thin piece which sits between the rear of the pump housing and the breast of the user. It engages with the breast and has to form a seal so that the pump can work properly, and it has a hole roughly in the middle into which the nipple goes. The milk passes from the nipple via a "nipple tunnel", and thence into the MCV. It can be seen in profile and at the rear of the pump (without the nipple tunnel, which is not shown save for the

proximal end) in the last two drawings in the 0010 designs. It is apparent that in profile it has a shallow concave shape.

57. Mr Cuddigan sought to rely on an extended description of this part of the device in the Elvie patent. That description goes into much more detail than is apparent from the designs, and is to that extent irrelevant. It contains a description of the "nipple tunnel", which is the part beyond the hole shown in the drawing, and which is no part of the design. What it does do is to propound the merits of a shallow, flatter profile for the part (described there as a flange) in spreading the forces across the breast so that it fits securely and can ensure the accurate location of the user's nipple. It is also described as being preferably wide enough to correspond with the rear of the pump housing. That is what is shown in the designs.

58. Mr Fischer's evidence on this point (ignoring irrelevant evidence about details of the nipple tunnel which are not shown) was that a flange (breast shield) must not be entirely flat because it would not form a proper seal with the breast, and that the shape should allow for the maximum surface contact between flange and breast, but not be so large as to compromise discretion of use or to risk being pushed out of alignment by the brassiere. The location should not be too high or too low, in order to promote balance and non-protrusion from the top of the brassiere. Mr O'Toole thought that the shield should be positioned relatively low on the housing to promote manipulation within the bra.

59. Mr Cuddigan's first submission was that the breast shield "is exclusively functional". That is undoubtedly true, but it is not quite the statutory question. The real question is whether the shield "has features of appearance of a product which are solely dictated by the product's technical function". Having posed that question, it seems to me that the answer is Yes in relation to all aspects of its appearance. It is concave (in a shallow fashion) which is necessary to enable it to engage fully with the breast, and it spreads out from the hole in the middle so as to engage with an appropriate amount, but not too much, of the breast. The need to engage with the breast is definitely a technical function, and its shape is intended to do that. There may be slightly different shapes which fulfil the same function – for example, the MFM product has a more circular shape than the Elvie design – but that does not mean that the design falls outside the exclusion (see above). I consider that there is no feature of the shield which is not dictated by function, so the exclusion applies.

The milk collection vessel (MCV)

60. Mr Cuddigan relied on three features of the MCV as being solely dictated by the technical function of the MCV within the meaning of the sub-section – the location of the MCV below the pump, the curved (domed) shape with a flat bottom and its transparency.

61. So far as positioning is concerned, if this were a relevant design aspect at all it would, in my view, be functional. Mr Fischer gave evidence that gravity feed was preferable to a system which required the milk to be pumped higher into

the device, which is apparent on some other products. An MCV below the path of the milk from the breast shield is described as "preferable" in the Elvie patent and a vessel forming a "lower part of the housing" is part of claims 27 and 29. The technical benefit is that gravity, rather than a pump, leads the milk to the collection point.

62. However, I do not think it is appropriate to consider this aspect of the design separately from the shape. If this "belowness" feature, thus described verbally, were to be treated as a separate functional exclusion then no in-bra breast pump with the vessel below the pump would be able to claim design right in the vessel no matter how differently designed it were in appearance. The positioning needs to be considered with the second aspect, namely the curved front aspect, and in truth is subsidiary to it. I have already held the front face of the MCV to be excluded as part of the curvature which functions to allow the pump to co-operate with and be supported by the brassiere. The positioning of the MCV is part of that excluded aspect so far as the exclusion goes. No other part of the MCV is excluded merely by virtue of its positioning.

63. A flat bottom is functional – it enables the unit, or the MCV as a separate item, to be placed on a flat surface after use without spilling. That was Mr Fischer's unchallenged evidence. As a single aspect of the design it is capable of falling within the exclusion, so far as it is part of the design at all.

64. Last, Mr Cuddigan claimed that the transparency of the MCV was a purely functional feature, because it enabled the level of milk to be apparent to the user. Apart from being obvious, that was also part of Mr Fischer's evidence, and accepted by Mr O'Toole. I find that this aspect of the design falls within the exclusion. However, nothing really turns on that in this case.

The overall comparison exercise – a preliminary dispute

65. Section 7(3) requires the court to consider design freedom in considering whether a different overall impression is produced – see above. The parties obviously accepted that. How that works can be taken from the encapsulation of the General Court *Eternit v EUIPO* T-193/20 (replete, I fear, with the unhelpful double negatives which permeate expositions of this area of the law):

> "The influence of the factor linked to the freedom of the designer on individual character varies according to a rule of inverse proportionality. Thus, the greater the designer's freedom in developing a design, the less likely it is that minor differences between the designs at issue will be sufficient to produce a different overall impression on an informed user. Conversely, the more the designer's freedom in developing a design is restricted, the more likely it is that minor differences between the designs at issue will be sufficient to produce a different overall impression on an informed user. In other words, if the designer enjoys a high

> degree of freedom in developing a design, that reinforces the conclusion that the designs which do not have significant differences produce the same overall impression on an informed user and, accordingly, the contested design does not display an individual character. Conversely, if the designer has a low degree of freedom, that reinforces the conclusion that the sufficiently marked differences between the designs produce a dissimilar overall impression on the informed user and, accordingly, the contested design displays an individual character (see judgment of 13 June 2019, *Display holder for vehicles*, T-74/18, EU:T:2019:417, paragraph 76 and the case-law cited)."

66. However, there was a significant dispute between the parties as to the starting point of the exercise. Mr Cuddigan submitted that the starting point is the design itself. One has to consider the design and ascertain the factors operating on design freedom (mainly function-related matters in this case), and having done that, or in that context, one can consider the evidence from the design corpus as being further evidential material going to the point; but the crucial starting point was the design itself. Ms Lane's starting point was the design corpus, which she said was all breast pumps. If one starts at that point then the corpus shows a very high degree of design freedom, with the effect (favouring her case) identified in *Eternit*.

67. Mr Cuddigan's argument starts from another passage from *Eternit* and is said to gain support from earlier English cases. As Ms Lane pointed out, the issue in *Eternit* was validity, not infringement; Mr Cuddigan said that did not affect the principles involved which ought to be consistently applied to both – see Floyd LJ in *Pulseon v Garmin* [2019] RPC 12. In *Eternit* the court applied its assessment in 4 stages:

> "21. The assessment of the individual character of the contested design for the purposes of the abovementioned provision is carried out, in essence, in four stages. That examination consists in deciding upon, first, the sector to which the products in which the design is intended to be incorporated or to which it is intended to be applied belong; secondly, the informed user of those products in accordance with their purpose and, with reference to that informed user, the degree of awareness of the prior art and the level of attention to the similarities and the differences in the comparison of the designs; thirdly, the designer's degree of freedom in developing his or her design, the influence of which on individual character is in inverse proportion; and, fourthly, taking that degree of freedom into account, the outcome of the comparison, direct if possible, of the overall impressions produced on the informed user by the contested design and by any earlier design which

> has been made available to the public, taken individually (see, to that effect, judgment of 13 June 2019, *Visi/one* v *EUIPO – EasyFix (Door hanger for vehicles)*, T-74/18, EU:T:2019:417, paragraph 66 and the case-law cited)."

68. Then it went on to pronounce the paragraph Mr Cuddigan relied on as his starting point:

> "24. It is apparent from recital 14 of Regulation No 6/2002 that the assessment as to whether a design has individual character should be based on whether the overall impression produced on an informed user viewing the design clearly differs from that produced on him or her by the existing design corpus, taking into consideration the nature of the product to which 'the design' is applied or in which 'it' is incorporated, and in particular the industrial sector to which 'it' belongs and the degree of freedom of the designer in developing the 'design'. The reference in the singular to the 'design' in order to determine the industrial sector to which 'it' belongs and the degree of freedom of the designer in developing it, as opposed to the use of the concept of 'design corpus' which covers all of the existing designs, clearly indicates that the first three stages of the analysis, namely those relating to the determination of the sector concerned, the informed user and the designer's degree of freedom, must be carried out only in relation to the design the individual character of which is assessed, that is to say, in the present case, the contested design."

It is the last sentence of that paragraph on which Mr Cuddigan principally relies. It seems to me that he was entitled to do so. It is true, as Ms Lane pointed out, that the issue in that case was the relevance of designs outside the design sector when it came to considering validity, but the statements would seem to be of general application and therefore applicable to infringement cases as well.

69. Support for the principle is said to exist from prior English cases. In *Gimex v Chill Bag* [EWPCC] 31 HHJ Birss QC said:

> "66. There are various factors which influence the degree of freedom of the designer. Based on paragraph 34 of the judgment of Arnold J in ***Dyson*** at first instance, [2010] EWHC 1923, it was common ground before me that design freedom can be constrained by: the technical function of the product or an element thereof; the need to incorporate features common to such products; and by economic considerations (e.g. the need for the item to be inexpensive).

> 67. The designer's degree of freedom is a factor taken into account in assessing overall impression on an informed user. It plainly must be linked to the product concerned. For one thing if it was not, it is hard to see how the question of constraint by technical function could be considered sensibly. Unless the degree of freedom is linked to the right type of product, there would be a risk of arriving at the wrong degree of freedom. That could lead to too wide a degree of freedom being found which in turn could lead to too broad a scope of protection."

70. It is not clear that this really supports Mr Cuddigan's thesis. It all depends on what HHJ Birss QC meant by "the product concerned". One can see from his later consideration of design freedom that he regarded "the product" as an overall category of "bottle chillers" (see paragraphs 82 and 83) and he then considered the design constraints, including functional constraints, which applied across that category. It is not apparent that he actually carried out the process required by Mr Cuddigan. This supports Ms Lane's submission that the word "product" in paragraph 67 means the sector.

71. However, Mr Cuddigan has rather more support from the actual approach of Arnold J in *Dyson v Vax* [2010] FSR 39 at first instance (not criticised in this respect on appeal). That case involved vacuum cleaners, and Arnold J held that the existing design corpus was "cylinder vacuum cleaners" (paragraph 56). However, when considering design freedom he did not simply start from the range of such cleaners and consider the design freedom applicable to them. He took into account the technical compromises that would have to be made in order to produce a technically favourable outcome. Thus a bin inclined at 45˚ was "the best technical compromise" which restricted design freedom:

> "65. To that extent, therefore, the degree of freedom of the designer of the Mach Zen was restricted if he wanted to achieve the best technical compromise."

72. It should be noted that in the Court of Appeal Jacob LJ observed that the reference to the Mach Zen, which was the allegedly infringing product, should have been a reference to the Dyson DC02, which was the relevant design. That reinforces Mr Cuddigan's point – design freedom has to be assessed in the light of the actual design where appropriate, not just starting with the entire design corpus. The following paragraph does the same. Arnold J went on:

> "66. Counsel for Vax accepted that, at this level of generality, the Mach Zen was similar to the Registered Design while this feature was not present in the existing design corpus. He submitted, however, that, given the restricted degree of freedom of the designer of the Mach Zen, the similarity in itself was not of great significance. I accept this submission"

73. Again, in the Court of Appeal it was pointed out that the reference to the Mach Zen in paragraph 70 ought to have been a reference to the Dyson DC02. Subject to that, this extract makes the same point.

74. Other findings of his demonstrate the same approach:

> "69 In the further alternative Vax contends that the designer's freedom was constrained by the need for the user to see when the bin is full. So far as this is concerned, it is common ground that there are other possible solutions. One could have a window, one could have a tinted bin and one could have some kind of a detector with an indicator light or sounder. On the evidence, however, each of these alternatives had drawbacks. A window is unsatisfactory because dirt may not accumulate evenly in the bin, a tinted bin is unsatisfactory because it is less easy to see the dirt and a detector plus indicator involves added expense and complexity. It follows that ease of use and cost considerations both point to adoption of a transparent bin. Again, therefore, the degree of freedom of the designer of the Mach Zen was restricted if he wanted to achieve the best solution.
>
> 70. Counsel for Vax accepted that the Mach Zen was similar to the Registered Design in having a transparent bin while this feature was not present in the existing design corpus. He again submitted, however, that, given the restricted degree of freedom of the designer of the Mach Zen, this similarity in itself was not of great significance. I accept this submission. Furthermore, as I have already said, I also accept that the informed user would consider the design of the bin as a whole and note the differences identified in paragraph 67 above."

75. There is also a small amount of support to be had for Mr Cuddigan in *Proctor & Gamble Co v Reckitt Benckiser (UK) Ltd* [2008] ECDR, a case involving an aerosol canister with a trigger release. In the course of considering what the informed user is taken to know or appreciate Jacob LJ referred to the impact of function on design freedom:

> "29. Another thing is also clear. Where shapes are, to some extent, required to be the way they are by reason of function, the informed user is taken to know that. That is what Art 6(2), (for validity) and Art. 10(2) (for scope of protection) require. Take an aspect of this case. Both products have a trigger and something of a "pistol grip". There is some constraint on design freedom for this – the product must be grippable so that the index finger can pull the trigger, the trigger must be shaped to fit the finger and have sufficient space behind it for it to

> be pulled. That is a given. The informed user must take those requirements into account when assessing overall impression."

76. That does not quite go to Mr Cuddigan's starting point, but it is consistent with it.

77. I consider that Mr Cuddigan's submissions on this point are correct. It is apparent that functional constraints are capable of limiting design freedom. This appears in a number of places in the authorities and it is sufficient to draw attention to Arnold J's acceptance of the following proposition in *Dyson v Vax*:

> "34. Counsel for Vax submitted, and I accept, that this passage indicates that design freedom may be constrained by (i) the technical function of the product or an element thereof, (ii) the need to incorporate features common to such products and/or (iii) economic considerations (e. g. the need for the item to be inexpensive)."

78. That being the case, one has to ask where one starts in considering what technical requirements are involved, and the only sensible answer to that is with the design. If design freedom is to be limited by technical function, then one has to identify the technical function. In order to identify it one has to find it, and the only place one can find it is in the design. There is no point in considering technical function which does not appear in the design even if it appears elsewhere in the design corpus. So one has to start with the design, not the design corpus, in ascertaining what technical function one is considering. Mr Cuddigan is therefore correct in starting there.

79. I therefore consider Mr Cuddigan's submissions to be correct. When considering design constraints relevant to design freedom one looks at the constraints arising out of the design, not some wider, ill-defined, constraints arising out of the design corpus.

The design corpus and design freedom

80. The design corpus is nonetheless relevant to the question of design freedom. The informed user is taken to be aware of the design corpus – that was common ground. It may be significant that a registered design is a large departure from that corpus. As Jacob LJ put it in *Proctor & Gamble* at paragraph 57:

> "A large departure from the prior design corpus is indeed an indication of design freedom."

81. It was agreed that for these purposes account could be taken of designs produced after the registered design. All this is capable of being evidence that the designer of the registered design was not constrained in producing the design that he/she did. This factor is, however, merely evidence, or an

indication, and considering it is one of the tools which the court can use in order to assess the overall comparison exercise.

82. The operation of this was explained by Arnold J in *Dyson v Vax*:

> "39. Recital (13) of the Designs Directive indicates that, other things being equal, a registered design should receive a broader scope of protection where the registered design is markedly different to the design corpus and a narrower scope of protection where it differs only slightly from the design corpus. Thus in *Grupo Promer* the General Court held at [72]:
>
> > "... as the Board of Appeal pointed out at paragraph 19 of the contested decision, in so far as similarities between the designs at issue relate to common features, such as those described at paragraph 67 above, those similarities will have only minor importance in the overall impression produced by those designs on the informed user ...."
>
> 40. Conversely, in *Procter & Gamble* Jacob LJ held at [35(iii)]:
>
> > ... if a new design is markedly different from anything that has gone before, it is likely to have a greater overall visual impact than if it is 'surrounded by kindred prior art' (H. H. Judge Fysh's pithy phrase in *Woodhouse* at [58]). It follows that the 'overall impression' created by such a design will be more significant and the room for differences which do not create a substantially different overall impression is greater. So protection for a striking novel product will be correspondingly greater than for a product which is incrementally different from the prior art, though different enough to have it own individual character and thus be validity registered."

83. However, Arnold J added an important qualification:

> "41. Counsel for Vax accepted that in general the proposition stated by Jacob LJ would normally be correct, but submitted that it would not be correct where the striking elements of the design were ones where there was little design freedom, in particular because of technical requirements. More specifically, he argued that, if the registered design was based on a new technology bringing with it new design constraints, then differences between the registered design and an existing design corpus based on old technology might have little relevance when it came to comparing the registered design with a subsequent design based on the new technology. In principle I accept this point."

84. It should be noted that the citation from *Procter & Gamble* quoted by Arnold J is preceded by the words:

> "Next is not a proposition of law but a statement about the way people (and thus the notional informed user) perceive things."

All the statements about the effect of the design corpus and design freedom must be understood in the light of that. As I have observed, they are not absolutes but are tools to be applied in the exercise of considering the impact of the conflicting designs in the perception of the informed user.

85. I therefore turn to consider what the design corpus is. I have found the sector to be electric breast pumps, but the design corpus relevant to the present exercise seems to be narrower than that. Electric breast pumps can sensibly and properly (for these purposes) be divided into wearable and non-wearable. They correspond to Mr Hume's categories (c) to (e). They differ from the other categories in that the various components are within the wearer's clothing, or at least easily moveable with the wearer, so that the wearer can have some significant mobility while operating the pump.

86. Ms Lane submitted that this corpus showed plenty of scope for design freedom when one looked at the different approaches to design. She instanced the examples appearing in Annexe 4 to this judgment (some of which have appeared already in Annexe 2), together with the Whisper Wear patent. Those, she said, demonstrated some of the different approaches that could be adopted. For example, the Medela Swing was very obviously different from the other approaches; the Willow had all elements in the bra and indeed within the cover, with a breast shield integrated into the back and a rounded bottom; the Freemie was circular, not egg-shaped and had the pump outside the bra. It is unnecessary to go on.

87. She is correct in saying that this design corpus demonstrated a variety of approaches. None are said to be close to the registered designs – none had the same overall shape, none had the same shape from the side (egg-shaped with a flat bottom); the breast shields were different in either being separate from the pump or were integrated into the back of the pump rather than standing proud; and the MCVs were all of a very different design.

88. She went on to say that if one adds in the newer pumps that came on to the market after the date of the designs one can still see a great degree of design differences in, for example, the shapes of the pump housing, MCVs and breast shields. Instances appear in Annexe 5. And even if one looks at just all-in-one units for fitting into the brassiere there are various designs which again demonstrate design freedom – see Annexe 6.

89. If one starts with the "wearable" corpus, and if one is considering what that corpus tells one about design freedom in designing a wearable pump without more, then Ms Lane is correct in saying the corpus demonstrates considerable design freedom. It is also true to say that the registered designs differ from practically all the design corpus at the date of registration in their shape and concept, because most of the designs have part of the apparatus outside the brassiere. The exceptions are the Willow and the Fischer patent, which have the same sort of overall shape (in general terms) from the front and side, and

the Fischer patent has the flat bottom as well. However, for the reasons considered above, all that does not necessarily have the impact that Ms Lane would say it has. I have already decided that that sort of top-down approach to design freedom is not the correct approach, or at least not without modification. What one has to take into account is constraints on design freedom which are created by functional and other requirements, as was done by Arnold J in *Dyson v Vax*. When that is done it may become apparent the registered design's departure from the design corpus does not have the effect referred to in the authorities just cited.

The approach to the section 7 exercise

90. With those points in mind I can now embark on the exercise required by section 7(1), namely whether, in the eye of the informed user, the MFM product "does not produce … a different overall impression". I shall do so for each of the registered designs by taking out of the assessment the features I have found to be solely technically functional, seeing what is left, assessing whether any other functional restraints exist on design freedom and then assessing the differences in that light. Having done that for each product, and in case I am wrong on the technical function point (the section 1C(1) point), I shall revisit the assessment on the basis that the technical function bar does not rule out any aspects of the design. In carrying out that exercise I have considered the question from the starting point of the designs themselves, though I have been assisted by having specimens of the Elvie pump available. It is common ground that the authorities allow reference to a physical embodiment of the design provided that the embodiment used actually conforms to the design (see *Procter & Gamble*, supra, at para 12). It was not suggested that the Elvie pump did not so conform.

91. One point needs to be made about the photographs of the MFM product. They have to be treated with a little care because they are not always appropriate counterparts of the designs or they are a little distorted in the presentation. Thus for example the MFM product shown face-on against the first 0010 design is not photographed from the same face-on angle as the design; it is photographed from a slightly elevated angle. That is significant because it does not show one difference in features in that it does not fully capture a dip in the front housing of the MFM product, into an accommodating dip in the MCV. It also makes the MFM product look somewhat slimmer side to side than it is in reality. I, of course, have had the benefit of the physical product to work from, and I have done so.

92. In carrying out the exercise, I consider that the informed user whose view I have to consider would be one with a relatively high level of attention to detail, being a person who is interested in the discreet operation of an intimate piece of equipment and will be particularly attentive to how it appears and how it handles.

The 0010 design – assessment

93. Starting with the 0010 design, the informed user has to exclude the overall shape of the front of the housing from consideration, along with the flat

bottom of the MCV and the concave shape of the breast shield. With those excluded she can approach what is left, odd though the exercise has now become because there is not a lot left to consider. In my view the MFM product does then produce a different overall impression (expressing the statutory test in a more useful converted form, removing the double negative). From the front of the MFM product one has the dip in the housing into the corresponding recess in the front of the MCV, rather than the straight line appearing in the drawings. There are also the two scallops at the top of the MFM product housing matched by two scallops towards the side of the MCV. Those scallops are also apparent from a side view and create a different impression.

94. Also from the side, the back of the housing in the design has a slight concave shape matching the concave shape of the breast shield, whereas the MFM product has a flatter back until it recedes into the dip which accommodates the nipple tunnel on the breast shield. From the rear, the breast shield of the MFM product (whose shape, but not whose presence, is excluded from the design under section 1C(1)) follows the line of the rear of the housing in the design, whereas it extends beyond the shape of the housing towards the top of the MFM product. (The lower part of the shield of the design sits smoothly in a slight recess at the top of the MCV in the Elvie product, whereas the MFM product's shield simply overlaps its MCV. However, this feature is not apparent from the registered design drawings for design 0010 so I do not take it into account in relation to that design.)

95. Mr Cuddigan also relied on the fact that the MFM product is "substantially larger" than the Elvie pump. That is true in terms of the physical products, but irrelevant. The registered design says nothing about size, so that is not a relevant factor in the design. The informed user should not take it into account. However, the ratios of the dimensions are of interest. Mr Cuddigan produced the following figures:

Measurement	**Elvie ratios**	**MFM ratios**	**MFM.Elvie%**
Height/Width	1.16	1.28	110%
Height/Depth	1.91	1.68	87.9%
Width/Depth	1/64	1.31	79.8%

96. Those numbers are by themselves, of course, meaningless, but they do reflect what the physical experience tells a handler, which is that the MFM product comes across as much "chunkier" than the Elvie product. That is not a function of size; it is a function of shape. That aspect would be apparent to the informed user.

97. The departure from the design corpus point is of little relevance at this stage of the reasoning, because the major items have been removed from consideration by section 1C(1).

98. On this basis I consider that the informed user would consider that the MFM product would create an overall different impression in the eye of the informed user. There is limited design freedom because of the functional requirements of the product, and the differences which I have described will be more likely, and indeed do, produce a different overall impression in that user.

99. If I am wrong about the excluded material, the result is still the same. It is questionable whether there is the serious departure from the design corpus which Ms Lane would rely on, bearing in mind that the Willow and the Medela/Fischer patent were both part of that corpus, but in any event the informed user has to note the functional requirements which I have found in relation to the section 1C(1) point as being constraints on design freedom. Bearing that in mind, and in accordance with the "tools" to which I have referred above, I have concluded that the informed user would consider the differences to which I have just referred are sufficient to create a different impression.

100. Accordingly, I consider that there is no infringement of the 0010 design.

The 0002 design

101. Again, I deal with this first on the footing of the exclusion of the technically functional curved shape of the housing.

102. This is the housing without the MCV and the breast shield. The main curved shape is excluded from the design in the same way as in relation to the 0010 design. The "chunkier" design remarks apply and the scallops and dip at the front are again a difference. Additional points of visible difference are the control buttons (this time they are included in the design) and their positions, the charging port on the side of the Elvie design and the size of the MCV release button on the front.

103. Turning to the back, there is a stark difference between the design and MFM product in terms of the holes which accommodate the nipple tunnel of the breast shield. In the design there is an open topped semi-circular hole with two protruberences. (On the physical product they each house a spring-loaded ball-bearing which engage with the nipple tunnel to secure the breast shield when it is inserted, but that is not apparent on the design). Above that there is a large recess; the receding rings are intended to depict the recess which (going by the Elvie pump itself) accommodates a large diaphragm of the pump. The protruberances and the large circular recess are not present in the MFM product. In the MFM product there is a largely cylindrical hole which accommodates the nipple tunnel of the breast shield with a receding rectangular slot at the bottom running to the back of the hole. That is not present in the 0002 design. In the side of the hole there are two grooves for aligning the nipple tunnel; they are not present in the 0002 design. The back

of the MFM product, away from the edges, is rather less concave than the Elvie pump (though that is not so apparent from the design).

104. Bearing all those features in mind, and taking into account the correct approaches identified above in this judgment, the MFM product produces a significantly different impression to the informed user, especially having regard to the rear face of the two items. Even if one takes the design as being a departure from some of the items in the design corpus, indicating a greater degree of design freedom, the informed user will still vest the differences between the design and the MFM product to give a different impression.

105. The conclusion is the same even if the curved shape is not excluded. The tear-drop shape is still an understandable functional departure from the design corpus, which increases the scope for slighter differences to create a different overall impression, and the other differences still apply.

The 0003 design

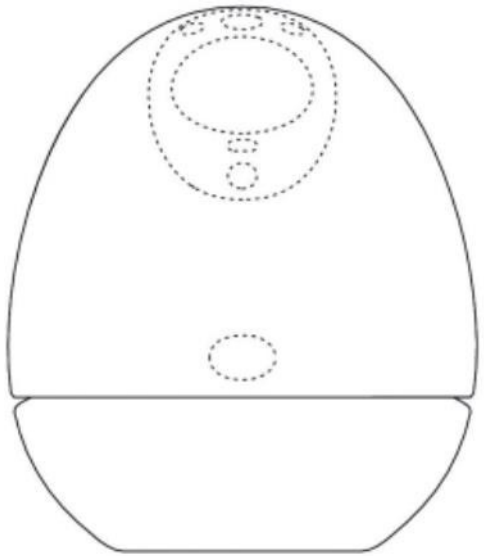
106. Last is design 0003, the MCV. In this instance I can ignore the curved front and flat bottom which I have otherwise held to be excluded from the design by their technical function and can consider the MCVs as a whole, because the answer is plain. The bottles are similar in that they have a curved front and a straight back, and both are transparent. Each has a circular hole at the top which connects to the pump unit above. At that level of generality they are similar. However, beyond that they are not. The top of the 0003 design has an inlet aperture whose area is slightly less than one third of the top surface. The "shoulders" on each side are significant and, at their widest, are approximately as wide as the diameter of the aperture. The aperture of the MCV of the MFM product is much wider in relation to the width of the whole vessel. The "shoulders" are correspondingly much narrower. Furthermore the shoulders are flat whereas the "shoulders" of the design slope up to the neck of the aperture. Turning to the back, the rear of the MFM product is flat; the rear of the design has a curved recess (which, in the product, neatly accommodates the lower part of the breast shield). The front of the MFM product has scallops; the design has none. Underneath (the last of the 0003 drawings) the flat bottom of each item is a different shape. On the design it is an ellipse, as shown. On the MFM product the shape is dome-shaped towards the front of the bottle, with a not quite straight line tending to follow the straight line of the rear of the bottle itself. This is not so apparent from the annexed photograph but is apparent on the actual product. The product also has a sort of crease which is just apparent on the photograph as a faint curve (marked).

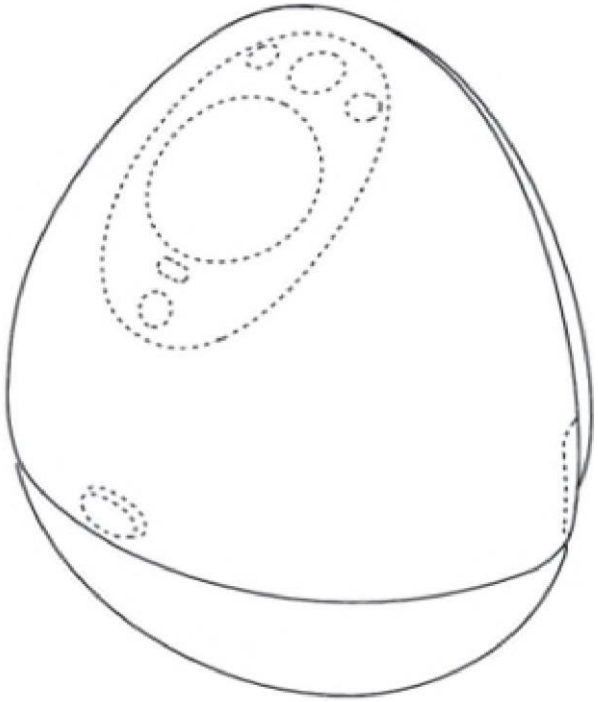
107. The design is not like much else in the design corpus, but the curved shape of the front and flat bottom are aspects of required technical function which, to a degree, would be apparent to the informed user which explains that departure. With that in mind, and bearing in mind the differences which I have identified, I consider that the MFM product's MCV would produce a different overall impression in the eye of the informed user.

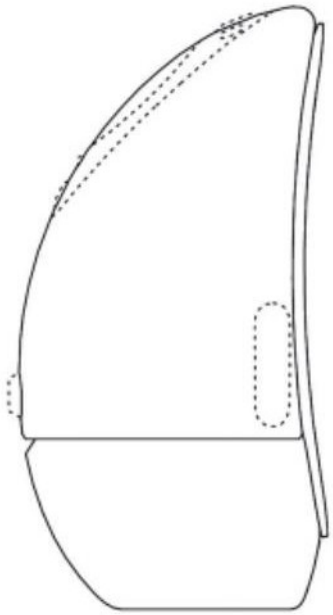
Conclusion

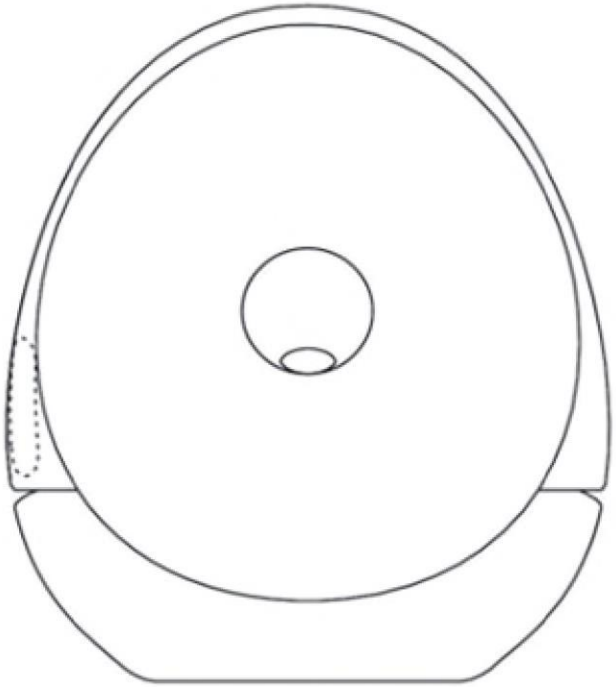
108. I therefore conclude that MFM product does not infringe any of the registered designs and this claim falls to be dismissed.

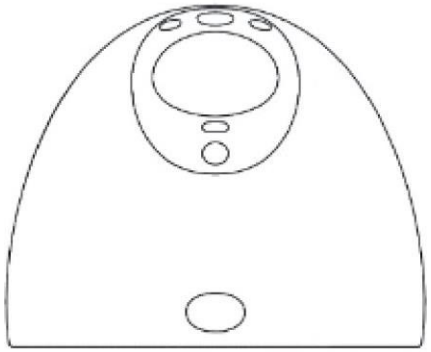
Annexe 1 - The registered design and comparable aspects of the MFM product

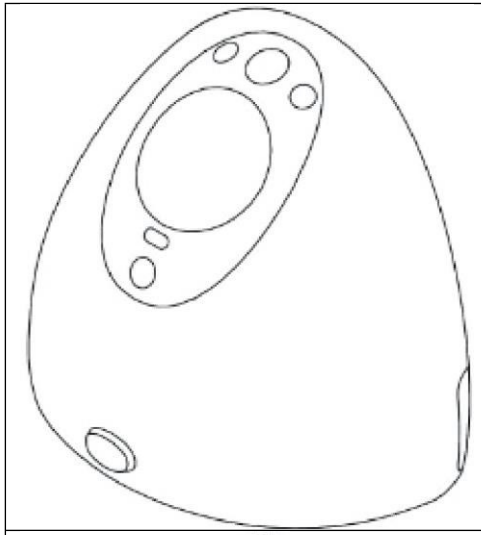
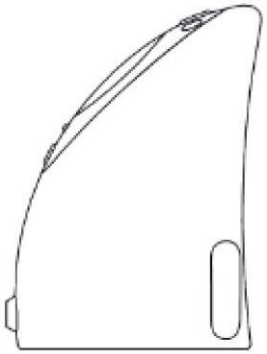
Registered Design	Defendant's product
0010 Design	
	

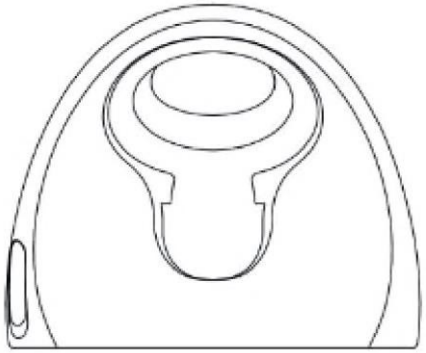
Registered Design	Defendant's product
	

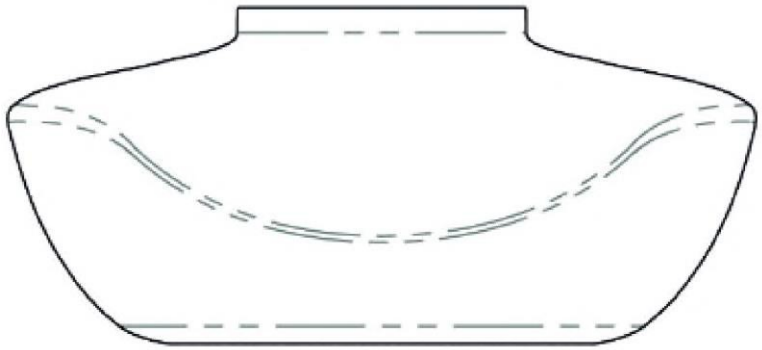
Registered Design	Defendant's product
	

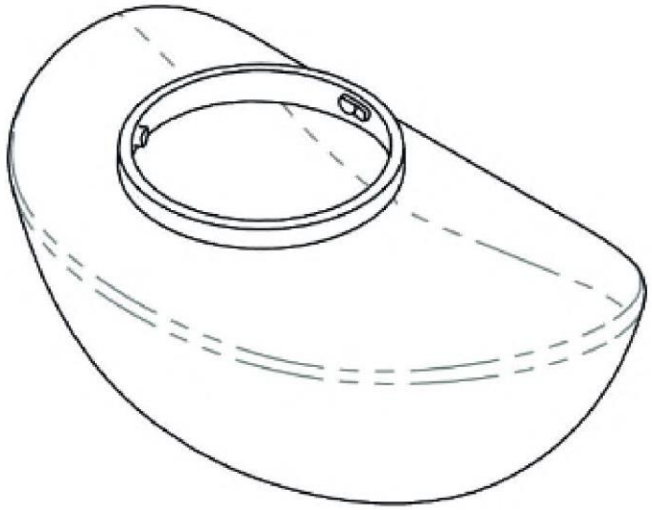
Registered Design	Defendant's product
	

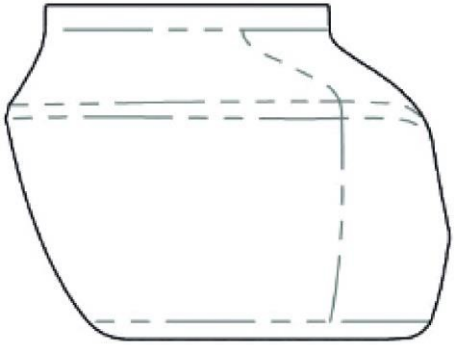
0002 Design	
Registered Design	**MFM Product**
	

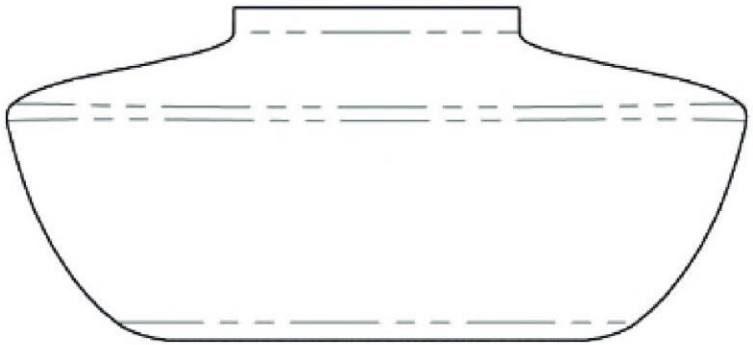
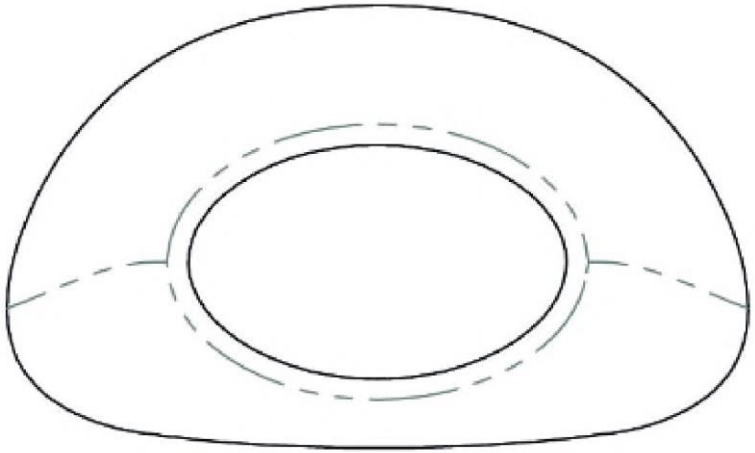
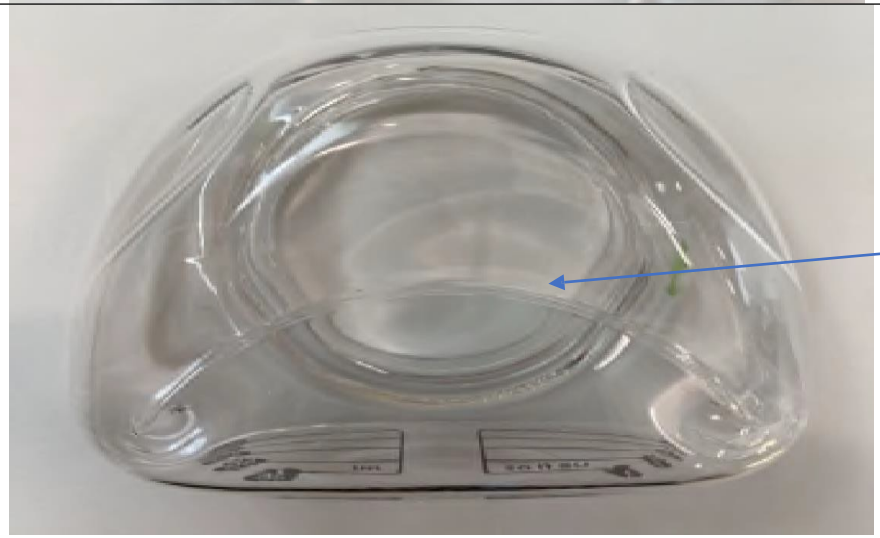
	
	

0003 Design	
Registered Design	**MFM product**
(The back of the MCV – design 0003A) 	Rear face of the MFM product – photo A )





(The front of the MCV – design 0003B)	Front of the MFM product – photo B
	
	
(The bottom of the	Crease

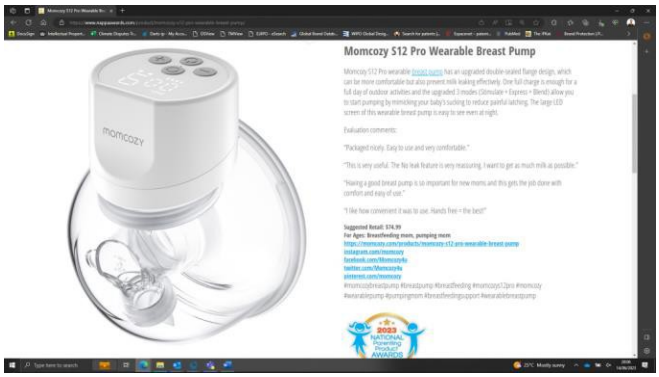
NB – I have labelled the back and front of the registered design MCV because those are the appropriate faces to compare with the corresponding faces of the MFM product. As the defendant pointed out, but the claimant did not accept, the wrong faces are invited for comparison by the claimant.

Annexe 2 – types of breast pump on the market in 2018

Medela Symphony

Medela Freestyle Flex

Medela Freestyle wearable breast pump



Momcozy S12

Willow (external view and the rear, opened up)

Annexe 3 – patents

The Whisper Wear patent (or Medela patent/application)

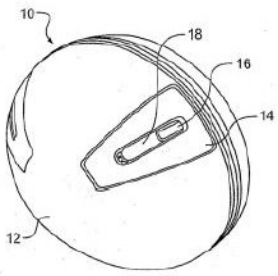


FIG. 1A

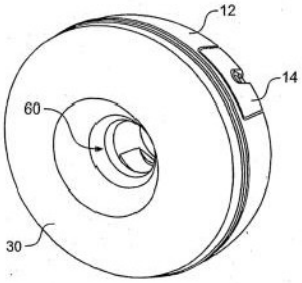


FIG. 1B

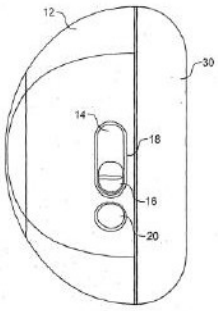
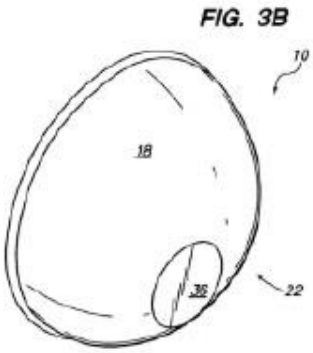
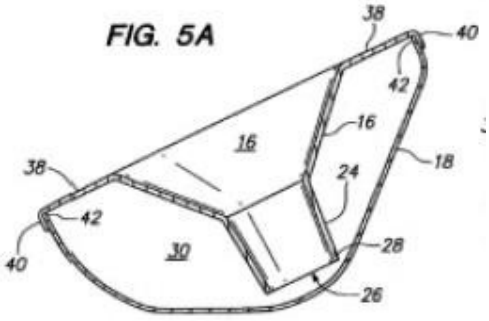
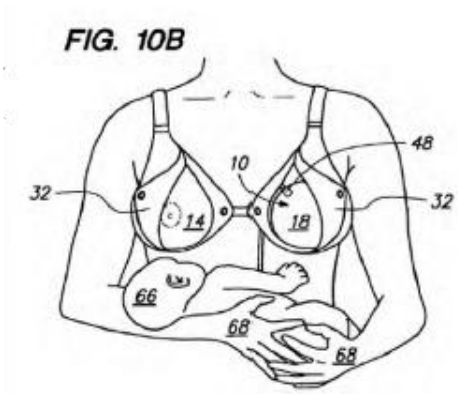


FIG. 3

Dao patent







The Fischer patent

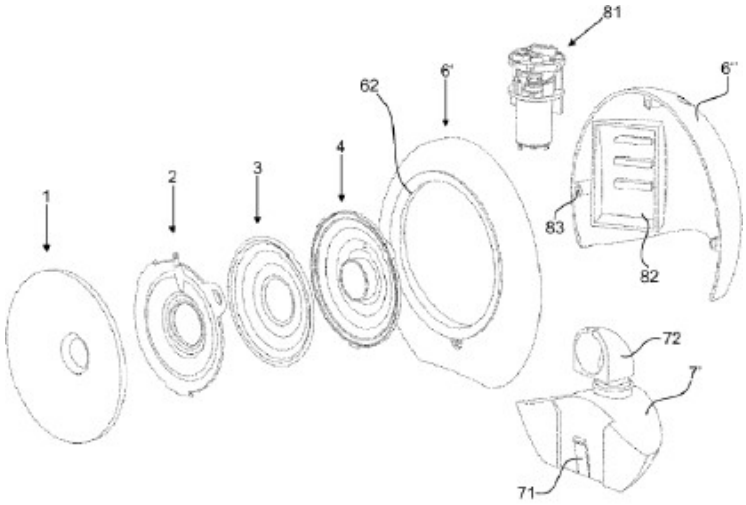


FIG. 11

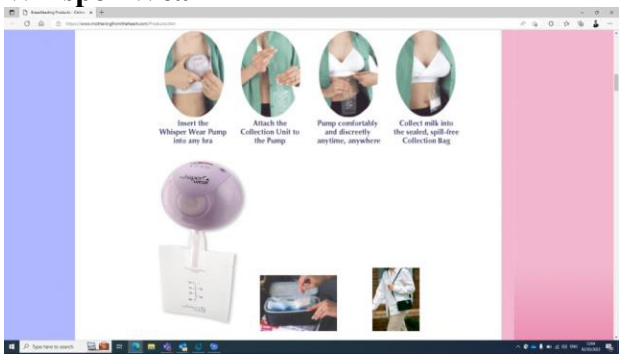
Annexe 4 – wearable pump design corpus (instances)

Medela Swing

Willow

NB – milk collection vessel is a bag which sits round the pump.

Whisper Wear

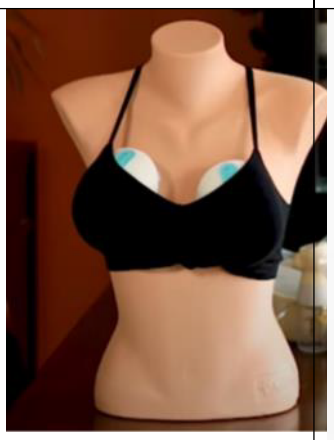


Freemie

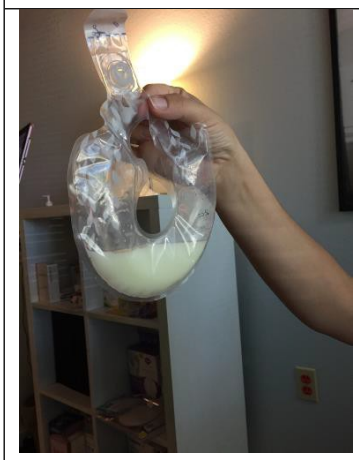
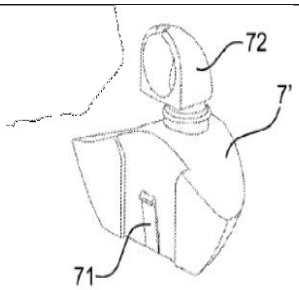
Medela application (see Annexe 3)

Annexe 5 – designs since the date of the registered designs

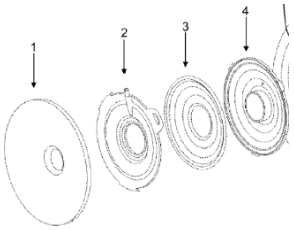
Differences in pump housings

Medela Swing	Freemie	Willow	Momcozy
			

Differences in MCVs

Willow	Whisper Wear	Medela Application	Willow Go
			

Differences in breast shields

Medela Swing	Willow	Medela Application	Willow Go
			

Annex 6 – recent designs for in-bra wearables

Bellababy	Wearable Breast Pump	Mumgaroo	Chef Handy
			
Momcozy M1	**Missaa**	**Kisdream**	**Pippeta Compact**