UPC Court of Appeals, 3 December 2024, SharkNinja v Dyson

A hand-held cleaning appliance

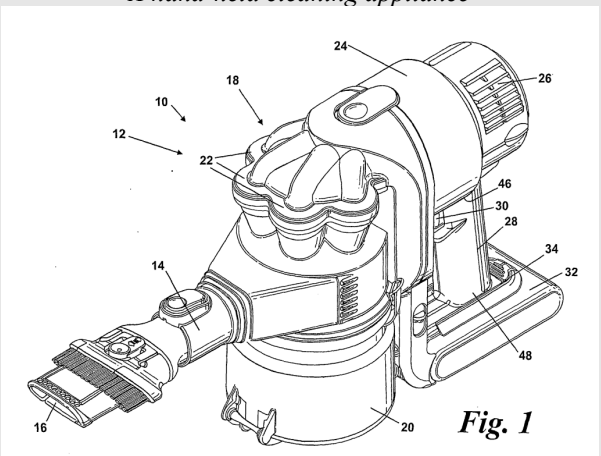


Fig. 1

PATENT LAW – PROCEDURAL LAW

Provisional injunction lifted (Article 62 UPCA, R. 211 RoP)

Not more likely than not that the patent is infringed

- **it is not more likely than not that the contested embodiments realise feature 1.3 of claim 1.**

47. On the basis of these observations, the Court of Appeal finds it more likely that regarding the introduction of particle laden air into the cylinder, the tilted flap next to the air inlet creates an air flow at an angle, with the result that the particles hit the cylinder wall in a generally vertical direction, but does not lead to a tangential airflow. The three types of particles demonstrate different patterns of movement. The sugar particles come closest to helical movement during a small part of their journey downwards (the downward curve), but it cannot from this evidence be established whether this is the predominant mode in which the airflow affects the particles. If there is centrifugal force, it does not show in the videos to the requisite legal standard. As mentioned, the fibre did not appear to settle in a collection region, and consequently does not seem to be subject to centrifugal forces as it never sticks to the wall and is not separated.

No need to examine the other grounds brought forward by the parties

- **Given the assessment in relation to feature 1.3 of claim 1**

Claim construction feature 1.3: "cyclonic separating apparatus" (Article 69 EPC).

- **The patent specification does not define what a cyclonic separating apparatus is. The Court of Appeal, as a first step, agrees with Dyson's view that cyclonic separating apparatus is a functional claim element as understood by the skilled person at the priority date**

Source: Unified Patent Court

UPC Court of Appeal,
3 december 2024
(Kalden, Simonsson, Rombach, Ashley, Tilmann)
UPC_CoA_297/2024
APL_32012/2024
ORDER
of the Court of Appeal of the United Patent Court
issued on 3 December 2024
in proceedings for provisional measures
HEADNOTE
On the balance of probabilities, it is not more likely than not that the patent is infringed. The provisional injunction of the Local Division is lifted.
KEYWORDS
Evidence, provisional injunction
APPELLANTS (AND DEFENDANTS IN THE MAIN PROCEEDINGS BEFORE THE CFI)
1. **SharkNinja Europe Limited**, Leeds, UK
2. **SharkNinja Germany GmbH**, Frankfurt am Main, Germany
(hereinafter jointly referred to as SharkNinja)
both represented by: attorneys-at-law Wolrad Prinz zu Waldeck und Pyrmont, Dr. Christopher Stothers, Kilian Seidel and Caroline Horstmann
(Freshfields Bruckhaus Deringer, Düsseldorf, Germany)
RESPONDENT (AND CLAIMANT IN THE MAIN PROCEEDINGS BEFORE THE CFI)
Dyson Technology Limited, Malmesbury, Wiltshire, UK
(hereinafter: Dyson)
Represented by: attorneys-at-law Dr. Constanze Krenz, David Kleß and Joschua Fiedler
(DLA Piper, Munich, Germany)
LANGUAGE OF PROCEEDINGS
German
PANEL AND DECIDING JUDGES:
Second Panel:
Rian Kalden, Presiding judge and legally qualified judge
Ingeborg Simonsson, legally qualified judge and judge-rapporteur
Patricia Rombach, legally qualified judge
Graham Ashley, technically qualified judge
Max Tilmann, technically qualified judge
IMPUGNED ORDER OF THE COURT OF FIRST INSTANCE
- □ Date: 21 May 2024, Local Division Munich
- □ Action number attributed by the Court of First Instance: UPC_CFI_443/2023; ACT_589207/2023

POINTS AT ISSUE
Application for provisional measures (R.220.1 RoP, R.212.3 RoP, R.197.3 RoP and R.197.4 RoP)
PATENT AT ISSUE
EP 2 043 492
ORAL HEARING ON
31 October 2024 (held in English with the consent of the parties)
INDICATION OF THE PARTIES' REQUESTS
The patent in suit

1. Dyson is the registered holder of European patent EP 2 043 492, "A hand-held cleaning appliance" ('the patent in suit' or 'the patent'). The patent application was filed on 6 July 2007, and the application was published on 8 April 2009. The date of publication and mention of the grant of the patent was 21 September 2011. It is in force in (inter alia) Germany and France.

2. Claim 1 of the patent reads as follows:

A hand-held vacuum cleaner (10) comprising a suction conduit (14) having a longitudinal axis, an airflow generator (36) for generating an airflow along the suction conduit, cyclonic separating apparatus (18) arranged in communication with the suction conduit (14) for separating dirt and dust from the airflow, a power source (32) for supplying power to the airflow generator (36) and an elongate handle (28) characterized in that the elongate handle (28) is disposed between the airflow generator (36) and the power source (32) and dimensioned and arranged to be gripped by a user's hand, wherein the elongate handle (28) lies transverse to the longitudinal axis of the suction conduit (14) and the cyclonic separating apparatus (18) is positioned between the suction conduit (14) and the elongate handle (28).

3. In German translation, claim 1 reads as follows:

In der Hand gehaltener Staubsauger (10), der einen Saugkanal (14), der eine Längsachse hat, einen Luftstromerzeuger (36), um einen Luftstrom längs des Saugkanals zu erzeugen, eine ZyklonAbscheidevorrichtung (18), die in Verbindung mit dem Saugkanal (14) angeordnet ist, um Schmutz und Staub aus dem Luftstrom abzuscheiden, eine Energiequelle (32), um den Luftstromerzeuger (36) mit Energie zu versorgen, und einen länglichen Griff (28) umfasst, dadurch gekennzeichnet, dass der längliche Griff (28) zwischen dem Luftstromerzeuger (36) und der Energiequelle (32) angeordnet und dafür bemessen und angeordnet ist, durch eine Hand eines Benutzers ergriffen zu werden, wobei der längliche Griff (28) quer zu der Längsachse des Saugkanals (14) liegt und die ZyklonAbscheidevorrichtung (18) zwischen dem Saugkanal (14) und dem länglichen Griff (28) angeordnet ist.

4. Dyson has suggested that the claim is broken down in features as follows:

1. A hand-held vacuum cleaner (10)	1. In der Hand gehaltener Staubsauger (10),
1.1 comprising a suction conduit (14) having a longitudinal axis	1.1 der einen Saugkanal (14), der eine Längsachse hat,
1.2 an airflow generator (36) for generating an airflow along the suction conduit,	1.2 einen Luftstromerzeuger (36), um einen Luftstrom längs des Saugkanals zu erzeugen,
1.3 cyclonic separating apparatus (18) arranged in communication with the suction conduit (14) for separating dirt and dust from the airflow,	1.3 eine Zyklon-Abscheidevorrichtung (18), die in Verbindung mit dem Saugkanal (14) angeordnet ist, um Schmutz und Staub aus dem Luftstrom abzuscheiden,
1.4 a power source (32) for supplying power to the airflow generator (36) and	1.4 eine Energiequelle (32), um den Luftstromerzeuger (36) mit Energie zu versorgen, und
1.5 an elongate handle (28) characterized in that	1.5 einen länglichen Griff (28) umfasst, dadurch gekennzeichnet, dass
1.5.1 the elongate handle (28) is disposed between the airflow generator (36) and the power source (32) and	1.5.1 der längliche Griff (28) zwischen dem Luftstromerzeuger (36) und der Energiequelle (32) angeordnet ist und
1.5.2 dimensioned and arranged to be gripped by a user's hand,	1.5.2 dafür bemessen und angeordnet ist, durch eine Hand eines Benutzers ergriffen zu werden,
1.5.3 wherein the elongate handle (28) lies transverse to the longitudinal axis of the suction conduit (14) and	1.5.3 wobei der längliche Griff (28) quer zu der Längsachse des Saugkanals (14) liegt und
1.5.4 the cyclonic separating apparatus (18) is positioned between the suction conduit (14) and the elongate handle (28).	1.5.4 die Zyklon-Abscheidevorrichtung (18) zwischen dem Saugkanal (14) und dem länglichen Griff (28) angeordnet ist

1.

The contested embodiments

5. SharkNinja has offered on its German and French websites handheld vacuum cleaners of the Shark Detect Pro models with (IW3611EN/EU) and without (IW1611EN/EU) automatic emptying base station, as well as the Shark cordless vacuum cleaner with Powerfins Plus technology (BU1120DE) (hereinafter "the contested embodiments").

The impugned order

6. Dyson lodged an application for provisional measures against SharkNinja with the Local Division Munich.

7. The Local Division Munich ordered as follows:

I. The defendants are ordered by way of an interim injunction to refrain from doing so in the territory of the Federal Republic of Germany and/or the territory of the French Republic,

a hand-held hoover (10) having a suction duct (14) with a longitudinal axis, an air flow generator (36) for generating an air flow along the suction duct, a cyclone separator (18) in communication with the suction duct (14) and a cyclone separator (18) in communication with the suction duct (14) is arranged to separate dirt and dust from the airflow, a power source (32) to power the airflow generator (36), and an elongate handle (28), characterised in that the elongate handle (28) is located between the airflow generator (36) and the power source (32) and is sized and arranged to be gripped by a user's hand, the elongate handle (28) lying transverse to the longitudinal axis of the suction duct (14) and the cyclone separator (18) being located between the suction duct (14) and the power source (32), to be gripped by a hand of a user, the elongate handle (28) being transverse to the longitudinal axis of the suction duct (14) and the cyclone separator (18) being disposed between the suction duct (14) and the elongate handle (28),

(claim 1 of EP 2 043 492)

to offer and/or deliver, especially when this happens as with the upright hoovers with the model numbers IW3611EU, IW3611DE, IW1611EU, IW1611DE and/or BU1120DE.

II. For each individual case of non-compliance with the order under I., the respective defendant must pay the court a (possibly repeated) penalty payment of up to EUR 250,000.00.

III. The parties shall each provisionally bear their own costs of the proceedings to order interim measures.
IV. In all other respects, the applications of the parties are rejected.
V. This order is effective and enforceable immediately.
VI. This preliminary injunction will be revoked or otherwise set aside at the request of the defendants, without prejudice to any claims for damages, if the applicant does not initiate proceedings on the merits before the Unified Patent Court within a period of 31 calendar days or 20 working days - whichever is longer - from 21 May 2024.

8. The Local Division found that Dyson had treated the matter with the necessary urgency. When interpreting feature 1.3 of claim 1, the Local Division found with reference to the prior art document **US 2002/0189048A** (US 048) cited in the patent description, that the person skilled in the art understands the feature "cyclone separating device" of claim 1 to mean that the separating device is not limited to a tangential air inflow. The claim must be interpreted in such a function-related manner that it encompasses any such vortex flows that enable the separation of particles by means of centrifugal force, and is not limited to a two-stage configuration of the cyclone separation device. On feature 1.5.3, the Local Division concluded that it is generally sufficient for the X-axis to coincide with the Y-axis at any point and that a pistol-like grip is possible. In feature 1.5.4, the word "between" is, according to the Local Division, to be understood as a usual arrangement along a line, i.e. a usual arrangement of the cyclone separator between the suction channel and the handle along a line. Accordingly, feature 1.5.4 is to be understood as a spatial physical arrangement of the suction channel, cyclone separator and handle; it is not to be inferred from the wording or the description that these components must lie on an axis. The Local Division concluded that the contested embodiments make use of features 1.3, 1.5.3 and 1.5.4 in accordance with the wording and therefore infringe the patent in suit (the other features being uncontested).

9. On validity, the Local Division examined prior art
- **DE 1 863 708 U** (13.12.1962) (Gimelli or FBD 8)
- **GB 2 298 572** (GB 572 or FBD 9)
- JP 54-027573 U (JP 573 or FBD 10)
- **FR 1 508 452 A1** (FR 452, D2 or FBD 11)
- Extract Museum of Design in Plastics in Great Britain, Pifco Vacette, **https://www.modip.ac.uk/artefact/aibdc-007361** (Pifco Vacette or FBD 24)
- **KR 2000-0067144A** – 2000 (KR 144 or FBD 12)
- **GB 2 035 787 A** (GB 787 or FBD 13),

but considered that none of the combinations relied on by SharkNinja could call into question the validity of the patent in suit with the required level of proof, and neither could the other combinations cited by SharkNinja (for the combinations relied on by SharkNinja, see para 24 below).

10. The ordering of interim measures was considered necessary in order to prevent the continuation of the infringement and/or at least to prevent further imminent infringement and in any case necessary due to the damage threatened to Dyson by the products offered by SharkNinja.

The appeal

11. SharkNinja has appealed and requests the Court of Appeal to set aside the impugned order and order Dyson to pay the costs of the proceedings.

12. Dyson requests that the appeal be rejected and the order of the Court of First Instance be upheld.

SharkNinja's submissions on appeal in summary

13. SharkNinja's grounds of appeal are in summary, and insofar as relevant, as follows:
- The contested embodiments do not infringe the patent in suit. The contrary view of the first instance decision is based, on the one hand, on legal errors in the interpretation of the claims and, on the other hand, on an incorrect assessment of the evidence (the video material submitted by the parties).
- The Local Division's claim construction is erroneous, both on the cyclone separator device according to feature 1.3 and the spatial arrangement of the components according to features 1.5.3 and 1.5.4.
- The contested embodiments do not realise feature 1.3 because they do not include a tangential air inlet or swirl generator, there is no tangential spiral movement of the air along the circumference of the inner wall, no centrifugal force-induced pressing of dust and dirt particles against the inner wall of the device, and no collection area for dust and dirt particles.
- Contrary to the decision at first instance, feature 1.5.3 is not realised by the fact that the longitudinal axis of the suction channel is intersected by the axis of the elongated handle. Realisation of feature 1.5.4 is ruled out because the contested embodiments are based on the principle of filter separation and therefore do not have a cyclone separation device. In addition, the dust chamber, which according to the (incorrect) view of the Local Division represents the cyclone separator device, is not arranged "between" the suction channel and the elongated handle if the correct interpretation, i.e. that it must lie on an axis, is applied.
- The Local Division made an incorrect assessment of the validity of the patent in suit (see below under II – Validity). It also based its assessment of the sufficiently certain legal status of the patent in suit, and particularly the inventive step, on an incorrect standard of assessment. In particular, it wrongly argued that the large number of possible combinations of different prior art documents submitted by the appellants suggested that the required inventive step could be assumed.
- The assessment of urgency by the Local Division was erroneous and statements on the necessity of ordering provisional measures in other respects are absent from the Local Division's order.

14. In the Statement of grounds of appeal, SharkNinja argued that the Local Division did not grant SharkNinja a sufficient hearing at the oral proceedings and violated its rights to be heard. This occured by incorrectly pointing out a possible delay in arguments in the written rejoinder and by demanding that SharkNinja limit its

submissions on the validity of the patent to three arguments at the oral hearing. This issue was discussed and resolved at the interim conference in the Court of Appeal.

Dyson's submissions in response to the appeal in summary

15. Dyson's submissions in response are in summary, and insofar as relevant, as follows:

- On features 1.3, 1.5.3 and 1.5.4 Dyson is supporting the reasoning of the Local Division with regard to claim interpretation and whether the contested embodiments realise the features.
- The Local Division rightly considered the patent in suit to be legally valid with sufficient certainty.
- Dyson has acted with the urgency required.
- On necessity, the patent-infringing actions of SharkNinja threatened to lead to shifts in market share that could have lasting effects in the long-life product market concerned.

I – Infringement

16. It is undisputed that the contested embodiments realise features 1, 1.1, 1.2, 1.4, 1.5, 1.5.1, and 1.5.2, while on the other hand, it is contested whether they realise features 1.3, 1.5.3 and 1.5.4: cyclonic separating apparatus (18) arranged in communication with the suction conduit (14) for separating dirt and dust from the airflow, …, wherein the elongate handle (28) lies transverse to the longitudinal axis of the suction conduit (14) and the cyclonic separating apparatus (18) is positioned between the suction conduit (14) and the elongate handle (28).

17. The respective positions of the parties on the realisation (or non-realisation) of features 1.3, 1.5.3 and 1.5.4 are in summary as follows.

Feature 1.3 – cyclonic separating apparatus (18) arranged in communication with the suction conduit (14) for separating dirt and dust from the airflow

18. According to Dyson:

- The only defining characteristic of a centrifugal separator/cyclone separator is that by means of conducting the air flow (or another medium) centrifugal force is used in order to achieve a separation of the conveyed substances due to the different mass inertia, e.g. air and dirt particles, whereby the skilled person is further aware that it is neither desirable nor possible to achieve complete separation of all particles. Feature 1.3 does not require a complete separation of dust and dirt by the cyclone separator.
- The fact that an air flow is generated inside the transparent housing, which flows tangentially around the circumference of the housing, creating a spiral-shaped air flow with centrifugal forces, means that there is a cyclone. The separation of the particles takes place in the area of a wedge-shaped plastic part, on the upper side of which particles collect and are thus separated from the air. It is therefore a cyclone separator.
- The angle or radius at which this occurs is irrelevant to the question of "tangential" airflow, as the Court of First Instance correctly recognised. Even the idealised standard models cannot rule out air turbulence. This is because air turbulence arises due to the deflection of the air and is therefore inherent to a cyclone separator. On generation of the airflow, it is not important for a tangential centrifugal separator to have a tangential air inlet. It is only important that the incoming air is controlled tangentially so that it flows along the inner wall of the cyclone chamber.
- In the contested embodiments, a downwards spiral movement can be observed.
- The fact that the contested embodiments also use filters, among other things, cannot exclude the realisation of the feature.
- There is a separation taking place, in that the cyclone in the cylinder ensures that the particles in the intake air are kept just away from the outlet, i.e. they are separated from the exhaust air.
- The claim is not limited to the use of an embodiment with two sequential cyclones.
- The claim does not include a requirement for a separate collection container.

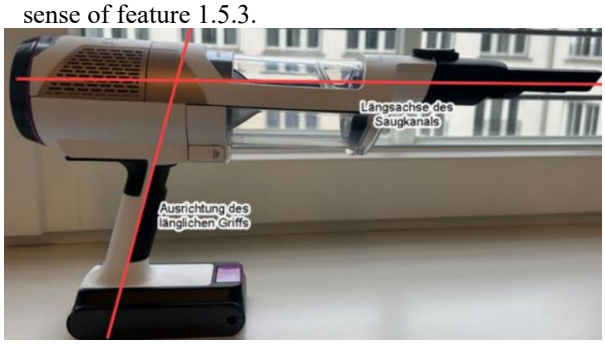
19. According to SharkNinja:

- On a correct interpretation, a cyclone separator must be designed for complete separation of dust and dirt. A complete separation is however not possible since there may be some very small debris. Feature 1.3 also requires that the cyclone separator device is designed in two stages, i.e. with two sequential cyclones. Furthermore, the claim requires a separate collection container for separated dirt and dust, or must at least incorporate a "collection area".
- The contested embodiments do not have a cyclone separation device. A collecting container is missing and there is no separation of the particles from the dust container into a collecting container or collection area located outside the airflow of the dust container. Furthermore, the separation of dirt and dust from the airflow is not carried out by the operating principle of cyclone separation, but by a filter.
- A cyclone separator generates a constant and permanent helical air flow around a central axis to the exclusion of other erratic or turbulent flows. The spiral-shaped air movement along the longitudinal axis, which characterises a cyclone separator, is absent in the contested embodiments.
- The airflow containing dust and dirt particles is drawn into the dust container through the suction pipe. Due to the inclined design of the inlet into the dust container, the airflow containing dust and particles is set in motion. This serves to keep the sucked-in dirt particles in the dust container permanently in motion and thus, in particular, to prevent them from settling in front of the filter and clogging it. The dust and dirt particles are not conveyed out of the airflow and separated from it, but are instead continuously moved around by it. The particles and dust are separated exclusively by the filter (debris separator) installed in the dust container of the embodiments, which prevents the dust and dirt particles that hit it from leaving the dust container and retains them in the airflow; the filter then allows clean

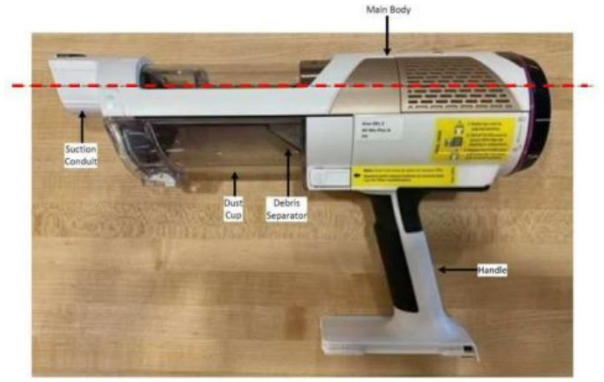
air to pass from the dust container towards the airflow generator.
- The skilled person knows that a device according to claim 1 is characterised by a corresponding structural design of the air inlet, either by a tangential air inlet or by a swirl generator, which provides the characteristic tangential and helical air flow. The contested embodiments lack the structural design of the air inlet required for a cyclone separator device and the airflow is therefore not introduced into the dust chamber in a tangential and spiral manner. They do not include a tangential air inlet or swirl generator.

Feature 1.5.3 – wherein the elongate handle (28) lies transverse to the longitudinal axis of the suction conduit (14) and

20. According to Dyson:
- The longitudinal axis of the handle of the contested embodiments also intersects the longitudinal axis of the suction channel, i.e. it lies transverse to it in the sense of feature 1.5.3.

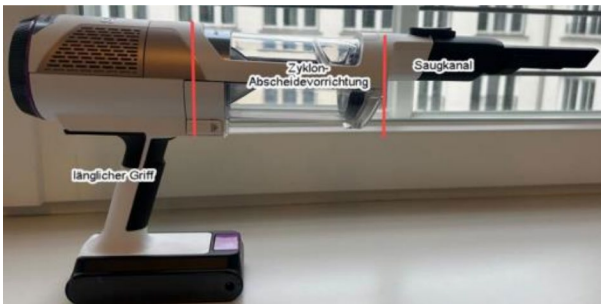


21. According to SharkNinja:
- The longitudinal axis running through the suction channel must pass through the elongated handle on a correct claim construction. The handle of the contested embodiments does not realise feature 1.5.3.
- The handle does not lie transversely to the longitudinal axis of the suction channel and intersects it, but is located underneath it.

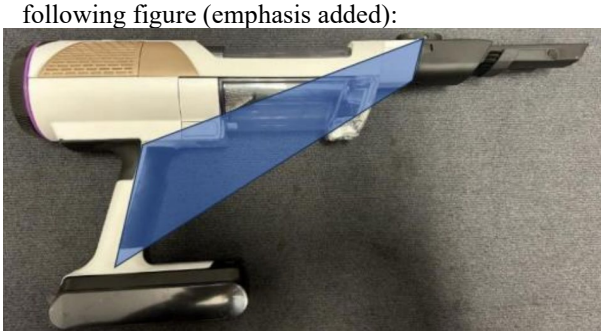


Feature 1.5.4 – the cyclonic separating apparatus (18) is positioned between the suction conduit (14) and the elongate handle (28)

22. According to Dyson:
- The cyclone separator of the contested embodiments is located between the suction channel and the elongated handle according to feature 1.5.4.



- The fact that the handle, cyclone separator and suction pipe are arranged along a line is also illustrated in the following figure (emphasis added):



23. According to SharkNinja:
- The alleged cyclone separator device is not arranged between the suction channel and the elongated handle, since the handle is not arranged in a plane next to, but rather below the dust container.
- The dust container is not arranged between the suction channel and the elongated handle, since the elongated handle is not located on the same axis as the alleged cyclone separator and the suction channel.

II – Validity

24. SharkNinja is questioning the finding of the Court of First Instance on the likelihood of validity of the patent in suit, with the following grounds.
- Lack of inventive step in relation to **Gimelli**, a German utility model with the title "Hand-held hoover", in conjunction with common general knowledge
- Lack of inventive step in relation to **Gimelli** in combination with **KR 144** (FBD 12)
- Lack of inventive step in relation to **Gimelli** in combination with **GB 787** (FBD 13)
- Lack of inventive step in relation to **Gimelli** in combination with US 048 (FBD 14)
- Lack of inventive step in relation to **GB 572** (FBD 9) in conjunction with common general knowledge
- Lack of novelty or inventive step in relation to JP 573 (FBD 10) in conjunction with common general knowledge
- Lack of inventive step in relation to **FR 452** (also known as D2 or FBD 11) in conjunction with common general knowledge
- Lack of inventive step in relation to **Pifco Vacette** (FBD 24)

25. According to Dyson, the patent is valid. Dyson has presented reasoned arguments against all of the combinations relied on by SharkNinja.

GROUNDS FOR THE ORDER

The legal standard

26. When the Court adjudicates on an application for provisional measures pursuant to R. 211.2 RoP in conjunction with Art. 62(4) UPCA, a sufficient degree of certainty (see also Art. 9(3) Directive 2004/48/EC) requires that the court considers on the balance of probabilities, that it is more likely than not, that the Applicant is entitled to initiate proceedings and that the patent is infringed. A sufficient degree of certainty is lacking if the Court considers it on the balance of probabilities to be more likely than not that the patent is not valid.

27. Insofar as is relevant here, the burden of presentation and proof for facts allegedly establishing the entitlement to initiate proceedings and the infringement or imminent infringement of the patent, as well as for all other circumstances allegedly supporting the applicant's request, lies with the applicant. Whereas the burden of presentation and proof for facts concerning the lack of validity of the patent and other circumstances allegedly supporting the defendant's position lies with the Defendant.

The person skilled in the art

28. The Munich Local Division rightly determined that the person skilled in the art is a qualified engineer with several years of practical experience in the development and construction of household vacuum cleaners. This has not been contested by the parties.

Claim construction; feature 1.3; in particular the element "cyclonic separating apparatus"

29. The patent claim is not only the starting point, but the decisive basis for determining the protective scope of a European patent under Art. 69 EPC in conjunction with the Protocol on the Interpretation of Art. 69 EPC. The interpretation of a patent claim does not depend solely on the strict, literal meaning of the wording used. Rather, the description and the drawings must always be used as explanatory aids for the interpretation of the patent claim and not only to resolve any ambiguities in the patent claim. This does not mean that the patent claim merely serves as a guideline, and that its subject matter also extends to what, after examination of the description and drawings, appears to be the subject-matter for which the patent proprietor sought protection. The patent claim is to be interpreted from the point of view of a person skilled in the art. In applying these principles, the aim is to combine adequate protection for the patent proprietor with sufficient legal certainty for third parties. These principles for the interpretation of a patent claim apply equally to the assessment of the infringement and the validity of a European patent.

30. The patent specification does not define what a cyclonic separating apparatus is. The Court of Appeal, as a first step, agrees with Dyson's view that cyclonic separating apparatus is a functional claim element as understood by the skilled person at the priority date.

31. According to the witness statement of Mr [...] relied on by Dyson, *"The distinguishing elements of a cyclonic separating apparatus in a vacuum cleaner are: the airflow entering the separator is manipulated to flow tangentially around the circumference of the inner wall of the bin; this forms a helical direction of airflow; the purpose of which is to generate centrifugal forces, forcing the debris away from the direction of exhaust air. Separated debris starts to settle in a collection region."*

32. Similarly, Mr [...] explains in his witness statement, relied on by SharkNinja, how cyclonic separation units utilize centrifugal force to separate particles (such as debris) from the airflow. Mr [...] depicts the separation principle of the reverse flow cyclone separator as follows:

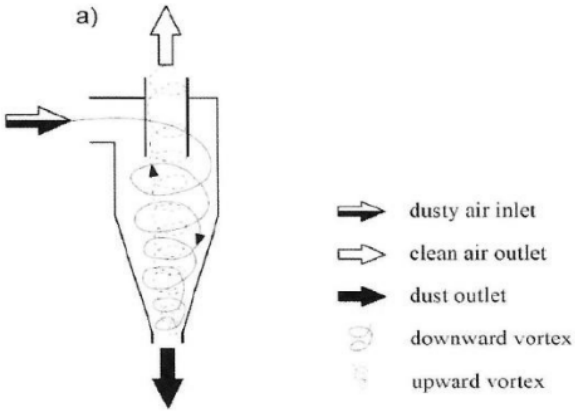


Figure 1

With reference to the following figure, Mr [...] explains how in reverse flow cyclonic separators, dirty air is fed into the cyclone body, via a specifically designed lateral side inlet, so that the air moves tangentially along the inner wall of the cyclone chamber. Due to the tangential inflow and the cylinder shape, the particles in the air flowing into the cyclonic separator at the side inlet are set in a circular motion along the inner wall of the cyclone housing and move downwards in a spiral (sometimes referred to as helical airflow). The centrifugal force carries the dust or liquid particles outwards to the inner wall of the cyclone body.

FIG. 2

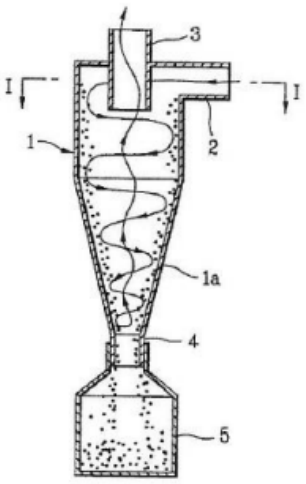


Figure 2

33. Based on the concordant evidence of the witness statements of the respective parties, the Court is convinced with sufficient degree of certainty that, as of

the priority date, the skilled person would understand feature 1.3 requiring that the airflow entering the housing is manipulated to flow tangentially around the circumference of the inner wall of that space, thereby forming a helical airflow, the purpose of which is to generate centrifugal forces, forcing the debris away, allowing them to settle in a collection region.

34. As explained, there is no discernible difference in opinion between the party experts on this. Furthermore, there is nothing in the patent claim, description or drawings that contradicts such an interpretation, and some additional support for the view that a cyclonic separating apparatus should be understood in its "ordinary" sense can be found in the description at [18], where it reads:

> *When operating, the airflow generator 36 draws a flow of dirt- and dust-laden air into the suction opening 16, through the suction conduit 14 and into the cyclonic separating apparatus 18. Dirt- and dust-laden air enters the upstream cyclone 20 and larger dirt and dust particles are separated by cyclonic motion. These particles are then collected in the upstream cyclone 20.*

35. The Court of Appeal moreover agrees with Dyson that a cyclonic separating apparatus can be designed for separating certain particles, while other particles go to a filter, and also that claim 1 is not limited to the use of an embodiment with two sequential cyclones.

36. When it comes to the meaning of tangential and how the centrifugal force should act on particles in accordance with the invention, the parties disagree. – In Dyson's view, the centrifugal forces should create an arc-shaped motion for some particles of dust to move around a part of the circumference of the cylinder. Indeed, to Dyson's view, it does not need to be a complete circle and it makes no difference if the angle of airflow is steep or not. Particles flowing around a small bend can still be considered to be in circular motion. Tangential means that the airflow is along the inner circumference of the wall, but the angle relative to the wall does not matter. Dyson has also stressed that efficiency is not part of this claim element. – SharkNinja, on the other hand, argues that there is a need for a tangential helical airflow with circulation along the cylinder and that a cyclone separator must create more movement than just part of a circle.

37. As will be explained in the next section, the Court of Appeal is not convinced that the airflow entering the housing of the contested embodiments is manipulated to flow tangentially around the circumference of the inner wall of that space, thereby forming a helical airflow, the purpose of which is to generate centrifugal forces, forcing the debris away, allowing them to settle in a collection region. It is more likely that, regarding the introduction of particle laden air into the cylinder, the tilted flap next to the air inlet creates an air flow at an angle, with the result that the particles hit the cylinder wall in a generally vertical direction, but does not lead to create a tangential airflow. For this reason, it can be left open to what extent circulation of particles would be required in a helical airflow.

Whether the contested embodiments realise feature 1.3, element "cyclonic separating apparatus"

38. The next question that needs to be considered is whether the contested embodiment comprises a cyclonic separating apparatus, as required by feature 1.3.

39. This is a case where the evaluation of the evidence presented by the patent proprietor is at the core of the case and will determine the outcome of the proceedings. Dyson has presented video sequences of (i) sugar particles, (ii) light brown particles and (iii) a fibre, all entering the transparent plastic cylinder housing of the contested embodiments and moving around inside it.

40. The air enters the cylinder housing through an inlet which is placed flat in the circular base of the cylinder; when air is not flowing through the inlet, a hinged flap closes the opening (inlet and flap marked below):

41. Furthermore, the contested embodiments are designed to allow the air to flow from the inlet into the cylinder towards a filter (filter marked below):

42. From the demonstration example of the contested embodiments (available at the oral hearing), it can be seen that there is a plastic protrusion next to the filter. This is not so clearly visible on the videos. When asked about the function of this protrusion, Dyson replied that it is there to make the debris settle away from the filter, in particular to redirect the debris downwards. SharkNinja replied that the protrusion is there to create turbulence. The protrusion is shown below.

43. It is clear that the principal mode of separating the dirt particles from the airflow in the contested embodiments is the filter. However, this does not exclude that there may be cyclone separation as well, as vacuum cleaners can be equipped with both cyclone separators and filters at the same time.

44. When examining the videos, the Court of Appeal looked for evidence of a centrifugal force acting on the particles. Out of the three types of particles (sugar, light brown particles and a fibre), the fibre was the only type of debris that displayed a full rotation. This occurred in the upper part of the cylinder where the filter is located. However, before that, it could be seen that the fibre entered through the air inlet diagonally and relatively quickly; it was propelled against the cylinder wall at a low point, close to the air inlet. Thereafter, the fibre bounced across the cylinder back and forth, but continuing on an upwards path, eventually taking up a carousel movement counterclockwise around the filter. The fibre did not appear to settle in a collection region.

45. The movement of the sugar particles looked altogether different. The sugar particles came in at a steep upwards angle from the air inlet and continued to move in a diagonal line, hitting the cylinder wall rather high up towards the filter. Some particles even seem to hit the cylinder top. The initial movement was consequently contrary to that of a cyclone. Many of the sugar particles then moved in a slight downward curve towards the ledge next to the flap, where some of them settled. Other particles eventually settled at the cylinder base. Other particles, however, were drawn into the incoming air stream and cast again upwards towards the filter. It is difficult to ascertain to what extent the downward movement is caused by gravity acting on the particles after their initial diagonal propulsion upwards and the subsequent bouncing on the cylinder wall, and to what extent it is a consequence of the airflow. What one would typically expect to observe when centrifugal force is in action is particles coming down the walls in some sort of spiral movement (see figures 1 and 2 above under Claim construction), but that is not the case here. In addition, turbulence can be observed at the cylinder base next to the air inlet, and in the upper portion next to the protrusion.

46. Finally, the light brown particles also move from the air inlet diagonally and hit the cylinder wall (although at a lower point than the sugar particles), then display movement which looks more random. Some of them gravitate to the ledge but are then cast upwards again.

47. On the basis of these observations, the Court of Appeal finds it more likely that regarding the introduction of particle laden air into the cylinder, the tilted flap next to the air inlet creates an air flow at an angle, with the result that the particles hit the cylinder wall in a generally vertical direction, but does not lead to a tangential airflow. The three types of particles demonstrate different patterns of movement. The sugar particles come closest to helical movement during a small part of their journey downwards (the downward curve), but it cannot from this evidence be established whether this is the predominant mode in which the airflow affects the particles. If there is centrifugal force, it does not show in the videos to the requisite legal standard. As mentioned, the fibre did not appear to settle in a collection region, and consequently does not seem to be subject to centrifugal forces as it never sticks to the wall and is not separated.

48. These considerations lead to the conclusion that in the way Dyson has made its case, it is not more likely than not that the contested embodiments realise feature 1.3 of claim 1. On the balance of probabilities, it is not more likely than not that the patent is infringed. The provisional injunction against SharkNinja (Order of the Local Division, I-II) must be lifted.

49. Given the assessment in relation to feature 1.3 of claim 1, there is no need to examine the other grounds brought forward by the parties.

50. The Local Division ordered that the parties shall each provisionally bear their own costs of the proceedings. This part of the order must be reversed insofar as SharkNinja's costs are concerned. Instead, Dyson shall be ordered to bear SharkNinja's costs in the Court of First Instance. In addition, Dyson shall be ordered to bear SharkNinja's costs in the appeal proceedings.

ORDER

- The impugned order (I-II) is set aside. The application for provisional measures is denied.
- Dyson shall bear SharkNinja's costs for the proceedings on provisional measures in both instances.

Issued on 3 December 2024

Rian Kalden, Presiding judge and legally qualified judge
Ingeborg Simonsson, legally qualified judge and judge-rapporteur
Patricia Rombach, legally qualified judge
Graham Ashley, technically qualified judge
Max Tilmann, technically qualified judge
