

CERTIFICATE OF TRANSLATION ACCURACY

I am a professional translator, reviewer, and coordinator specializing in translating Chinese, Japanese and Korean to English and vice versa.

I served as Chief Examiner of the certified court interpreter test for the State of California and as a contract translator and interpreter for various federal agencies through the U.S. Department of State of for more than a decade. I served as an instructor at the University of California at Berkeley and the Middlebury Institute of International Studies at Monterey.

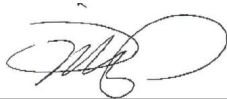
I have more than 30 years of experience translating thousands of technical, legal, and business documents from Korean to English submitted to, among others, Korean judicial authorities, various U.S. federal courts, the U.S. International Trade Commission (ITC), and the USPTO Patent Trial and Appeal Board (PTAB).

I certify that the following document translated from Chinese into the English language is a true, correct, and complete translation of the corresponding source text to the best of my knowledge and ability.

I certify under penalty of perjury that the foregoing is true and correct.

Executed this 18th day of September 2023 in the Contra Costa County of the State of California.

By:



Alex N. Jo
Member, ATA

100080 LIU SHEN & ASSOCIATES 10th Floor, Building 1 (1+1 Plaza), 10 Caihefang Road Haidian District, Beijing, 100080, China Agent: Xing CHEN (62681616)	ISSUING DATE: Sept. 23, 2022
Application or Patent No.: 201610830364.1	Issuing No.: 2022092000830930
Case Number: 4W114082	
Title of the Invention: VACUUM CLEANER	
Patentee: DYSON TECHNOLOGY LTD.	
Invalidation Petitioner: Na LI	

REVIEW DECISION ON REQUEST FOR INVALIDATION
(No. 58306)

Pursuant to the provisions set forth in Article 46 Paragraph 1 of the Patent Law of China, China National Intellectual Property Administration (CNIPA) has reviewed the petitioner's request for invalidation of the above-mentioned patent, and now made a decision as follows:

- ☐ declaring the patent invalid in whole.
☐ declaring the patent invalid in part.
☒ maintaining the validity of the patent.

Pursuant to the provisions set forth in Article 46 Paragraph 2 of the Patent Law of China, the Patentee or the person who made the request for invalidation may, within three (3) months from the date of receiving this decision, appeal by filing a case with the Beijing Intellectual Property Court, and the opponent of the appellant appears as a third party in the legal proceedings.

Appendix: Text of the decision 12 pages (from the second page)

Panel Group Lead: Wenzhi LIU
Primary Reviewer: Junyan YANG
Participating Reviewer: Yan HU

Rereview and Invalidation Department of the CNIPA

[seal affixed: **CNIPA Rereview and Invalidation Dept.** 1101081361184]

201019	Postal address for written request and reply:	CNIPA Rereview and Invalidation Dept., 6#, Xitucheng Road, Jimenqiao, Haidian District, Beijing 100088, China
2019.4	All electronic requests must be filed in the form of electronic documents through the electronic patent application system. Unless otherwise provided, documents filed in any other form such as a hard copy shall be deemed not filed.	

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China National Intellectual Property Administration (CNIPA)
Review Decision on Request for Invalidation (No. 58306)

Case Number	No. 4W114082
Date of Decision	September 15, 2022
Title of the Invention	VACUUM CLEANER
International Classification Number	A47L5/24, A47L9/16, B04C5/08, B04C5/185
Invalidation Petitioner	Na LI
Patentee	DYSON TECHNOLOGY LTD.
Patent No.	201610830364.1
Filing Date	September 18, 2016
Priority Date	September 17, 2015
Granting Announcement Date	November 03, 2020
Date of Invalidation Request	March 21, 2022
Legal Basis	Article 22 Paragraph 3, Article 26 Paragraph 4 of the Patent Law of China, and Article 22 Paragraph 2 of the Implementing Regulations of the Patent Law of China
Key points: If a claim has a distinctive technical feature over the closest prior art, and the prior art does not provide sufficient technical inspiration for the distinctive technical feature, then the claim is inventive (nonobvious).	

I. Cause of action

This Request for Invalidation involves Invention Patent No. 201610830364.1, titled “VACUUM CLEANER” (hereinafter referred to as “the Subject Patent”). It was filed on September 18, 2016 with the priority date of September 17, 2015. It was granted and issued on November 3, 2020, as publicly posted. The Patentee is Dyson Technology Limited. The claims of the Subject Patent are as follows, when it was publicly posted:

“1. A handheld vacuum cleaner, comprising:

a handle by which the vacuum cleaner is supported during normal use;

a cyclonic separating unit having a longitudinal axis and a dirt collector at one end of the cyclonic separating unit, the cyclonic separating unit comprising an end portion having a closed configuration in which dirt is retained within the dirt collector by the end portion and an open configuration for the removal of dirt from the dirt collector, wherein the handle has a pistol grip configuration in which the handle is inclined with respect to the cyclonic separating unit to form an angle of not less than 85 degrees and not greater than 140 degrees between the handle and the longitudinal axis of the cyclonic separating unit, wherein the longitudinal axis of the cyclonic separating unit extends in a plane which is located above the handle, wherein the end portion is arranged to pivot between the closed configuration and the open configuration.

2. The handheld vacuum cleaner of claim 1, wherein the handle is inclined with respect to the cyclonic separating unit to form an angle of not less than 100 degrees and not greater than 125 degrees between the handle and the longitudinal axis of the cyclonic separating unit.

3. The handheld vacuum cleaner of claim 1, wherein the end portion comprises an end wall of the cyclonic separating unit.

4. The handheld vacuum cleaner of any one of claims 1-3, wherein the cyclonic separating unit comprises a dirty air inlet through the end portion.

5. The handheld vacuum cleaner of any one of claims 1-3, further comprising a connector and a cleaning tool connectable to the connector, wherein the cleaning tool is configured such that when the end portion is in the closed configuration and the cleaning tool is connected to the connector, movement of the end portion from the closed configuration to the open configuration is prevented.

6. The handheld vacuum cleaner of claim 5, wherein the cleaning tool comprises a collar which abuts the end portion in order to hold the end portion in the closed configuration.

7. The handheld vacuum cleaner of any one of claims 1-3, wherein the dirt collector is disposed forward of the handle.

8. The handheld vacuum cleaner of any one of claims 1-3, wherein the cyclonic separating unit comprises a cyclonic separation chamber having an axis that defines the longitudinal axis of the cyclonic separating unit.”

The petitioner for invalidation Na LI (hereinafter referred to as “the Petitioner”) filed a request for invalidation to China National Intellectual Property Administration (CNIPA) against the above patent on March 21, 2022, on the ground that claims 1-8 of the Subject Patent are not in comport with Article 22 Paragraph 3 of the Patent Law of China, requested to declare all of claims 1-8 of the Subject Patent invalid, and submitted the following exhibits at the same time:

Exhibit 1: Chinese patent document No. CN101489456A, published on July 22, 2009;

Exhibit 1’: Chinese patent document No. CN101489454A, published on July 22, 2009; and

Exhibit 2: Chinese patent document No. CN103607938A, published on February 26, 2014.

In conjunction with the exhibits above, the Petitioner believes that: (i) By taking Exhibit 1 as the closest prior art, referring to the disclosure of Exhibit 1’ for the angle value, claim 1 of the Subject Patent differs from Exhibit 1 in the configuration of relative positions of the cyclonic separating unit and the handle, for which Exhibit 2 gives the technical inspiration, and Therefore, the technical solution of claim 1 is apparent with respect to the prior art. (ii) The additional technical features of dependent claims 2-8 lack inventiveness either as Exhibits 1 and 2 give the technical inspirations, or as they are conventional designs of the prior art.

Upon formal examination, on April 1, 2022, the China National Intellectual Property Administration accepted the above request for invalidation and delivered the copies of the Request for Invalidation and exhibits to the Patentee, and established a Collegiate Panel to review this case.

On April 18, 2022, the Petitioner submitted the Statement of Opinion, additionally concluded that claims 1-8 are not in comport with Article 26 Paragraph 4 of the Patent Law of China and Article 20 Paragraph 2 of the Implementing Regulations of the Patent Law of China, and further provided the following exhibits (with the numbers continued):

Exhibit 3: Chinese patent document No. CN101437596A, published on May 20, 2009;

Exhibit 4: Chinese patent document No. CN1840239A, published on October 4, 2006;

Exhibit 5: US patent document No. US2005/0177974A1 and Chinese translation of part of it, published on August 18, 2005;

Exhibit 6: Chinese patent document No. CN1864619A, published on November 22, 2006;

Exhibit 7: Chinese patent document No. CN201192312Y, published on February 11, 2009;

Exhibit 8: Chinese patent document No. CN1355004A, published on June 26, 2002;

Exhibit 9: Japanese patent document No. JP 60-185543 and Chinese translation thereof, published on December 9, 1985;

Exhibit 10: Chinese patent document No. CN2316914Y, published on May 5, 1999;

Exhibit 11: International patent document No. WO2004/069021A1 and Chinese translation of part of it, published on August 19, 2004;

Exhibit 12: Japanese patent document No. JP 2004-89241 and Chinese translation of part of it, published on March 25, 2004;

Exhibit 13: Japanese patent document No. JP 52-97874U and Chinese translation thereof, published on July 22, 1977;

Exhibit 14: US patent document No. US2012/0055073A1 and Chinese translation of part of it, published on March 8, 2012;

Exhibit 15: Chinese patent document No. CN1682634A, published on October 19, 2005; and

Exhibit 16: Chinese patent document No. CN1361673A, published on July 31, 2002.

In conjunction with the exhibits above, the Petitioner further believes: (i) The improvement of the Subject Patent lies in the design and orientation of the cyclonic separating unit itself, and at least both of the air inlet duct of dirty air and the air duct of the cyclonic separating unit have a close technical association with the orientation of the cyclonic separating unit. However, the claims of the Subject Patent define the orientation of the cyclonic separating unit only using an angle range, and those skilled in the art cannot directly incline any existing cyclonic separating unit to achieve the technical effect that the Subject Patent is intended to achieve, so the claims of the Subject Patent are not supported by the description. Additionally, the definition of the “connector” of the cleaning tool is unclear in claim 5 of the Subject Patent, and the “connector” is not set forth in the description and thus is not supported by the description either. (ii) Claims 1-8 of the Subject Patent do not set forth the designs of the air inlet duct of dirty air and the air duct of the cyclonic separating unit, lacking an essential technical feature. (iii) Exhibits 1, 11, 13, 14 and 16 are taken as the closest prior art respectively to comment on the inventiveness of claim 1, and the corresponding exhibits give the technical inspiration for the additional technical features of the other dependent claims, or these additional technical features are conventional means in the art, thus lacking inventiveness.

On May 13, 2022, the Patentee submitted the Statement of Opinion against the Request for Invalidation, in which the Patentee concluded that Exhibit 1 fails to disclose the feature related to the configuration of the relative positions of the handle and the cyclonic separating unit, and Exhibit 2 also lacks technical inspiration, and thus the Subject Patent is inventive (nonobvious).

On May 24, 2022, the Collegiate Panel issued the Notification of Transmittal of Documents to both parties to transfer the Statement of Opinion submitted by the Patentee on May 13, 2022 to the Petitioner, and to transfer the Statement of Opinion and supplemental exhibits submitted by the Petitioner on April 18, 2022 to the Patentee. On May 26, 2022, the Collegiate Panel issued the Notification of Oral Hearing to both parties to inform that an on-line oral hearing would be conducted for this case on August 2, 2022.

On July 8, 2022, the Patentee submitted the Statement of Opinion for the Notification of Transmittal of Documents, in which the Patentee concluded: (1) The Subject Patent is intended to improve a dirt emptying problem of the handheld vacuum cleaner, and claims 1-8 completely set forth the technical solution to solve the above problem, do not lack essential technical features, can be also obtained from the sufficient disclosure of the description and thus can be supported by the description. Additionally Paragraphs 0024-0029 of the description set forth the connection manner and the connection structure of the cleaning tool, and Therefore, claim 5 can be supported by the description. (2) None of the exhibits submitted by the Petitioner involves the dirt emptying problem of the handheld vacuum cleaner, and fails to disclose the feature relevant to the configuration of the relative positions of the handle and the cyclonic separating unit in order to solve the above problem. Therefore, the Subject Patent is inventive (nonobvious).

On July 14, 2022, the Collegiate Panel issued the Notification of Transmittal of Documents to the Petitioner to transfer the Statement of Opinion submitted by the Patentee on July 8, 2022 to the Petitioner.

On July 28, 2022, the Petitioner submitted the Statement of Opinion and Appendices 1-8 for the above delivered document, and concluded: the technical problem actually to be solved by the Subject Patent is to improve an air flow path to render the air flow effect better, instead of improving the dirt emptying problem of the handheld vacuum cleaner, and the use of “vertical arrangement” or “horizontal arrangement” of a cyclonic separator to achieve different tangential or axial air intake is a conventional means in the art. Furthermore, the cyclonic separator may be used to various types of cleaners, and Exhibit 16 also pertains to a handheld vacuum cleaner. Therefore, the Subject Patent is not inventive.

The oral hearing was conducted as scheduled, in which the Petitioner delegated patent agents Feng XU and Sida LIU, and a citizen agent Zhimin WU to be present, and the Patentee delegated patent agents Ziqiu HE, Xing CHEN and Jiaen XIONG to be present. The Collegiate Panel delivered the Statement of Opinion and attached Appendices 1-8 submitted by the Petitioner on July 28, 2022 to the Patentee at court. During the oral hearing, the Petitioner clarified his ground and scope of the request for invalidation: claims 1-8 of the Subject Patent are not in comport with Article 22 Paragraph 3 of the Patent Law of China, the provisions about description support as specified in Article 26 Paragraph 4 of the Patent Law of China, and Article 20 Paragraph 2 of the Implementing Regulations of the Patent Law of China. Regarding the exhibits, the Petitioner concluded that the usage of Exhibits 1-16 is the same as that in the written opinions where Exhibit 1 and Exhibit 1’ are used as a single technical solution; only Appendices 3, 7 and 8 of Appendices 1-8 act as the exhibits, with the others for reference by the Collegiate Panel; Appendix 3 is the patent document No. CN101489454B published on February 29, 2012, used to prove that the solution in the background art of the Subject Patent already has an excellent ergonomic design, so the improvement of the Subject Patent does not lie in more convenient hand-holding during dirt emptying; Appendix 7, as a textbook “*Cyclonic Separator — Principle, Design and Engineering Application*”, is used to prove that both tangential air intake and axial air intake are commonly used designs in the art; and Appendix 8 is the patent document No. CN103961029A published on August 6, 2014, used to prove that the cyclonic separator is universally applicable to various types of cleaners. The Patentee had no objection against the authenticity of Exhibits 1-16 and Appendices 3 and 8 and no objection against the accuracy of the Chinese translations of the foreign exhibits, but concluded Appendices 3 and 8 exceeded the time limit for adducing evidences; for Appendix 7, the Patentee did not recognize its authenticity since the Petitioner failed to provide the original document; furthermore, the Patentee had no objection against the use of Exhibits 1 and Exhibit 1’ as a single technical solution. The Petitioner indicated that Appendix 7 is a basic textbook, and the original document is readily accessible, thus having no problem of authenticity.

Regarding the solution defined by the claims of the Subject Patent, the Patentee emphasized that the Subject Patent is intended to solve the dirt emptying problem as clearly set forth in the description, and is relevant to how the air enters, which has been clearly set forth in the claims; claim 1 of the Subject Patent defines that the cyclonic separating unit has a longitudinal axis, and its end portion should be at the end of the longitudinal axis; therefore, it defines that the dirt is removed at the distal end of the cyclonic separating unit since the end holds the dirt in the closed configuration, and the dirt is emptied by pivoting to the open configuration.

Regarding the inventiveness, the Petitioner focused on commenting on the inventiveness by taking Exhibit 1 (in conjunction with Exhibit 1') as the closest prior art at court. Both parties accepted that claim 1 of the Subject Patent differs from Exhibit 1 in "to form an angle of not less than 85 degrees and not greater than 140 degrees between the handle and the longitudinal axis of the cyclonic separating unit, wherein the longitudinal axis of the cyclonic separating unit extends in a plane which is located above the handle". The Petitioner insisted that the above distinctive technical feature actually solves an air intake problem. For this problem, multiple exhibits provide technical inspirations, for example, Exhibits 2 and 6 disclose axial air intake, thereby giving the technical inspiration of transversely disposing the cyclonic separator in Exhibit 1. The Patentee insisted that the Subject Patent is intended to solve the dirt emptying problem, the above-referenced distinctive technical feature defines the end design for emptying the dirt on the whole from the perspective of the inclined angle and disposing position, can reduce the risk of a user to be in contact with the dirt, maintains the same gripping manner during emptying as that during cleaning, improves the operation during emptying, and is irrelevant to the air intake, and none of the exhibits submitted by the Petitioner involves this and cannot give a technical inspiration. Furthermore, the Patentee also emphasized that Exhibit 16 discloses a vertical or rod-type cleaner in which the dust collection portion is disassembled for emptying, and Exhibit 11 requires that the handle cannot be bent, such that both of them cannot give a technical inspiration for improving the emptying operation of the handheld vacuum cleaner by configuring the angle between and positions of the cyclonic separating unit and the handle.

In light of the above, the Collegiate Panel determines that the facts of the case have been clear for making a review decision.

II. Grounds for the decision

1. Evidentiary determination

Exhibits 1-16 and Appendices 3 and 8 submitted by the Petitioner are all patent documents, and the Patentee has no objection to their authenticity, and the collegial panel approves their authenticity after the review. Among them, Appendices 3 and 8 are the evidentiary materials supplementarily submitted by the Petitioner in response to the opinions in the Observation submitted by the Patentee on July 8, 2022, thus the collegial panel accepts them. All of Exhibits 1-16 and Appendices 3 and 8 are published before the priority date of the Subject Patent and the content described thereon constitutes the prior art of the Subject Patent. Among them, the Patentee has no objection to the accuracy of the Chinese translation of the foreign language Exhibits submitted by the petitioner, so the Chinese translation submitted by the Petitioner shall prevail over the content disclosed in the above foreign language exhibits.

Appendix 7 is a book, the Petitioner does not provide the original, and the Patentee has objection to its authenticity, the collegial panel believes that its authenticity cannot be verified after the review, so Appendix 7 may not be used as an evidentiary material in the present case.

2. With regards to Article 26 Paragraph 4 of the Patent Law of China

Article 26 Paragraph 4 of the Patent Law of China stipulates that the claims shall be supported by the description and shall define the extent of the patent protection sought for in a clear and concise manner.

In the present case, the Petitioner believes that the improvement of the Subject Patent lies in the design and orientation of the cyclonic separating unit itself, while both the inlet duct of the dirty air and the design of the air duct of the cyclonic separating unit itself are at least closely related to the orientation of the cyclonic separating unit. However, the claims of the Subject Patent are limited by only using the angle range, and it cannot be confirmed that all of the solutions covered thereof can achieve the corresponding technical effects. In addition, the "connector" of a cleaning tool in claim 5 of the Subject Patent is not described in the specification, so the claims of the Subject Patent cannot be supported by the specification. In this regard, the Patentee believes that what the Subject Patent needs to improve is a problem of emptying the dirt of the handheld vacuum cleaner, and the technical solutions to solve the above problem are completely described in the claims, which can be supported by the specification. In addition Paragraphs 0024-0029 of the specification record the connection method and connection structure of the cleaning tool, and claim 5 can also be supported by the specification.

Upon review, the collegiate panel believes: firstly, the disclosure of the invention content in the specification of the Subject Patent corresponds to the content of claims 1-8, and there is no contradiction with the specific structure described in the description of embodiments, so all of the technical solutions defined by the claims of the Subject Patent have all been described in the specification; and secondly, a defect in the prior art described in the background of the Subject Patent is that “the user typically has to twist his or her hand to one side or upwardly in order to direct the dirt away from themselves into the waste bin”, whereas an effect of the Subject Patent is “(the cleaner) can be emptied by opening the end portion while maintaining a natural grip on the handle” and “there is a low risk of the user coming into contact with the dirt as it is emptied” (refer to Paragraphs 0005 and 0040 of the specification of the Subject Patent). It can be seen from the above content described in the specification that a concept of the Subject Patent is the structural improvement of the handheld vacuum cleaner in the prior art which subjects an inconvenient operation when emptying the dirt, which has nothing to do with how the cyclonic separating unit itself designs the inlet duct to make the filtering effect better. In this regard, the technical solutions of the claims of the Subject Patent define that the cyclonic separating unit has the longitudinal axis, and includes the end portion, the dirt is retained within the dirt collector by the end portion, the end portion can be pivotally opened, and “the longitudinal axis of the cyclonic separating unit extends in a plane which is located above the handle”, and “form an angle of not less than 85 degrees and not greater than 140 degrees between the handle and the longitudinal axis of the cyclonic separating unit”, which ensures that the user can carry out an emptying operation in a normally clean holding manner when in use, and the dirt retained by the end portion of the longitudinal axis of the cyclonic separating unit is far away from the user, thereby reducing a risk of the user contacting the dirt when emptying. It can be seen that all the technical solutions of the claims of the Subject Patent are described in the specification, which can achieve the desired technical effect, and can be supported by the specification.

With regards to the content of the “connector” in claim 5: as mentioned above, the content is described in Paragraph 0008 of the specification of the Subject Patent; and those skilled in the art can understand that it is defined that a vacuum cleaner body has a part that can be connected to the cleaning tool. As described in Paragraphs 0024-0027 of the specification, the cleaning tool 10 is inserted into the central duct 30 to implement the connection of the cleaning tool, and the central duct 30 provided on the vacuum cleaner body can correspond to the “connector” at this time. Therefore, the definition of the “connector” in claim 5 can be obtained by those skilled in the art from what is described in the specification.

In summary, claims 1-8 of the Subject Patent are supported by the specification, which can achieve the desired technical effect, and do comply with the provisions set forth in Article 26 Paragraph 4 of the Patent Law of China.

3. With regards to Article 22 Paragraph 2 of the Implementing Regulations of the Patent Law of China.

Article 22 Paragraph 2 of the Implementing Regulations of the Patent Law of China stipulates that the independent claim shall outline the technical solution of an invention or utility model and state the essential technical features necessary for the solution of its technical problem.

In the present case, the Petitioner believes that none of the claims 1-8 of the Subject Patent record the inlet duct of the dirty air and the design of the air duct of the cyclonic separating unit, which lacks necessary technical features. In this regard, as described above, the technical problem to be solved according to the disclosure of the specification of the Subject Patent is an operation problem when the handheld cleaner empties the dirt, and the technical problem can be solved by the technical solutions defined in the claims. Therefore, there is no lack of the necessary technical features, and claims 1-8 do comply with the provisions set forth in Article 22 Paragraph 2 of the Implementing Regulations of the Patent Law of China. As for how the air duct of the cyclonic separating unit itself is designed to have the better effect, it has nothing to do with the invention purpose of the Subject Patent. In the case that the purpose of the Subject Patent is not to achieve the filtering effect, no matter how the orientation of the cyclonic separating unit is set, a variety of inlet structures can be used. Therefore, the design of the air duct is not an essential technical feature in the claims of the Subject Patent, and the collegial panel shall not support the Statement of Opinion made by the petitioner.

4. With regards to Article 22 Paragraph 3 of the Patent Law of China

Article 22 Paragraph 3 of the Patent Law of China stipulates that inventiveness means that, as compared with the prior art, the invention has prominent substantive features and represents a notable progress.

(1) Exhibit 1 (combined with Exhibit 1') is taken as the closest prior art

Claim 1 of the Subject Patent seeks protection for a handheld vacuum cleaner, Exhibit 1 also discloses a handheld vacuum cleaner, and both of which are in the same technical field. Exhibit 1 specifically discloses the following content (refer to description of embodiments in the specification and FIGS. 1-4): the handheld vacuum cleaner 10 has a main body 12 which houses a motor and fan unit; a handle 16 is provided on the main body 12 for manipulating the handheld vacuum cleaner 10 in use; a cyclonic separator 100 is attached to the main body 12; the cyclonic separator 100 has a longitudinal axis 26 which extends in a generally upright direction so that the axis 26, and therefore the cyclonic separator 100, lies substantially parallel to the direction in which the handle 16 extends; the cyclonic separating apparatus 100 comprises a cyclone 102 and a collector 105 having a wall 104; a base 116 closes the collector 105 at one end of the first cyclone 102; the base 116 is pivotably mounted on the lower end of the wall 104 by means of a hinge 118; the base 116 is retained in a closed position by means of a catch 120 which engages with a lip 150 located on the wall 104. It can be seen from figures of Exhibit 1' that there is an included angle between the axis of the suction inlet and the axis of the handle in the cleaner structure similar to that of Exhibit 1.

Claim 1 of the Subject Patent is compared with the above content disclosed in Exhibit 1, both of which use the handle to support the normal use of the handheld vacuum cleaner, and the handle has a pistol grip configuration; both have the cyclonic separating unit, and end portion of the longitudinal axis of the cyclonic separating unit is provided with the dirt collector; and the end portion can pivot between the closed configuration and the open configuration, the end portion retains the dirt within the dirt collector when closed, and the dirt can be removed from the dirt collector through the end portion when opened.

After the above comparison and analysis, claim 1 of the Subject Patent differs from Exhibit 1 in: in the Subject Patent, the longitudinal axis of the cyclonic separating unit extends in a plane which is located above the handle, and an angle is formed of not less than 85 degrees and not greater than 140 degrees between the handle and the longitudinal axis of the cyclonic separating unit; however, in Exhibit 1, the longitudinal axis of the cyclonic separating unit extends in the roughly upright direction, and although the handle is slightly inclined with respect to the cyclonic separating unit, the longitudinal axis of the cyclonic separating unit is set roughly parallel to the extension direction of the handle.

With regards to the above distinctive technical features, the technical problem actually solved thereby is to improve the operation of the handheld vacuum cleaner when emptying the dirt and reduce the risk of the user touching the dirt. The Petitioner believes that all of Exhibits 2-7 and Exhibits 11 and 16 provide a technical inspiration for this.

Exhibit 2 discloses a cyclonic separator, which is the improvement on the air duct of the cyclonic separator, and the cyclonic separator is applied to an upright vacuum cleaner or a canister vacuum cleaner. Among them, the upright vacuum cleaner 1 comprises a main body 2 and a cleaner head 3, and a cyclonic separator 4 is mounted to the main body 2. The cyclonic separator is removable from the main body 2 such that dirt collected by the separator 4 may be emptied (refer to Paragraph 0037 of the specification and FIGS. 1-3 in Exhibit 2); and the canister vacuum cleaner 50 comprises a main body 51 to which a cyclonic separator 52 is removably mounted (refer to Paragraph 0070 and FIGS. 7 and 8 in Exhibit 2). It can be seen from the above content disclosed in Exhibit 2 that it involves the upright vacuum cleaner or the canister vacuum cleaner, neither of which is a handheld vacuum cleaner, and the dirt is emptied after the cyclonic separator is removed from the main body. It can be seen that Exhibit 2 does not involve the problem of emptying the dirt of the handheld vacuum cleaner, and the handheld part at the upper end of the main body of the upright or canister vacuum cleaner cannot correspond to the handle used in the Subject Patent or Exhibit 1 to support the vacuum cleaner, and the position relationship between the handle and the cyclonic separation unit is not disclosed. Therefore, Exhibit 2 cannot provide a technical inspiration for the structural improvement for the handheld vacuum cleaner in Exhibit 1 when emptying the dirt.

Exhibit 3 discloses a particle separator (refer to the specification and accompanying drawings of Exhibit 3); Exhibit 4 discloses a cyclone dust separating apparatus (refer to the specification and accompanying drawings of Exhibit 4); Exhibit 5 discloses a vacuum cleaner having two cyclonic cleaning stages (refer to the Chinese translation and the accompanying drawings of Exhibit 5); Exhibit 6 discloses a multi-stage cyclone dust-collection apparatus (refer to the specification and accompanying drawings of Exhibit 6); and Exhibit 7 discloses a dust cup of a dust collector (refer to the specification and accompanying drawings of Exhibit 7). Similar to Exhibit 2, all of Exhibits 3-7 are the improvements to the air duct for the cyclonic separator itself, and Exhibits 4 and 5 only disclose the application of cyclonic separator to the upright vacuum cleaner, so neither of them involves the problem of emptying the dirt of the handheld vacuum cleaner, and the position relationship between the handle of the handheld vacuum cleaner and the cyclonic separating unit has not been disclosed. Similarly, they cannot provided a technical inspiration for the structural improvement of the handheld vacuum cleaner during the operation of emptying the dirt in Exhibit 1.

Exhibit 11 disclose a handheld vacuum cleaner (refer to pages 2-5 of translation, and FIGS. 1-7 of Exhibit 11): the vacuum cleaner comprises an elongated shaft part 10 in which a handheld vacuum cleaner 11 is removably arranged; the lower end of the shaft part supports a floor suction head 12 and the suction opening is, via a flexible tube passage 15, connected to the handheld vacuum cleaner 11. The handheld vacuum cleaner 11 comprises a housing 20 with a handle 21 and the housing 20 encloses a motor-fan unit 22; the housing is provided with a recess 30 in which a dust container 31 is removably arranged; the dust container 31 is shaped as an elongated body with an open end, and dust laden air may form a vortex in the dust container which will thus operate as a cyclone separator; the dust container has a large emptying opening 46 extending to the entire bottom part of the dust container and the opening is normally covered by a lid 47 supported by a yoke 48 turnably secured at each side of the dust container; in order to empty the handheld vacuum cleaner, the lid 47 may be manually opened, such that the emptying opening 46 is uncover, and the collected dust is allowed to fall freely out of the opening or to be shaken out through it; and this means a quick emptying function without the need for removing the dust container from the handheld vacuum cleaner. From the above content of Exhibit 11, it can be seen that although the handheld vacuum cleaner 11 therein has a pivot structure that facilitates the emptying and discharging of dust through the end portion of the cyclone separator, the handheld vacuum cleaner 11 still needs to be installed on the elongated shaft part 10, so its handle 21 and the longitudinal axis of the cyclone separator must be set on a same axis, and there cannot be an included angle between the two, that is, the whole handheld vacuum cleaner 11 also needs to be elongated so as to be matched with the elongated shaft 10. This structure is completely different from the structure in Exhibit 1 in which the handle and the longitudinal axis of the cyclone separator are roughly parallel, and cannot provide a technical inspiration of setting an included angle range between the two to improve an emptying operation in a grip state.

Exhibit 16 discloses a vacuum cleaner, FIGS. 1-19 for the first embodiment and FIG. 25 for the fifth embodiment (refer to the specification of these two embodiments and the corresponding accompanying drawings). FIG. 25 is a diagram schematically showing the vacuum cleaner of a fifth embodiment; for convenience's sake, such members as find their counterparts in the first embodiment shown in FIG. 1 are identified with the same reference numerals, that is, the coupling pipe 10b coupled to the cyclone dust collecting part 5 is directly coupled to the body 1 of the vacuum cleaner; that is, the vacuum cleaner as a whole is structured as a vacuum cleaner of a so-called upright type. The handle 10a held by the user during cleaning is formed integrally with the body 11; a connection pipe 3 is connected to a suction opening 4 having a suction port facing the floor surface F, and the connection pipe 3 is coupled to a cyclone dust collecting part 5; when the electric blower is driven, suction air is taken in through the suction port of the suction opening 4, and the suction air passes through the connection pipe 3 and flows into the cyclone dust collecting part 5 through an flow-in port 5a; dust is separated and collected in a first dust collecting chamber 7; under the first dust collecting chamber 7, a second dust collecting chamber 8 substantially coaxially therewith is provided, with a partition wall 9 placed in between; the partition wall 9 has a meshed opening part 9a having a large number of through holes, so fine particles of dust pass through the opening part 9a and are collected in the second dust collecting chamber 8. The cyclone dust collecting part 5 is so structured that the first and second dust collecting chambers 7 and 8 are integrally detachable by means of a coupling part 5e realized by screw engagement, a bayonet, a clamp, or another means; as shown in FIG. 16 or 17, the first and second dust collecting chambers 7 and 8 are further separable by means of a coupling part 5f realized by screw engagement, a bayonet, a clamp, or another means; furthermore, as shown in FIG. 18, the second dust collecting chamber 8 may be so structured that a lid 8c at its bottom is openable by means of a coupling part 5h realized by screw engagement, a bayonet, a clamp, or another means. Therefore, since fine particles of dust are collected in the second dust collecting chamber 8, it is possible to detach the first and second dust collecting chambers 7 and 8 integrally from the vacuum cleaner, and then separate the first and second dust collecting chambers 7 and 8 from each other above a trash can or the like, which simplifies the transporting work and also helps preventing the fine particles in dust from scattering and making the surroundings dirty. It can be seen from the above content disclosed in Exhibit 16 that although the body 1 of the vacuum cleaner is directly connected with the cyclone dust collecting part 5 in the fifth embodiment, it essentially adopts a concept of the upright vacuum cleaner, which is a rod cleaner, and when in use, both the connection pipe 3 and the suction opening 4 facing the floor surface can receive good support, which is not supported by the handle 10a, and it is not the handheld vacuum cleaner. Moreover, in Exhibit 16, the first and second dust collecting chambers 7 and 8 are integrally detached from the cyclone dust collecting part 5 to empty the dirt, and such emptying process has nothing to do with a grip state of the handle. Therefore, Exhibit 16 cannot provide a technical inspiration of improving an emptying operation of the handheld vacuum cleaner in the grip state in Exhibit 1.

In summary, claim 1 does possess inventiveness with respect to a combination of Exhibit 1 (combined with Exhibit 1') and Exhibits 2-7, Exhibit 11 and Exhibit 16, and does comply with the provision as prescribed in Article 22 Paragraph 3 of the Patent Law of China. In addition, the Petitioner made comments on the additional technical features of claim 5 using Exhibit 8-10, which does not affect the inventiveness of claim 1.

Therefore, in the case that claim 1 does possess inventiveness, its dependent claims 2-8 also do possess inventiveness with respect to the exhibits above, and do comply with the provision as prescribed in Article 22 Paragraph 3 of the Patent Law of China.

(2) Exhibit 11 is taken as the closest prior art

The content disclosed in Exhibit 11 is as described above. Claim 1 of the Subject Patent is compared with Exhibit 11, both of which are the handheld vacuum cleaner, and have a handle for supporting and a cyclonic separating unit, and the ends of the cyclonic separating units along the longitudinal axis thereof are provided with the end portions that can be pivotally opened, and after being pivotally opened, the dirt retained within the dirt collector by the end portion can be emptied. The difference between the two is that: the handle in the Subject Patent is a pistol grip configuration, the handle is inclined with respect to the cyclonic separating unit to form an angle of not less than 85 degrees and not greater than 140 degrees between the handle and the longitudinal axis of the cyclonic separating unit, wherein the longitudinal axis of the cyclonic separating unit extends in a plane which is located above the handle. However, as mentioned above, in Exhibit 11, the handheld vacuum cleaner 11 needs to be installed on the elongated shaft part 10 for use, so its handle 21 and the longitudinal axis of the cyclone separator must be set on the same axis, and there must be no included angle between the two.

With regards to the above distinctive technical features, the technical problem actually solved thereby is changing of a grip angle of the handle and emptying operation after the changing of the grip manner. The Petitioner believes that both of Exhibit 12 and Exhibit 1' provide a technical inspiration of setting the handle with curved structure. In this regard, after the review, the collegial panel believes that in Exhibit 11, since the handheld vacuum cleaner 11 must meet two use modes, namely, the handheld mode and the mode after installation on the elongated shaft part 10, the vacuum cleaner 11 is in elongated shape as a whole, and its handle 21 cannot be set to be curved, otherwise it cannot be installed on the elongated shaft part 10. On the basis of this, even if Exhibit 12 and Exhibit 1' disclose the curved handle, those skilled in the art will not think of applying the handle that is set to be curved to Exhibit 11, nor will they think of solving a problem of convenient gripping and dirt emptying operation by considering a curved angle range between the handle and the longitudinal axis of the cyclone separator after setting the handle to be curved. Therefore, claim 1 of the Subject Patent does possess inventiveness with respect to a combination of Exhibit 11 and Exhibit 12 or Exhibit 1', and does comply with the provision as prescribed in Article 22 Paragraph 3 of the Patent Law of China. In addition, the Petitioner made comments on the additional technical features of claim 5 using Exhibits 8-10, which does not affect the inventiveness of claim 1.

Therefore, in the case that claim 1 does possess inventiveness, its dependent claims 2-8 also do possess inventiveness with respect to the exhibits above, and do comply with the provision as prescribed in Article 22 Paragraph 3 of the Patent Law of China.

(3) Exhibit 16 is taken as the closest prior art

The content disclosed in Exhibit 16 is as described above. Claim 1 of the Subject Patent is compared with the fifth embodiment of Exhibit 16, both of which have the cyclonic separating unit, and the end of the cyclonic separating unit has the dirt collector. The difference between the two is that: (1) the Subject Patent is a handheld vacuum cleaner, which is supported by the handle when in use, while the fifth embodiment of Exhibit 16 is a rod vacuum cleaner, and when in use, both the connection pipe 3 and the suction opening 4 facing the floor surface can have good support capacity; (2) in the Subject Patent, the end portion of the cyclonic separating unit retains the dirt within the dirt collector, that is, the dirt collector is located inside the cyclonic separating unit, and when emptying the dirt, the end portion is pivotally opened for direct emptying, while in Exhibit 16, the cyclone dust collecting part 5 is detachably installed together with the first dust collecting chamber 7 and the second dust collecting chamber 8, the pivoting lid 8c at the bottom of the second dust collecting chamber 8 does not belong to the cyclonic separating unit, and when emptying, it is necessary to integrally detach the two dust collecting chambers and place them in a trash can for emptying; and (3) the Subject Patent further defines an angle range between the handle and the longitudinal axis of the cyclonic separating unit, while Exhibit 16 only shows that the handle is set to be inclined with respect to the cyclone dust collecting part 5.

With regards to the above distinctive technical features, the technical problem actually solved thereby is how to set the structure and position of the handle and the cyclone separator in the handheld vacuum cleaner for a better emptying operation. The Petitioner believes that Exhibit 1 provides a technical inspiration of setting a pivotable end portion at the end of the cyclonic separating unit for emptying; and the end of the second dust collecting chamber 8 can also be pivotally opened for emptying, which provides a technical inspiration. In this regard, after the review, the collegial panel believes: firstly, embodiment 5 of Exhibit 16 is the rod vacuum cleaner, which is a variation of an upright vacuum cleaner in other embodiments, and continues a concept of the upright vacuum cleaner, which is not supported by the handle during operation, so it is difficult for those skilled in the art to consider it as the handheld vacuum cleaner and make improvements on this basis; secondly, the two dust collecting chambers in Exhibit 16 need to be integrally taken out for an emptying operation, which is not suitable for emptying when connected with the cyclonic separating unit, and cannot provide a technical inspiration for improving the emptying operation of the cyclonic separating unit having a dust collecting part in the handheld vacuum cleaner, and the structure of the handheld vacuum cleaner in Exhibit 1 can hardly affect its improvement; and finally, based on the above two points, it can be seen that an emptying process of Exhibit 16 is independent of a grip state of the handle, so it cannot provide a technical inspiration for the emptying operation along with a convenient gripping state through an angle range setting between the handle and the cyclonic separating unit. Therefore, claim 1 of the Subject Patent does possess inventiveness with respect to a combination of Exhibit 16 and Exhibit 1, and does comply with the provision as prescribed in Article 22 Paragraph 3 of the Patent Law of China. In addition, the Petitioner made comments on the additional technical features of claim 5 using Exhibits 8-10, which does not affect the inventiveness of claim 1.

Therefore, in the case that claim 1 does possess inventiveness, its dependent claims 2-8 also do possess inventiveness with respect to the exhibits above, and do comply with the provision as prescribed in Article 22 Paragraph 3 of the Patent Law of China.

(4) Exhibit 13 is taken as the closest prior art

Exhibit 13 discloses a small electric cleaner (refer to page 1 of translation of the specification, and FIG. 1 of Exhibit 13), which includes a body 3, a dust collecting housing 4; a hollow handle 1 is protruded from the lower side of the body, the front side is in an open state, and a plurality of small exhaust holes 2 are provided on the back side; the dust collecting housing is added to the open front side of the body in a freely detachable state; and a filter 11 is installed at a rear end of the dust collecting housing.

Claim 1 of the Subject Patent is compared with Exhibit 13, both of which belong to the handheld cleaner, both are supported by a handle, and the handle is set to be inclined with respect to the main body. The difference between the two is that: the Subject Patent provides a cyclonic separating unit, the end portion of which is provided with a dirt collector, the end portion of the longitudinal axis of the cyclonic separating unit can be pivotally opened or closed, the dirt is retained when closed, and the dirt is emptied when opened, and an angle range is set between the handle and the longitudinal axis of the cyclonic separating unit, where the longitudinal axis of the cyclonic separating unit extends in a plane which is located above the handle; however, there is no cyclonic separating unit in Exhibit 13, the dirt should be collected in the dust collecting housing 4, and the dirt can be emptied after the dust collecting housing is detached.

With regards to the above distinctive technical features, the technical problem actually solved thereof is to increase a dust gas separation effect and change a way of emptying dirt. The Petitioner believes that all of Exhibits 2-7 and Exhibit 11 provide a technical inspiration for the above distinctive technical features. In this regard, after the review, the collegial panel believes that Exhibit 13 discloses a small cleaner, and the disclosure of its own solution is very simple. Those skilled in the art understand that its design purpose is to achieve a small handheld configuration which is convenient for use, and people will not have higher requirements on its dust collecting effect and emptying operation, nor apply complex improvements on the basis of its structure. As mentioned above, all of Exhibits 2-7 are about the improvement of the duct of the cyclone separator itself, and the improved structure is more complex than the filtering structure itself of Exhibit 13, and the overall structure of Exhibit 11 is also more complex. Therefore, it is not easy for those skilled in the art to think of applying the cyclonic separating unit in these Exhibits to Exhibit 13 without clear teaching, which will make the structure more complex to achieve a better result, and they will not consider how to set the emptying structure in these cyclonic separating units, or whether it is convenient for emptying operation. Therefore, claim 1 of the Subject Patent does possess inventiveness with respect to a combination of Exhibit 13 and Exhibits 2-7 and Exhibit 11, and does comply with the provision as prescribed in Article 22 Paragraph 3 of the Patent Law of China. In addition, the Petitioner made comments on the additional technical features of claim 5 using Exhibits 8-10, which does not affect the inventiveness of claim 1.

Therefore, in the case that claim 1 does possess inventiveness, its dependent claims 2-8 also do possess inventiveness with respect to the exhibits above, and do comply with the provision as prescribed in Article 22 Paragraph 3 of the Patent Law of China.

(5) Exhibit 14 is taken as the closest prior art

Exhibit 14 discloses an insect catching apparatus (refer to the Chinese translation and FIGS. 1-16 of Exhibit 14), which includes a handle 2 and a battery pack 3, the battery pack 3 is connected to a basic housing 6 and an adjustable connection 8 for changing from the insect catch position to the insect release position, and the upper open-ended section of the apparatus includes outer tube 9 and inner tube 10 B; and the insect 13 that is pinned to the surface 12 on which it has rested due to the positive air-pressure indicated by the arrows A, is then vacuumed into inner tube 10 B, due to the vacuum effect of the negative air-pressure indicated by the arrows B. It can be seen from the above content disclosed in Exhibit 14 that it is the insect catching apparatus, which is far different from the vacuum cleaner field of the Subject Patent, and both are completely different in structure and use mode. The Petitioner believes that Exhibits 3, 4, 7 and 15 provide a technical inspiration of improving Exhibit 14 into a vacuum cleaner with a cyclonic separating unit. In this regard, after the review, the collegial panel believes that, as mentioned above, Exhibit 14 is far from the vacuum cleaner field, even though there is vacuum suction therein, and it is also difficult for those skilled in the art to think of improving the insect catching apparatus of Exhibit 14 after knowing the cyclonic separating unit or vacuum cleaner described in Exhibits 3, 4, 7 and 15, so as to use it as the vacuum cleaner. Therefore, claim 1 of the Subject Patent does possess inventiveness with respect to a combination of Exhibit 14 and Exhibits 3, 4, 7 or 15, and does comply with the provision as prescribed in Article 22 Paragraph 3 of the Patent Law of China. In addition, the Petitioner made comments on the additional technical features of claim 5 using Exhibits 8-10, which does not affect the inventiveness of claim 1.

Therefore, in the case that claim 1 does possess inventiveness, its dependent claims 2-8 also do possess inventiveness with respect to the exhibits above, and do comply with the provisions set forth in Article 22 Paragraph 3 of the Patent Law of China.

In addition, the Petitioner further uses Appendix 3 to prove that the solution in the background of the Subject Patent has possessed an excellent ergonomic design, so an improvement point of the Subject Patent is not that it is more convenient to hold when emptying the dirt. Appendix 8 proves that the cyclone separator is generally applicable to various types of cleaners. In this regard, the collegial panel believes that the handle in Appendix 3 is also roughly parallel to the longitudinal axis of the cyclonic separating unit, and if the bottom of the cyclonic separating unit can pivotally empty the dirt, the technical problem it is facing is a problem of inconvenient operation when emptying the dirt to be solved by the Subject Patent. Appendix 8 only explains that the applicable type of the cyclone separator is not obviously limited, but it does not involve how to improve the emptying operation of the handheld vacuum cleaner. Therefore, Appendix 3 and Appendix 8 have no impact on the inventiveness of the Subject Patent.

To sum up, the grounds for invalidation provided by the Petitioner are untenable.

III. Decision

The validity of the invention patent No. 201610830364.1 is maintained.

Pursuant to the provisions set forth in Article 46 Paragraph 2 of the Patent Law of China, the Patentee or the invalidation requestor may, within three (3) months from the date of receiving this decision, appeal by filing a case with the Beijing Intellectual Property Court, and the opponent of the appellant appears as a third party in the legal proceedings.

Panel Group Lead: Wenzhi LIU
Primary Reviewer: Junyan YANG
Participating Reviewer: Yan HU

Rereview and Invalidation Department of the CNIPA

[*seal affixed*: CNIPA Rereview and Invalidation Dept. 1101081361184]