

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:
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Applicant's or agent's file reference 1815801PCT		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/IB2019/054890	International filing date (day/month/year) 12-06-2019	Priority date (day/month/year) 30-11-2018	
International Patent Classification (IPC) or both national classification and IPC A62B23/06 Version=2019.01			
Applicant SAXENA, PIYUSH			

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis. I(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/ Indian Patent Office Plot No. 32, Sector 14, Dwarka, New Delhi-110075 Facsimile No.	Date of completion of this opinion 04-10-2019	Authorized officer Sreedhar Panchumarthi Telephone No. +91-1125300200
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WRITTEN OPINION OF THE
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International application No.
PCT/IB2019/054890

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed.
 - a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(b)).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No. PCT/IB2019/054890
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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims	None	NO

2. Citations and explanations:

Reference is made to the following documents:-

D1: WO 2008139499 A1 (NARCISCO, PAOLO) 20 NOV 2008 (20.11.2008)

D2: US 7918224 B2 (AIRWARE, INC.) 05 APR 2011 (05.04.2011)

D3: CN 204182044 U (WUHU BOMAI NEW MATERIAL TECHNOLOGY CO LTD) 04 MAR 2015 (04.03.2015)

D4: WO 2004069110 A1 (VANGSGAARD, Jrgen) 19 AUG 2004 (19.08.2004)

Novelty under Article 33(2)

Regarding claim 1,

D1, the closest prior art discloses all the technical features of the invention, but fails to disclose the retainers, and they are fixed in the housing.

Hence the independent claim 1 is considered novel over D1.

Since the Independent claim 1 is novel, the dependent claims 2-11 are also considered novel over D1.

D2, the another closest prior art discloses all the technical features of the invention, but fails to disclose the retainers are fixed inside the housing.

Hence the independent claim 1 is considered novel over D2.

Since the Independent claim 1 is novel, the dependent claims 2-11 are also considered novel over D2.

Inventive step under Article 33(3)

Regarding claim 1, D1 discloses a nasal-filter apparatus (1) comprising: a pair of housings (2), wherein a distal end of

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Continuation of Citation and Explanation(Box5)

corresponding pair of housings (2) is open and a proximal end of the corresponding pair of housings (2) comprises at least two rims(7). (Page:2 line 18- Page 4 line 2;) D2 discloses a nasal air filtration device which comprises at least two retainers (94,98) adapted to be placed over the pair of housings/base (80,82) wherein the at least two retainers (94,98) at the proximal end; at least two filters (96,100) placed inside the corresponding pair of housings (110) between corresponding at least two rims (130) and corresponding to the at least two retainers (94,98), wherein the at least two filters (96,100) are configured to restrict one or more pollutants present in the air from entering nostrils; (Col.8 line 65- Col.9 line 20; Figure:9;) and a plurality of wings (210,212,218,220) placed on an outer periphery of the pair of housings, wherein the plurality of wings (210,218) are configured to provide grip inside the nasal cavity and prevents accidental ejection.(Col.11 line 51- Col.12 line 5; Figure:21-24;). But the combination of D1 with D2 fails to disclose the retainers are placed inside the housing. Whereas, D3 discloses the fixing devices (6) are placed inside the housing. (Figure: 1; Claim 1 ;) Therefore, it would be obvious to the person skilled in the art to modify D1 by arranging retainers from D2 and fixing the said retainers inside the housing from D3 to arrive at the technical features claimed in claim 1.

Regarding claim 2, D1 discloses the pair of housings (4) are fabricated using a medical graded thermo plastic material. (Page 3 lines 22-26)

Therefore it is obvious to the person skilled in the art to use the document D1 and D2 with D3 to arrive at the features claimed in claim 2.

Regarding claim 3, D1 discloses the variation of the pair of housings (110) are designed to substantially match a shape of an inner surface of the nostrils of a user. (Page.2 line 27- Page.3 line 3; Figure:2;)

Therefore it is obvious to the person skilled in the art to use the document D1 and D2 with D3 to arrive at the features claimed in claim 3.

Regarding claim 4, D2 discloses that retainers (94,98) are attached to the housing (base 80,82) by press fit. (Col.9 lines 5-10; Figure: 9;) Therefore, it would be obvious to modify D2 form the common general knowledge to arrange flanges for attaching retainers to the housing to arrive at the technical features claimed in claim 4.

Regarding claim 5, D2 discloses the plurality of wings (184,186) comprises a plurality of collapsible wings which are tilted and pointed outside and collapses during insertion and expands during removal. (Col.11 lines 32-42;)

Therefore it is obvious to the person skilled in the art to use the document D1 and D2 with D3 to arrive at the features claimed in claim 5.

Regarding claim 6, D4 discloses the outer periphery of the pair of housings towards the proximal end comprises a tread pattern (rough

outer surface) configured to provide extra grip inside the nasal cavity and prevents accidental ejection. (Abstract, Figure:1) Therefore it is obvious to the person skilled in the art to use the document D1-D4 to arrive at the features claimed in claim 6.

Regarding claim 7, D2 discloses the retainers (94,98) at the proximal end (Figure:9); and D3 discloses two rims comprise one or more lines and the one or more lines are connected in a shape of triangle to provide strength and increase air flow.(Figure:1, 4;) Therefore it is obvious to the person skilled in the art to use the document D1 and D2 with D3 to arrive at the features claimed in claim 7.

Regarding claim 8, D2 discloses two filters (164,166) are fabricated using nanofiber material, microfiber material or non-woven fabric. (Col.10 lines 25-28;) Therefore it is obvious to the person skilled in the art to use the document D1 and D2 with D3 to arrive at the features claimed in claim 8.

Regarding claim 9, D2 discloses filters (160) comprises a replaceable filter. (Col.7 lines 21-26;) Therefore it is obvious to the person skilled in the art to use the document D1 and D2 with D3 to arrive at the features claimed in claim 9.

Regarding claim 10, D1 discloses a connector (3) mechanically coupled to a first side of each of the at least two housings (2).(Figure:1;) Therefore it is obvious to the person skilled in the art to use the document D1 and D2 with D3 to arrive at the features claimed in claim 10.

Regarding claim 11, D1 discloses the connector (3) comprises a bend corresponding to a nasal septum of the user, wherein the bend is configured to provide support with comfort when inserted into the nostrils. (Figure: 1;) Therefore it is obvious to the person skilled in the art to use the document D1 and D2 with D3 to arrive at the features claimed in claim 11.

Therefore, the subject matter of claims 1-11 lacks inventive step in the sense of Article 33(3) PCT.

Industrial Applicability under Article 33(4)

The subject matter of claims 1-11 is considered to be industrially

applicable and meets the requirements of Article 33(4) PCT.