Electronic Acknowledgement Receipt	
EFS ID:	48684336
Application Number:	18376975
International Application Number:	
Confirmation Number:	4138
Title of Invention:	HANDHELD SURFACE CLEANING APPARATUS
First Named Inventor/Applicant Name:	Wayne Ernest Conrad
Customer Number:	1059
Filer:	Philip C. Mendes da Costa/Snezana Lisowsky
Filer Authorized By:	Philip C. Mendes da Costa
Attorney Docket Number:	10452-P52585US1
Receipt Date:	05-OCT-2023
Filing Date:	
Time Stamp:	13:19:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$6160
RAM confirmation Number	E202305D25305625
Deposit Account	022095
Authorized User	Snezana Lisowsky
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Track One Request	TRACK1_REQUEST_2023-10-05_P52585US11.PDF	193777 9915d983257aae3ae9cb337ddbe9bad52275a014	no	2
Warnings:					
Information:					
2	Specification	SPECIFICATION_2023-10-05_P52585US11.PDF	512276 0521b513defee07514158f34ff3e35fde36ee93a	no	66
Warnings:					
Information:					
3	Claims	CLAIMS_2023-10-05_P52585US11.PDF	127445 ac43236d8167c974f57a4e6d0862c00b283173f7	no	3
Warnings:					
Information:					
4	Abstract	ABSTRACT_2023-10-05_P52585US11.PDF	95693 ff7203d4fd953398d13f0090fa7a3c04ddfa334f	no	1
Warnings:					
Information:					
5	Drawings-only black and white line drawings	P52585US09_US10_Drawings_2023-07-04.PDF	6660879 bf1de94b234fe7c53a9f47c946dc62379d95c823	no	50
Warnings:					
Information:					
6	Oath or Declaration filed	P52585US09_US10_Declaration_Wayne_2023-07-04_P52585US10.PDF	435349 1df24c221a1424407aca8e063945edce898f952b	no	1
Warnings:					
Information:					

7	Application Data Sheet	ADS_2023-10-05_P352585US11.PDF	2306545 13179e04bbf73076c00081112ef6c1948f7ecfa3	no	8
Warnings:					
Information:					
8	Power of Attorney	POA_2023-10-05_P52585US11.PDF	366156 01158611a5bb2ed5a0b50789547dc3f68a994b72	no	4
Warnings:					
Information:					
9	Internet Communications Authorization	Internet_2023-10-05_P52585US11.PDF	222057 7c8a72620ad1b02398a30b1ba8e5fa252417c8af	no	2
Warnings:					
Information:					
10	Fee Worksheet (SB06)	fee-info.pdf	50842 862d12eef07ccac932ea9d79914c1a808ce1216f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	10971019		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: ECOMM.AUTH/ECOMM.WTDW
Doc Description: Internet Communications Authorization/Internet Communications Authorization Withdrawal

PTO/SB/439 (11-15)

AUTHORIZATION FOR INTERNET COMMUNICATIONS IN A PATENT APPLICATION OR REQUEST TO WITHDRAW AUTHORIZATION FOR INTERNET COMMUNICATIONS		
	Application No.	
	Filing Date	October 5, 2023
	First Named Inventor	Wayne Ernest Conrad
	Art Unit	n/a
	Examiner Name	n/a
	Practitioner Docket No.	10452-P52585US11

To: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I. To authorize permission for Internet Communications.

☒ Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned and practitioners in accordance with 37 CFR 1.33 and 37 CFR 1.34 concerning any subject matter of this application via video conferencing, instant messaging, or electronic mail. I understand that a copy of these communications will be made of record in the application file. (MPEP 502.03)

II. To withdraw authorization for Internet Communications.

☐ The authorization given on _____, to the USPTO to communicate with the undersigned and any practitioner in accordance with 37 CFR 1.33 and 37 CFR 1.34 concerning any subject matter of this application via Internet communications such as video conferencing, instant messaging, or electronic mail is hereby withdrawn. I understand that the withdrawal is effective when approved rather than when received.

I am the

☐ applicant.

☒ attorney or agent of record. Registration number 33106.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Philip C. Mendes da Costa/ — Signature

October 5, 2023 — Date

Philip C. Mendes da Costa — Typed or printed name

416.957.1695 — Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Juristic entities must be represented by a patent practitioner (see 37 CFR 1.31, which is applicable to any paper filed on or after September 16, 2012, that is presented on behalf of a juristic entity, regardless of application filing date). Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	HANDHELD SURFACE CLEANING APPARATUS
First Named Inventor/Applicant Name:	Wayne Ernest Conrad
Filer:	Philip C. Mendes da Costa/Snezana Lisowsky
Attorney Docket Number:	10452-P52585US1

Filed as Large Entity

Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	320	320
UTILITY SEARCH FEE	1111	1	700	700
UTILITY EXAMINATION FEE	1311	1	800	800
REQUEST FOR PRIORITIZED EXAMINATION	1817	1	4200	4200
Pages:				
Claims:				
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	1830	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**6160**

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82A (07-13)
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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	
Filing Date	October 5, 2023
First Named Inventor	Wayne Ernest Conrad
Title	HANDHELD SURFACE CLEANING APPARATUS
Art Unit	N/A
Examiner Name	N/A
Attorney Docket Number	10452-P52585US11

SIGNATURE of Applicant or Patent Practitioner

Signature	/Philip C. Mendes da Costa/	Date (Optional)	October 5, 2023
Name	Philip C. Mendes da Costa	Registration Number	33106
Title (if Applicant is a juristic entity)	Vice-President and Agent of Record		
Applicant Name (if Applicant is a juristic entity)	Omachron Intellectual Property Inc.		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ *Total of _____ forms are submitted.

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0035. Public burden for this form is estimated to average 3 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** If filing this completed form by mail, send to: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc Code: PA..
Document Description: Power of Attorney

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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 01059

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☐ The address associated with the above-mentioned Customer Number

OR

☑ The address associated with Customer Number: 01059

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Omachron Intellectual Property Inc.

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Philip C. Mendes da Costa/	Date (Optional)	October 5, 2023
Name	Philip C. Mendes da Costa		
Title	Vice-President		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0035. Public burden for this form is estimated to average 3 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** If filing this completed form by mail, send to: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/82C (07-13)
Approved for use through 09/30/2025. OMB 0651-0035
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POWER OF ATTORNEY BY APPLICANT

No more than ten (10) patent practitioners total may be appointed as set forth below by name and registration number. This page need not be submitted if appointing the Patent Practitioner(s) associated with a Customer Number (see form PTO/AIA/82B):

Name	Registration Number

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013). https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf

Routine uses of the information in this record may include disclosure to: 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law; 2) a Federal, state, local, or international agency, in response to its request; 3) a contractor of the USPTO having need for the information in order to perform a contract; 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record; 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record; 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations; 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals; 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)); 9) the Office of Personnel Management (OPM) for personnel research purposes; and 9) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Additional Uses

Additional USPTO uses of the information in this record may include disclosure to: 1) the International Bureau of the World Intellectual Property Organization, if the record is related to an international application filed under the Patent Cooperation Treaty; 2) the public i) after publication of the application pursuant to 35 U.S.C. 122(b), ii) after issuance of a patent pursuant to 35 U.S.C. 151, iii) if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections, or an issued patent, or iv) without publication of the application or patent under the specific circumstances provided for by 37 CFR 1.14(a)(1)(v)-(vii); and/or 3) the National Archives and Records Administration, for inspection of records.

WHAT IS CLAIMED IS:

1. A hand vacuum cleaner having a front end, a rear end, an upper side and a lower side, the hand vacuum cleaner comprising:
   (a) an air flow passage extending from a dirty air inlet provided at the front end to a clear air outlet provided at the rear end;
   (b) a vacuum cleaner body comprising a suction motor positioned in the air flow passage, a front end, a rear end and a handle;
   (c) a cyclone unit positioned in the air flow passage upstream from the suction motor, the cyclone unit comprising a cyclone having a front end, a rear end, a cyclone axis of rotation extending between the front and rear ends of the cyclone, the cyclone unit further comprising an axially extending cyclone unit wall which extends to a front end of the cyclone unit, the front end of the cyclone unit comprising a front door that is moveable between a closed position and an open position; and,
   (d) a lock securing the front door in the closed position, the lock comprising an actuator, wherein the actuator is spaced towards the rear end of the cyclone.

2. The hand vacuum cleaner of claim 1 further comprising a pistol grip handle wherein the actuator is located at an upper end of the handle and forward of the pistol grip handle.

3. The hand vacuum cleaner of claim 2 further comprising a battery pack wherein the actuator is located adjacent a forward end of the battery pack.

4. The hand vacuum cleaner of claim 3 further comprising an enclosed finger grip area.

5. The hand vacuum cleaner of claim 4 wherein a battery pack mount forms part of the enclosed finger grip area.

6. The hand vacuum cleaner of claim 1 wherein a pistol grip axis extends through the pistol grip handle from a lower end of the pistol grip handle to an upper end of the pistol grip handle and the pistol grip axis intersects the suction motor.

7. The hand vacuum cleaner of claim 6 wherein the pistol grip axis and the cyclone axis of rotation intersect within the hand vacuum cleaner.

8. The hand vacuum cleaner of claim 1 wherein the front door has a door first end which is rotatably mounted to a front end of the cyclone unit wall and an opposed securable end and the latch is located at an elevation of the opposed securable end.

9. The hand vacuum cleaner of claim 1 wherein the cyclone unit wall terminates at an open end, the open end is closed by the front door, wherein all of the open end is opened when the front door is in the open position.

10. A hand vacuum cleaner having a front end, a rear end, an upper side and a lower side, the hand vacuum cleaner comprising:

    (a) an air flow passage extending from a dirty air inlet provided at the front end to a clear air outlet provided at the rear end;

    (b) a vacuum cleaner body comprising a suction motor positioned in the air flow passage, a front end, a rear end and a handle;

    (c) a cyclone unit positioned in the air flow passage upstream from the suction motor, the cyclone unit comprising a cyclone having a front end, a rear end, a cyclone axis of rotation extending between the front and rear ends of the cyclone, the cyclone unit further comprising an axially extending cyclone unit wall which extends to a front end of the cyclone unit, the front end of the cyclone unit comprising a front door that is moveable between a closed position and an open position;

    (d) a pistol grip handle; and,

(e) a lock securing the front door in the closed position, the lock comprising an actuator, wherein the actuator is located at an upper end of the handle and forward of the pistol grip handle.

11. The hand vacuum cleaner of claim 10 wherein a pistol grip axis extends through the pistol grip handle from a lower end of the pistol grip handle to an upper end of the pistol grip handle and the pistol grip axis intersects the suction motor.

12. The hand vacuum cleaner of claim 11 wherein the pistol grip axis and the cyclone axis of rotation intersect within the hand vacuum cleaner.

13. The hand vacuum cleaner of claim 10 further comprising a battery pack wherein the actuator is located adjacent a forward end of the battery pack.

14. The hand vacuum cleaner of claim 13 further comprising an enclosed finger grip area.

15. The hand vacuum cleaner of claim 14 wherein a battery pack mount forms part of the enclosed finger grip area.

16. The hand vacuum cleaner of claim 10 wherein the front door has a door first end which is rotatably mounted to a front end of the cyclone unit wall and an opposed securable end and the latch is located at an elevation of the opposed securable end.

17. The hand vacuum cleaner of claim 10 wherein the cyclone unit wall terminates at an open end, the open end is closed by the front door, wherein all of the open end is opened when the front door is in the open position.

18. The hand vacuum cleaner of claim 14 wherein the actuator is spaced towards the rear end of the cyclone.

Doc Code: TRACK1.REQ
Document Description: TrackOne Request

PTO/AIA/424 (04-14)

CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION UNDER 37 CFR 1.102(e) (Page 1 of 1)

First Named Inventor:	Wayne Ernest Conrad	Nonprovisional Application Number (if known):	
Title of Invention:	HANDHELD SURFACE CLEANING APPARATUS		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently $0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.

2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.

3. The applicable box is checked below:

I. ☑ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via Patent Center or EFS-Web.

---OR---

(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.

ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, **or** the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

i. A request for continued examination has been filed with, or prior to, this form.
ii. If the application is a utility application, this certification and request is being filed via Patent Center or EFS-Web.
iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /Philip C. Mendes da Costa/	Date October 5, 2023
Name (Print/Typed) Philip C. Mendes da Costa	Practitioner Registration Number 33106

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

☐ *Total of _____ forms are submitted.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013). https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf

Routine uses of the information in this record may include disclosure to: 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law; 2) a Federal, state, local, or international agency, in response to its request; 3) a contractor of the USPTO having need for the information in order to perform a contract; 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record; 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record; 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations; 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals; 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)); 9) the Office of Personnel Management (OPM) for personnel research purposes; and 9) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Additional Uses

Additional USPTO uses of the information in this record may include disclosure to: 1) the International Bureau of the World Intellectual Property Organization, if the record is related to an international application filed under the Patent Cooperation Treaty; 2) the public i) after publication of the application pursuant to 35 U.S.C. 122(b), ii) after issuance of a patent pursuant to 35 U.S.C. 151, iii) if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections, or an issued patent, or iv) without publication of the application or patent under the specific circumstances provided for by 37 CFR 1.14(a)(1)(v)-(vii); and/or 3) the National Archives and Records Administration, for inspection of records.

ABSTRACT

A hand vacuum cleaner has a cyclone unit having a cyclone with a horizontal cyclone axis of rotation. The front end of the cyclone unit comprises a front door that is moveable between a closed position and an open position. A lock secures the front door in the closed position, the lock comprising an actuator, wherein the actuator is spaced towards the rear end of the cyclone.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10452-P52585US11
	Application Number	
Title of Invention	HANDHELD SURFACE CLEANING APPARATUS	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Wayne	Ernest	Conrad	

Residence Information (Select One) US Residency ● Non US Residency Active US Military Service

City	Hampton	Country of Residence [i]	CA

Mailing Address of Inventor:

Address 1	9 King Lane		
Address 2			
City	Hampton	**State/Province**	ON
Postal Code	L0B 1J0	**Country** [i]	CA

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	01059		
Email Address	Pmdcosta@bereskinparr.com	Add Email	Remove Email

Application Information:

Title of the Invention	HANDHELD SURFACE CLEANING APPARATUS		
Attorney Docket Number	10452-P52585US11	**Small Entity Status Claimed**	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	50	**Suggested Figure for Publication (if any)**	42

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10452-P52585US11
	Application Number	
Title of Invention	HANDHELD SURFACE CLEANING APPARATUS	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	◯ Limited Recognition (37 CFR 11.9)
Customer Number	01059		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	18/346834	2023-07-04

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10452-P52585US11
	Application Number	
Title of Invention	HANDHELD SURFACE CLEANING APPARATUS	

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
18/346834	Continuation of	17/342299	2021-06-08	11737621	2023-08-29
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/342299	Continuation of	16/900465	2020-06-12	11445875	2022-09-20
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/900465	Continuation of	15/642781	2017-07-06	10722086	2020-07-28

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10452-P52585US11
	Application Number	
Title of Invention	HANDHELD SURFACE CLEANING APPARATUS	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10452-P52585US11
	Application Number	
Title of Invention	HANDHELD SURFACE CLEANING APPARATUS	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Omachron Intellectual Property Inc.		
Mailing Address Information For Applicant:			
Address 1	9 King Lane		
Address 2			
City	Hampton	**State/Province**	ON
Country	CA	Postal Code	L0B 1J0
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10452-P52585US11
	Application Number	
Title of Invention	HANDHELD SURFACE CLEANING APPARATUS	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Philip C. Mendes da Costa/			Date (YYYY-MM-DD)	2023-10-05
First Name	Philip	Last Name	Mendes da Costa	Registration Number	33106

Additional Signature may be generated within this form by selecting the Add button. Add

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10452-P52585US11
	Application Number	
Title of Invention	HANDHELD SURFACE CLEANING APPARATUS	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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FIG. 1

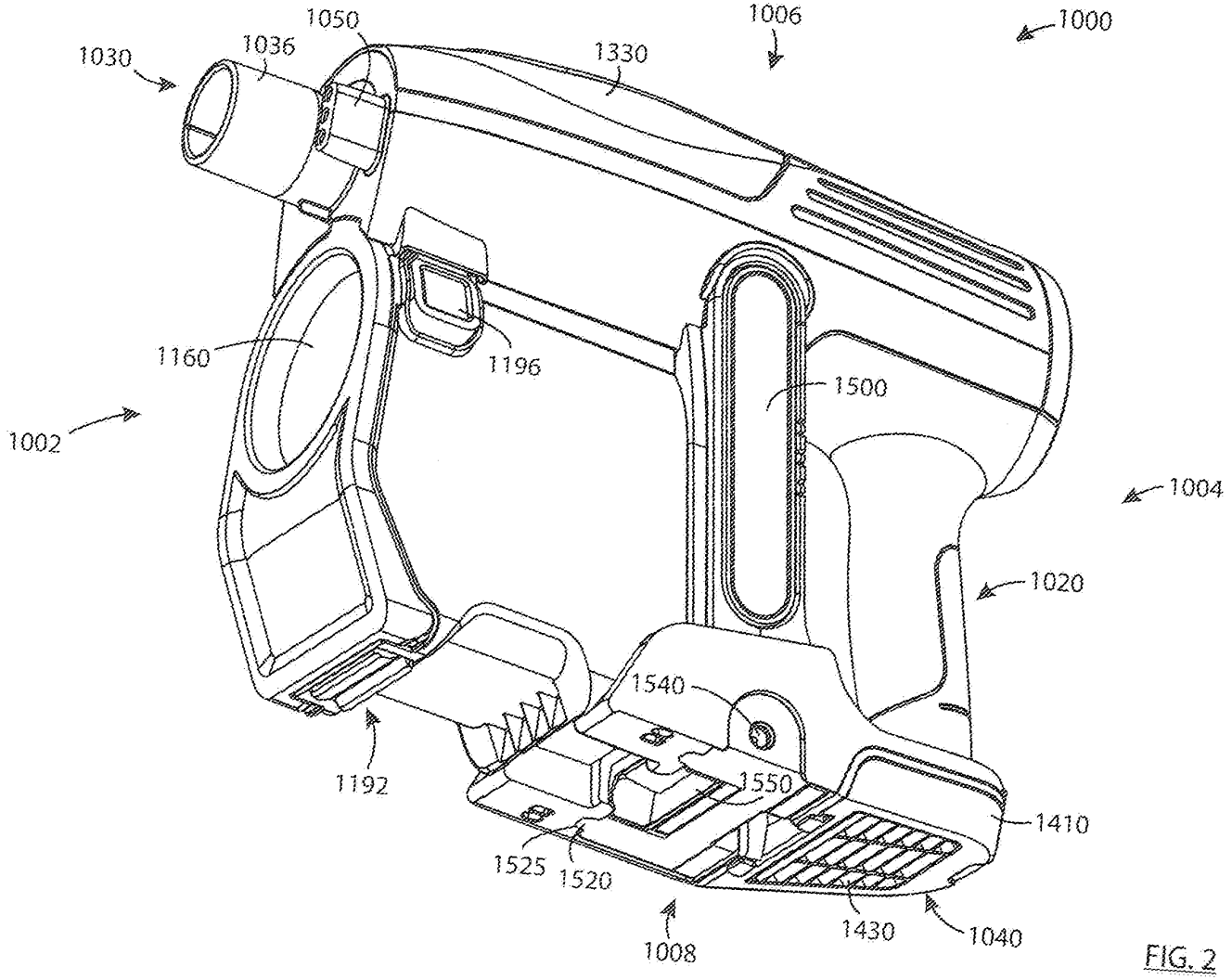


FIG. 2

Dyson Ex1004
Page 27

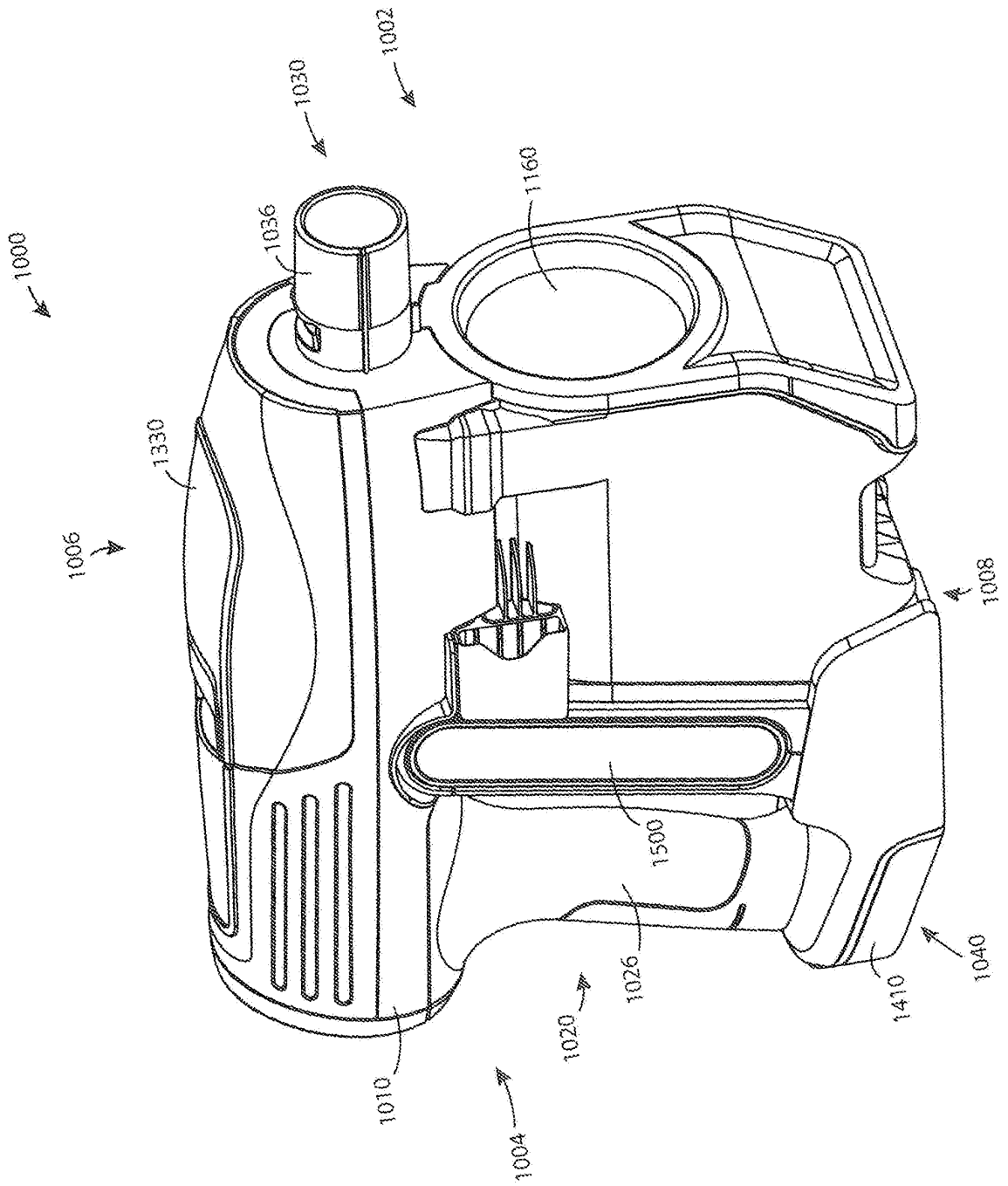

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FIG. 3

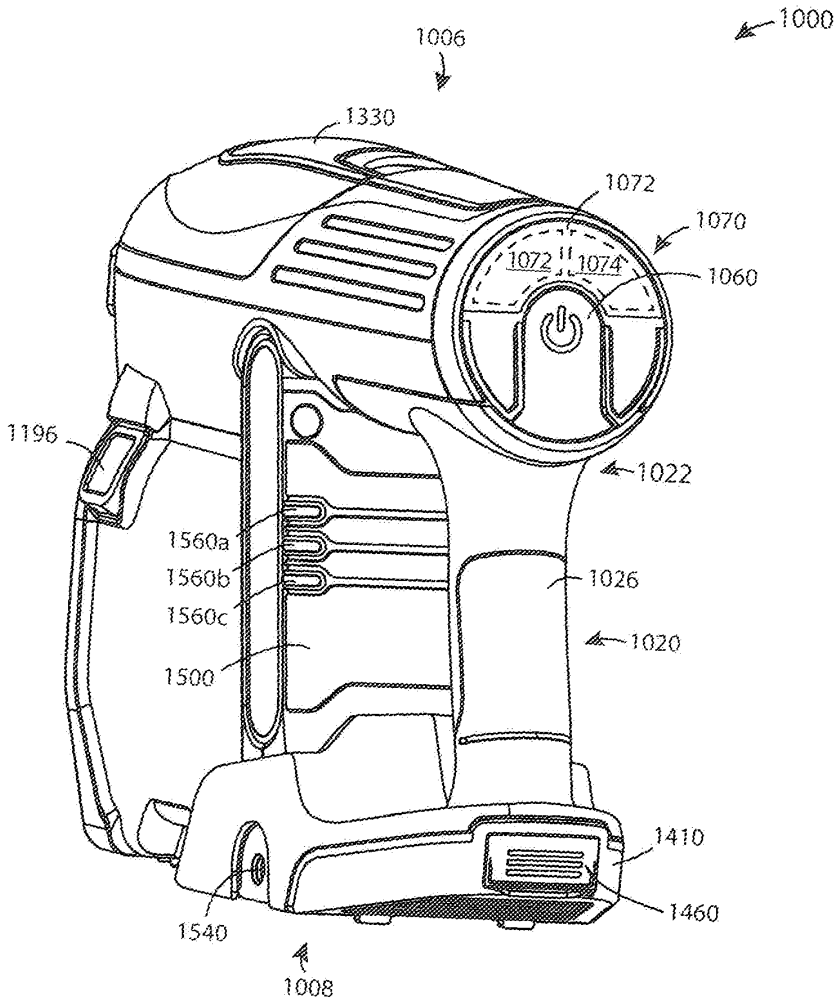

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FIG. 4

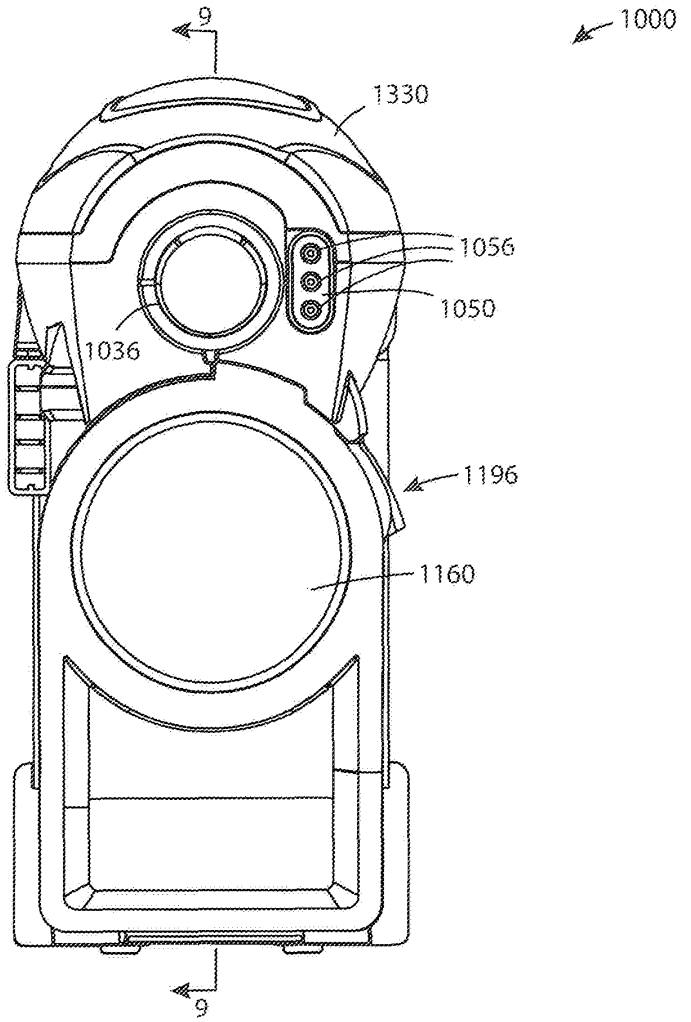


FIG. 5

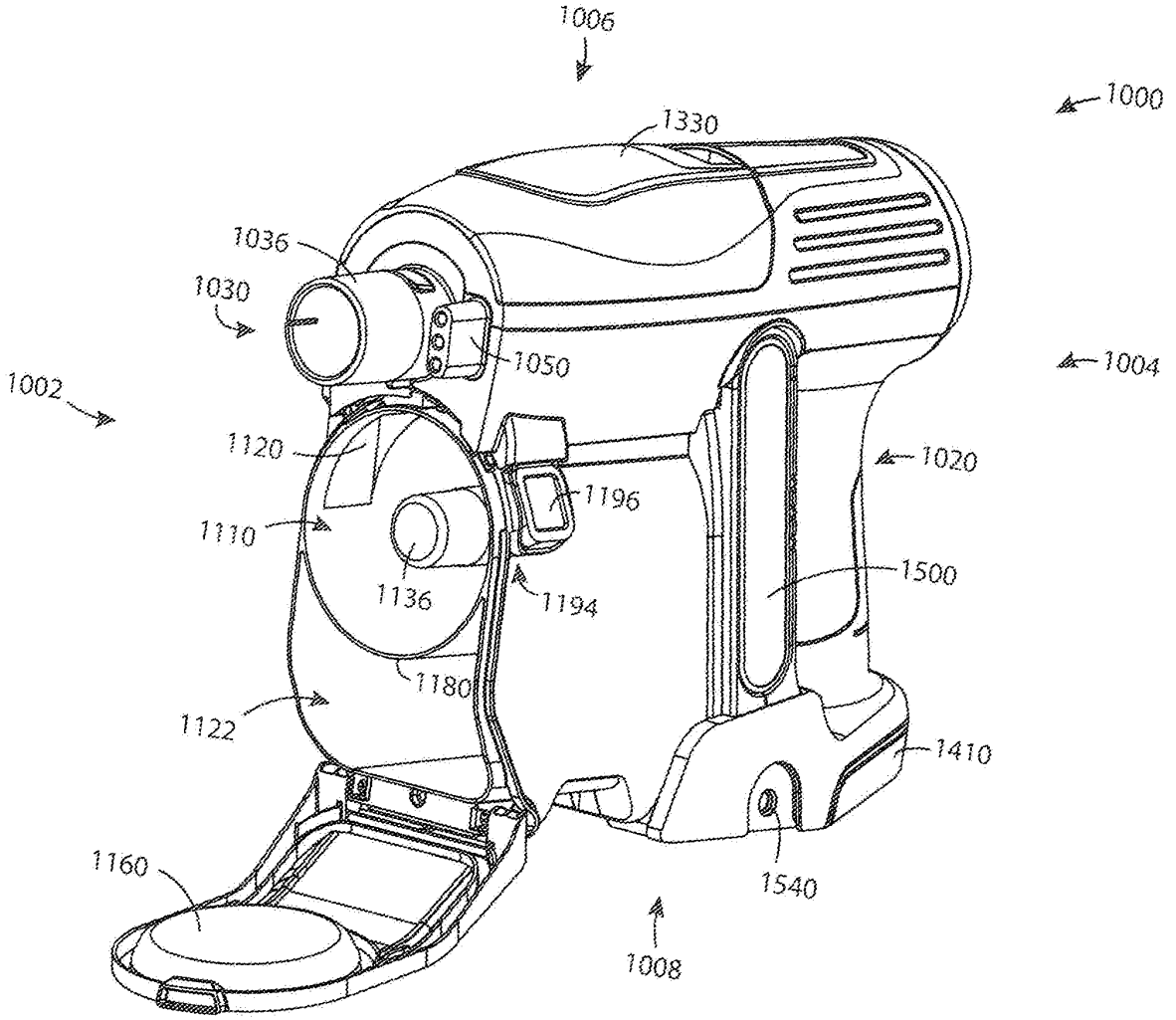


FIG. 6

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Page 31

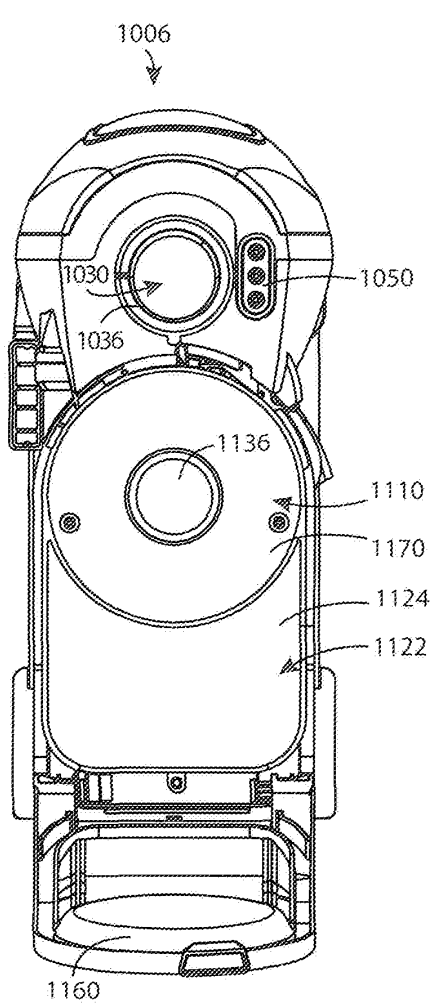


FIG. 7

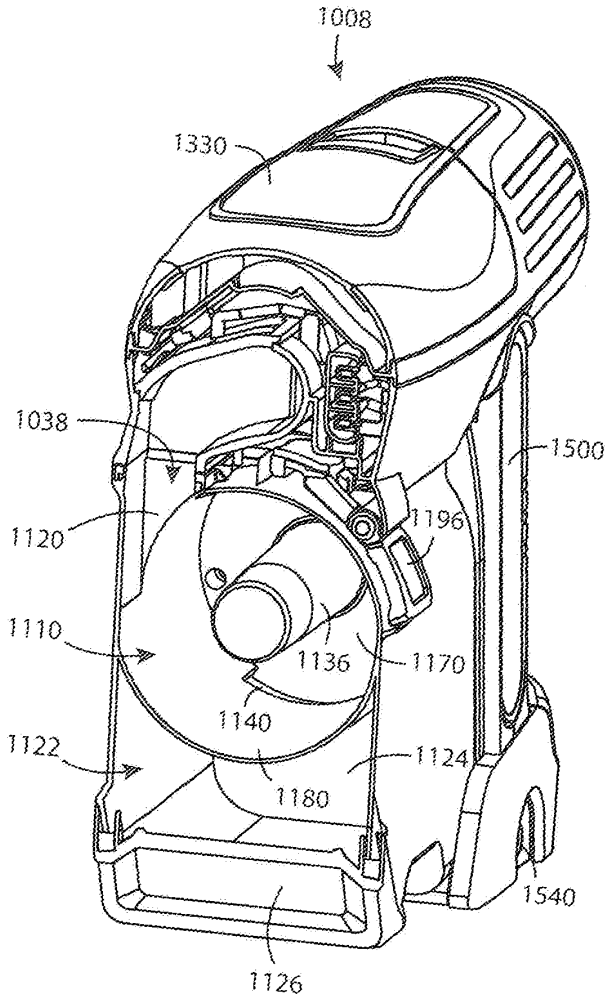

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FIG. 8

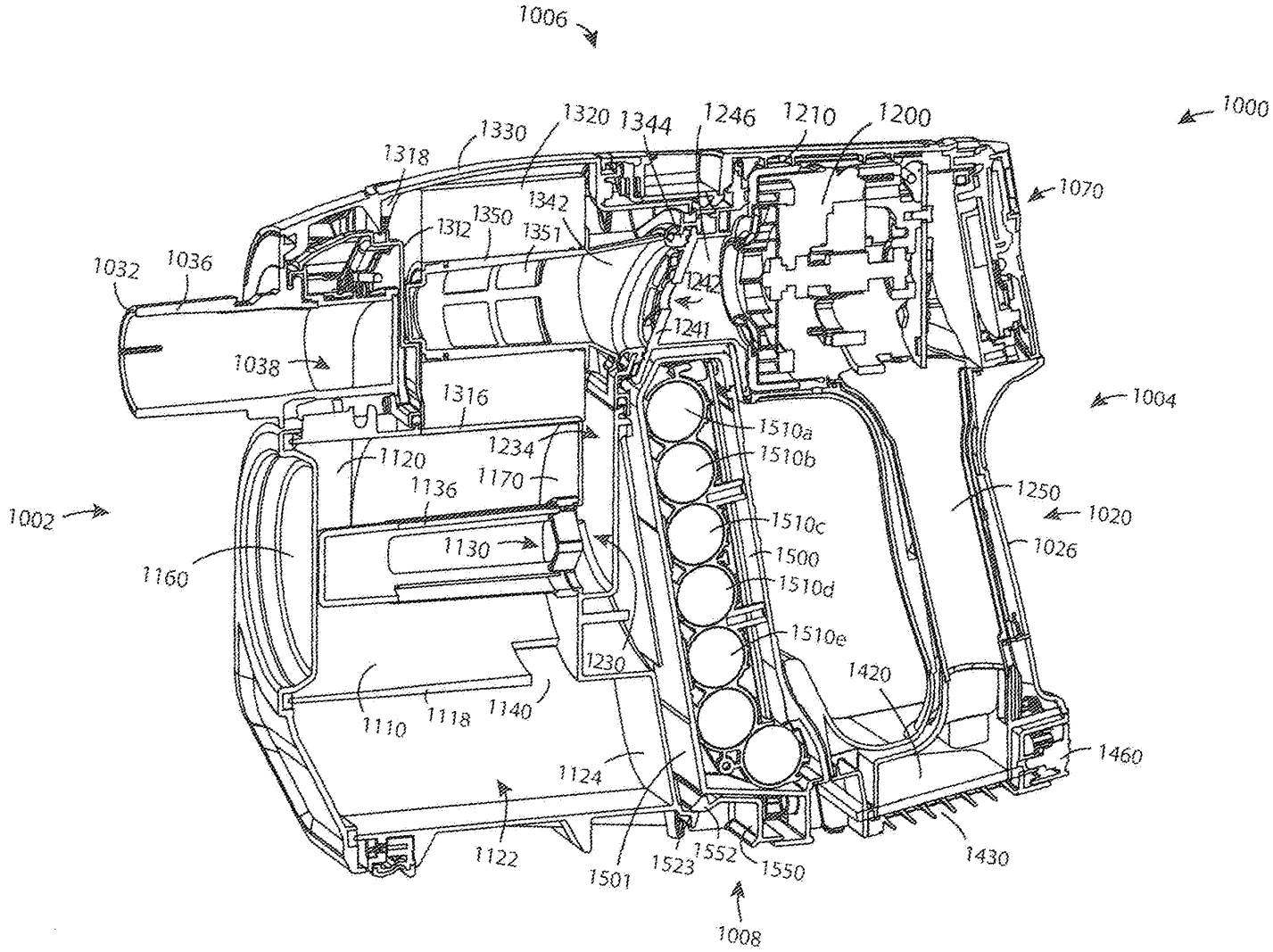

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FIG. 9

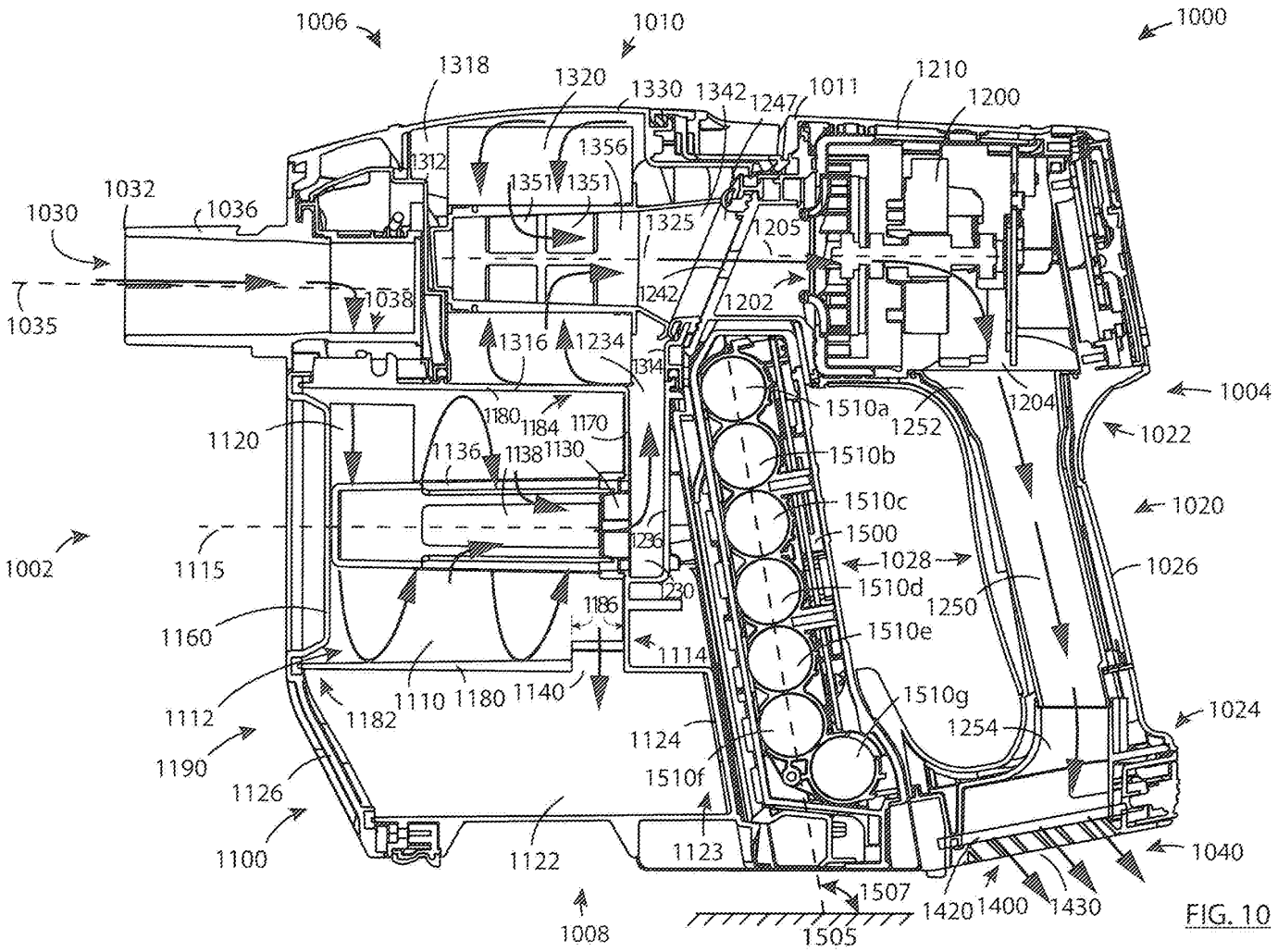

1006
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1000
1318
1320
1330
1342
1247
1011
1210
1200
1312
1356
1351
1351
1032
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1036
1325
1205
1035
1038
1242
1202
1316
1234
1314
1004
1510a
1252
1204
1180
1184
1170
1022
1120
1136
1138
1130
1510b
1510c
1020
1500
1002
1115
1028
1026
1510d
1250
1160
1186
1510e
1114
1112
1182
1110
1180
1140
1510g
1024
1254
1124
1190
1510f
1126
1100
1122
1123
1040
1507
1420
1400
1430
1008
1505

FIG. 10

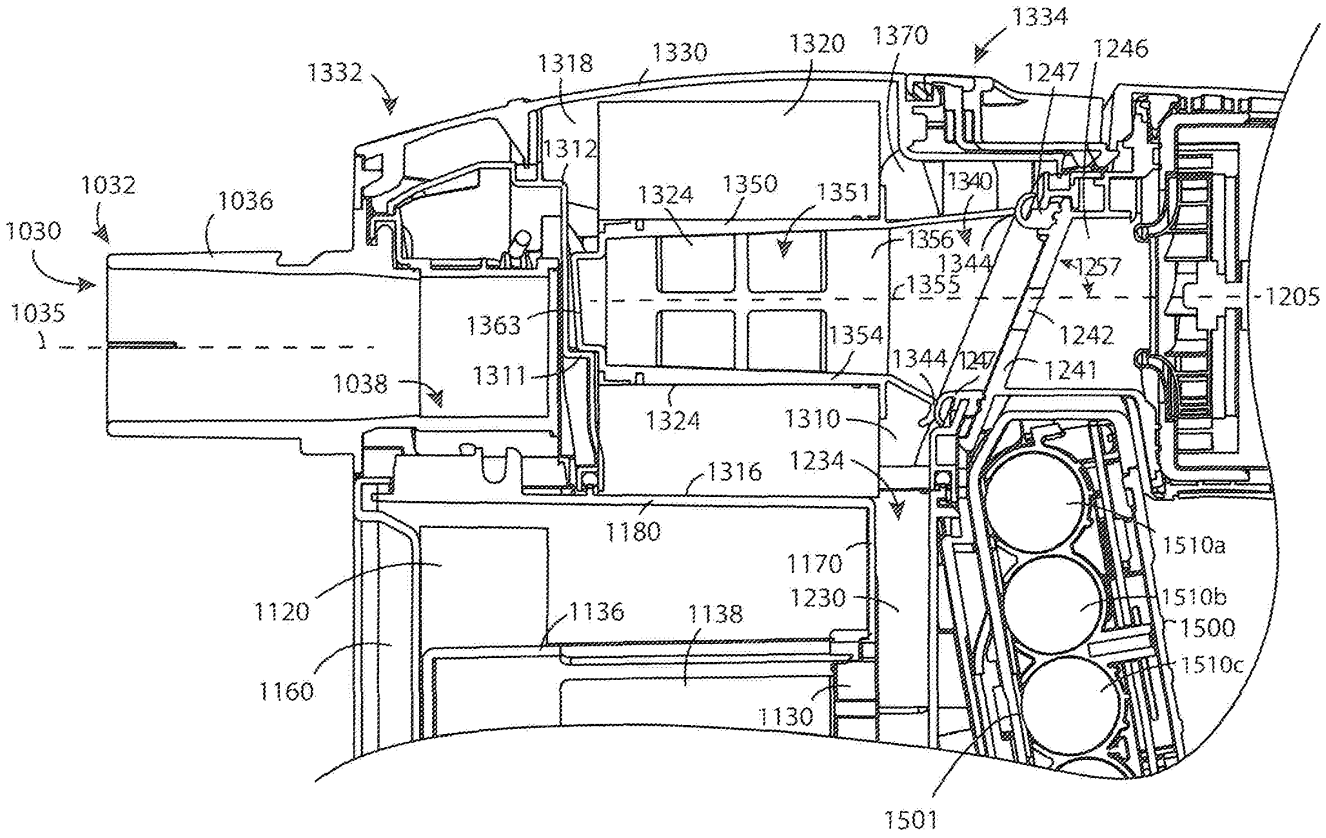

1334
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1324
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1340
1356
1344
1257
1355
1205
1035
1363
1354
1242
1344
1247
1241
1038
1311
1324
1310
1234
1316
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1510a
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1230
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1120
1136
1138
1500
1510c
1160
1130
1501

FIG. 11

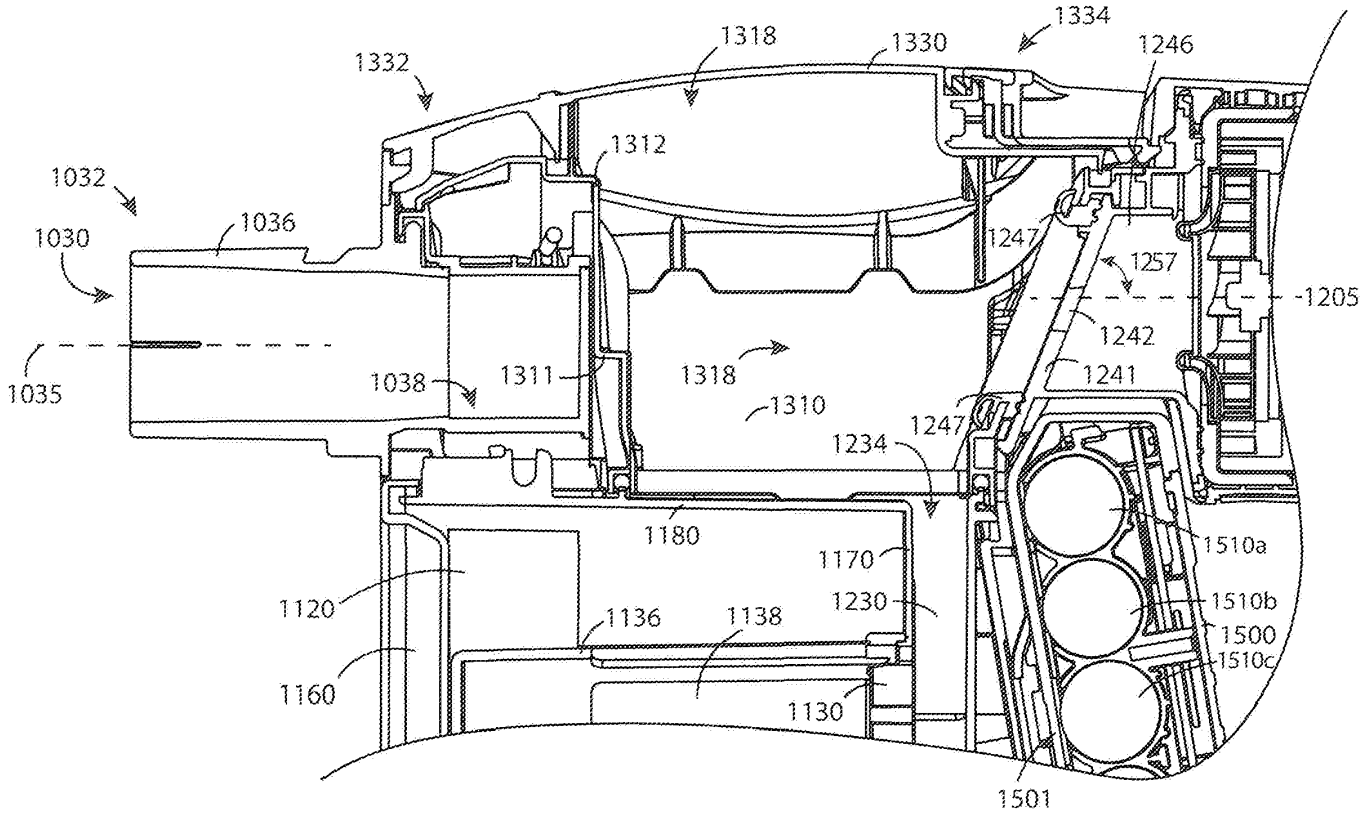

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1246
1332
1312
1032
1036
1030
1247
1257
1205
1242
1035
1038
1311
1318
1241
1310
1247
1234
1180
1510a
1170
1120
1230
1510b
1136
1138
1500
1160
1510c
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1501

FIG. 12

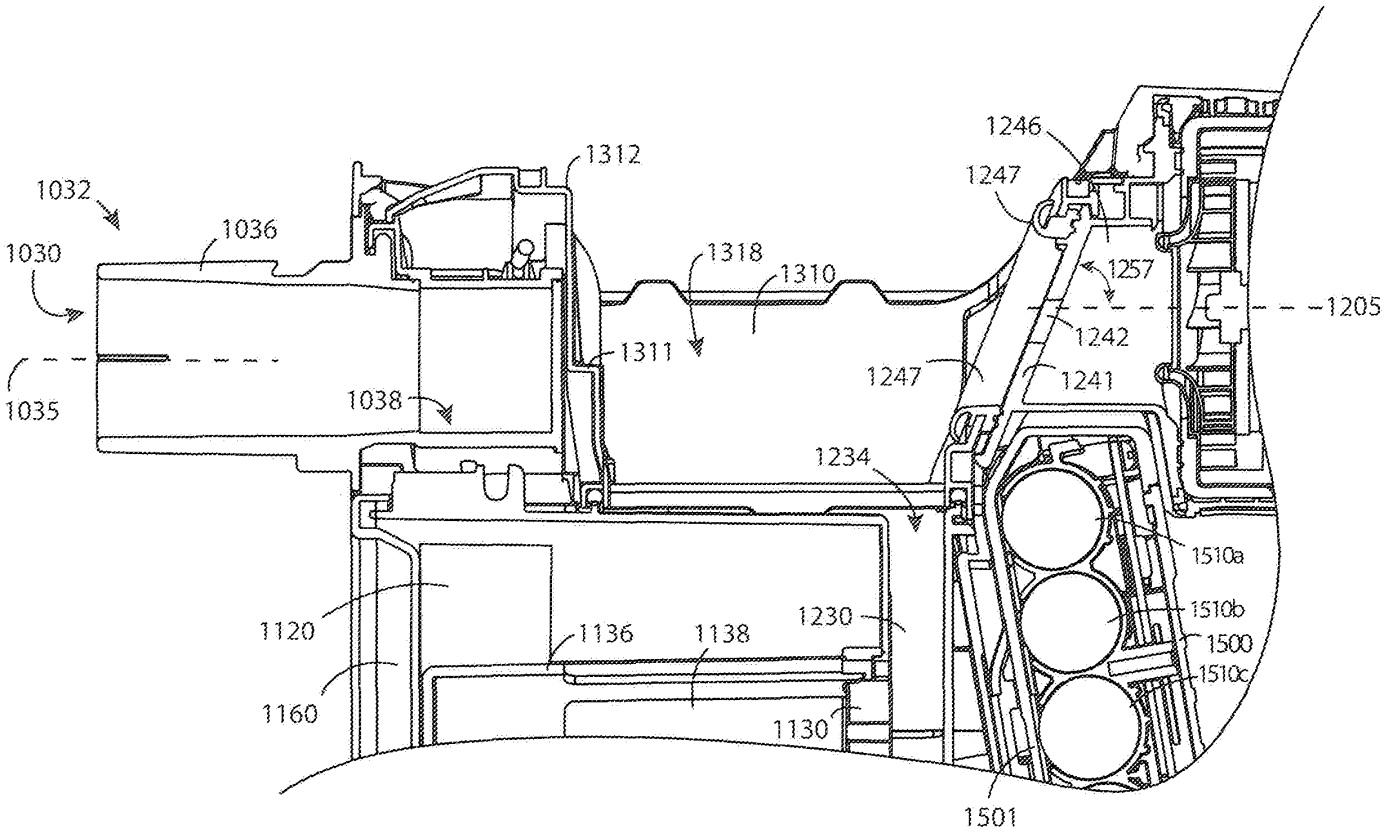

1032
1036
1030
1035
1038
1312
1318
1310
1311
1246
1247
1257
1205
1242
1241
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1510b
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1510c
1230
1120
1136
1138
1160
1130
1501

FIG. 13

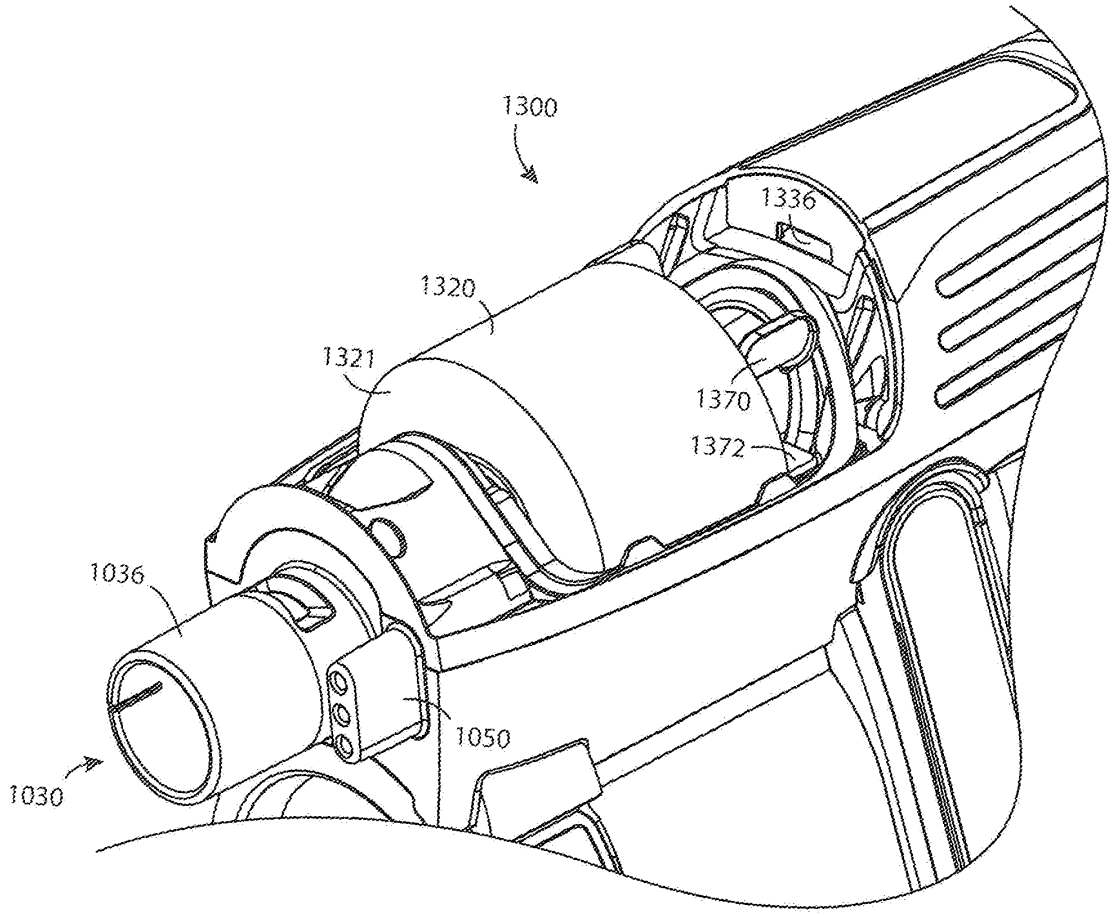


FIG. 14

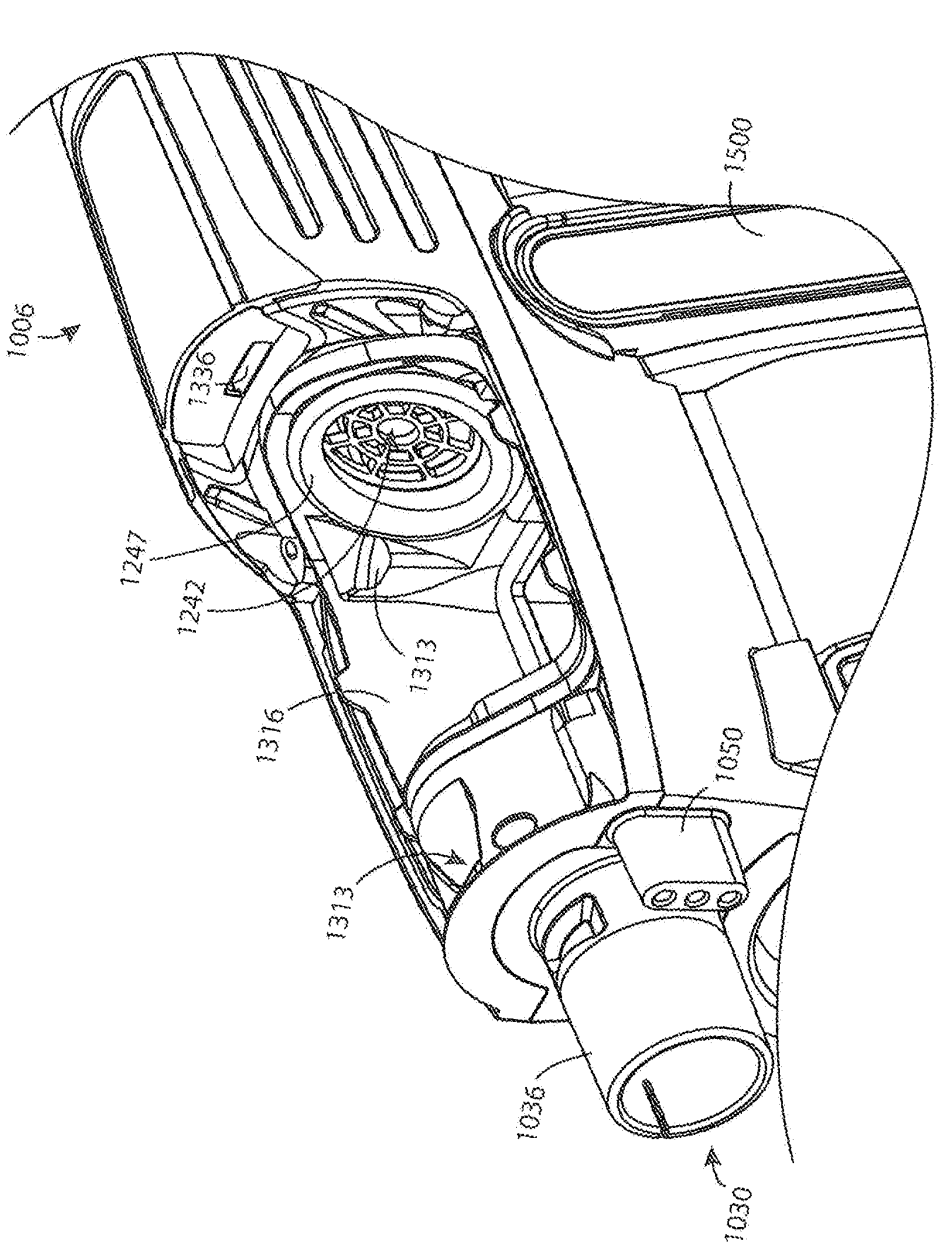


FIG. 15

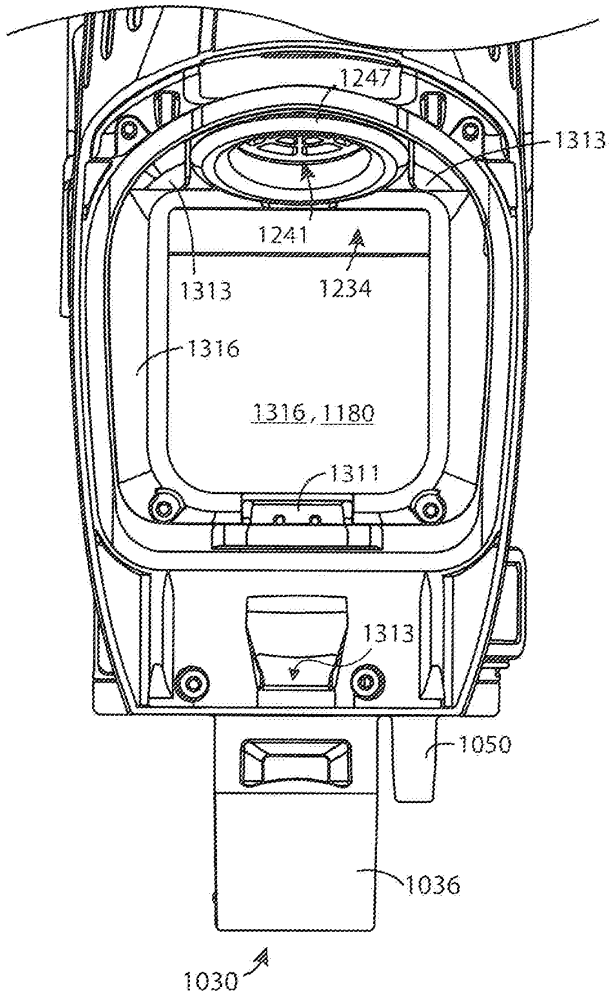

1247
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1313
1234
1316
1316, 1180
1311
1313
1050
1036
1030

FIG. 16

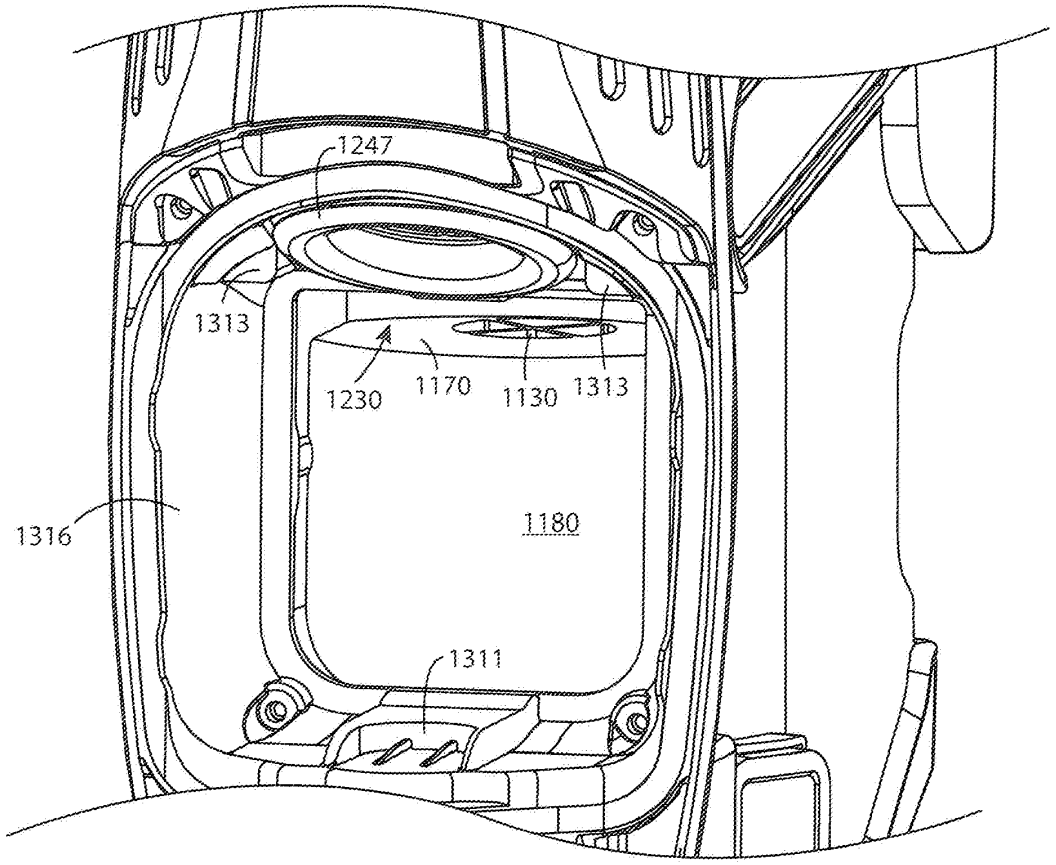


FIG. 17

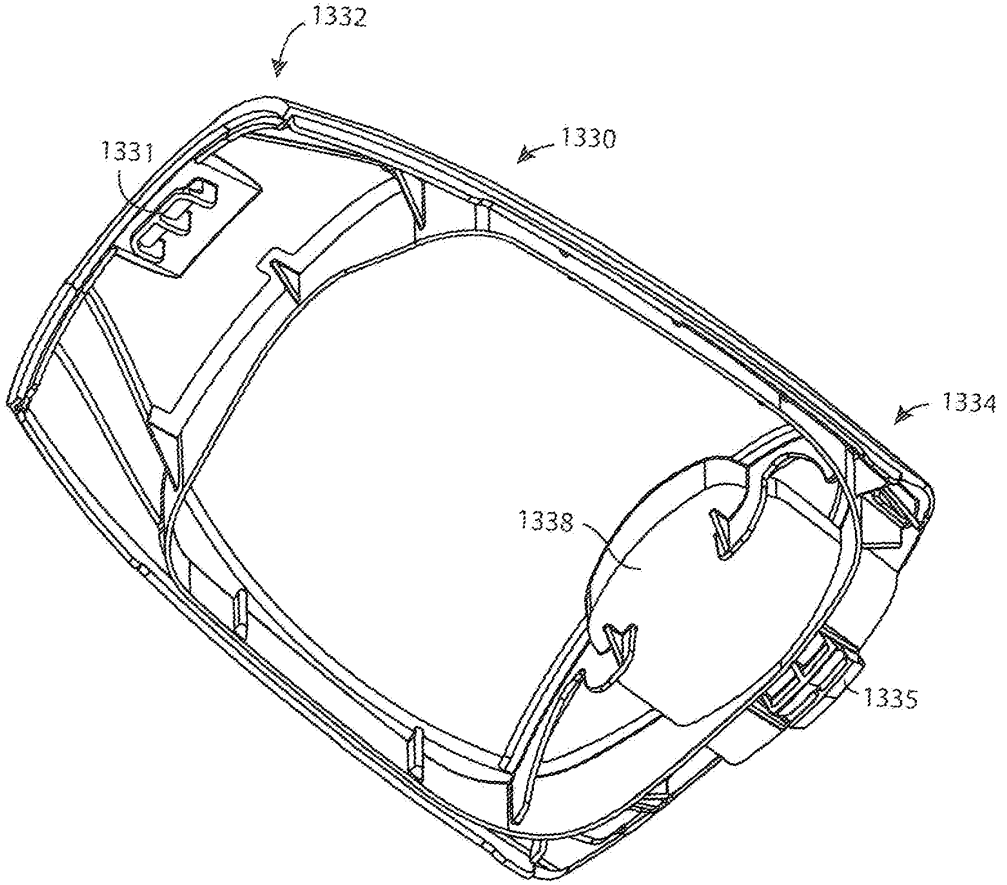


FIG. 18

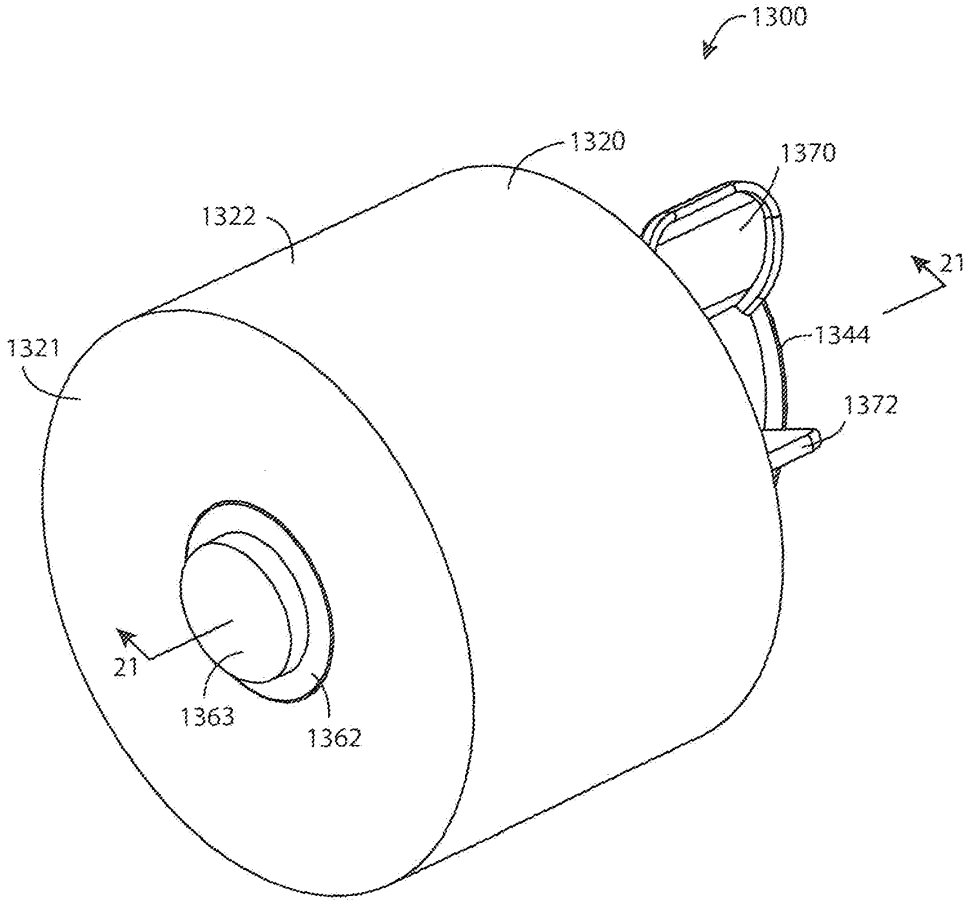


FIG. 19

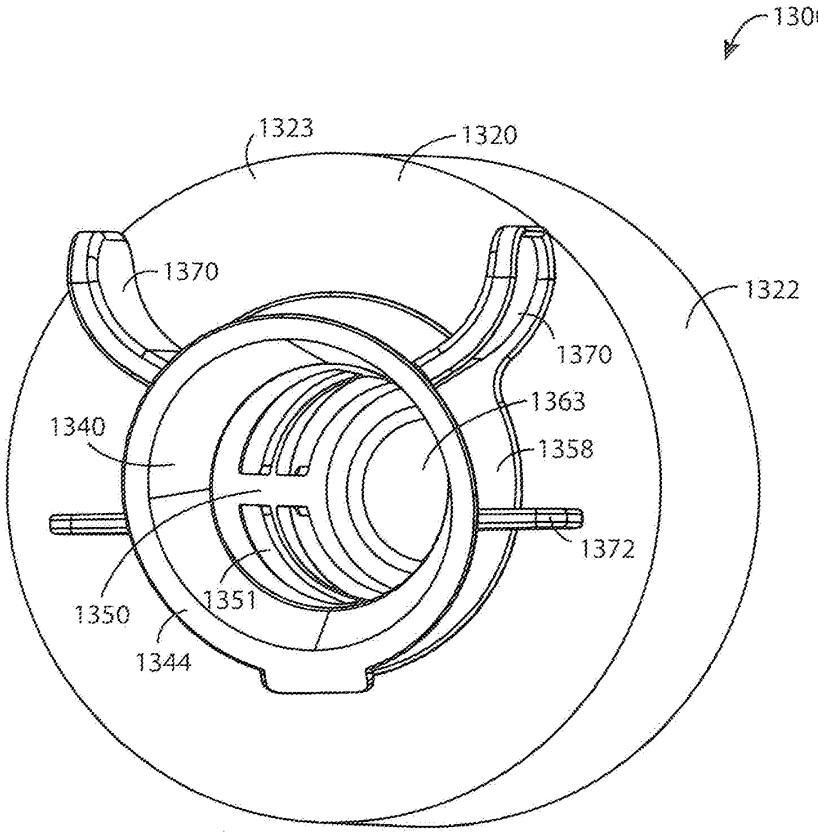

1300
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1320
1322
1370
1370
1363
1340
1358
1372
1350
1351
1344

FIG. 20

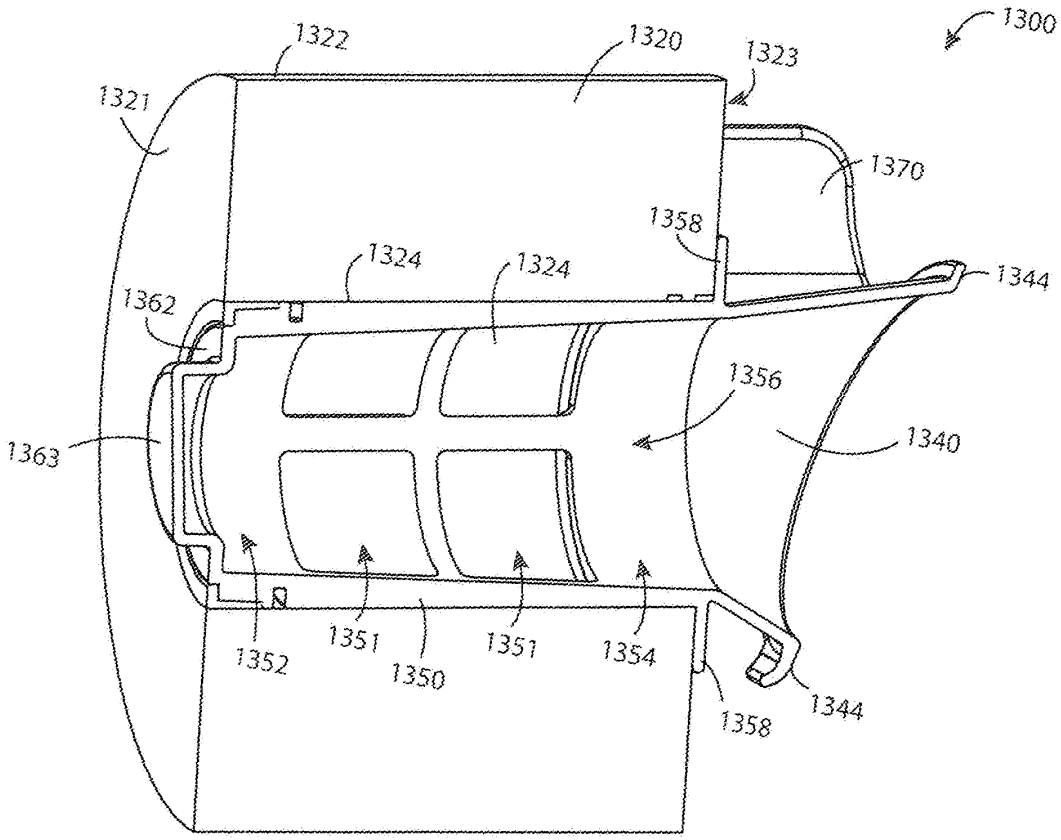

1300
1322
1320
1323
1321
1370
1358
1324
1324
1344
1362
1356
1363
1340
1352
1351
1350
1351
1354
1358
1344

FIG. 21

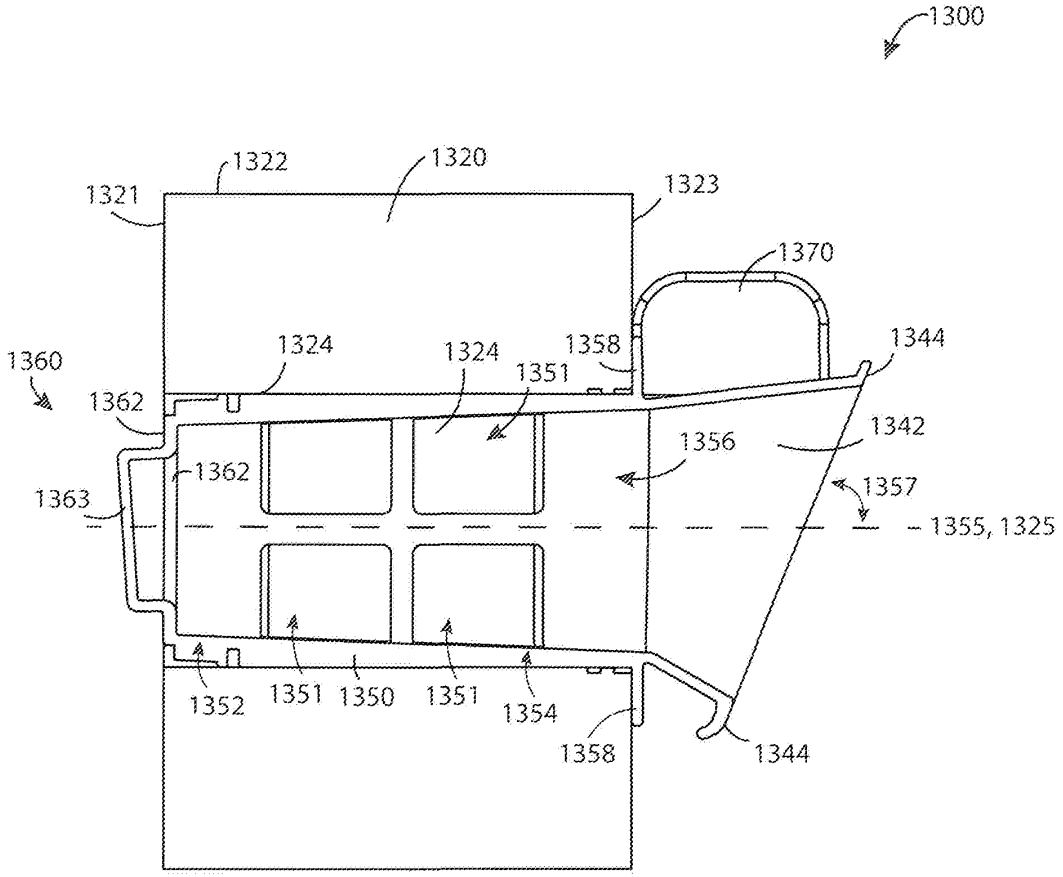

1300
1322
1320
1321
1323
1370
1360
1324
1324
1358
1344
1351
1362
1342
1356
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1357
1363
1355, 1325
1352
1351
1350
1351
1354
1358
1344

FIG. 22

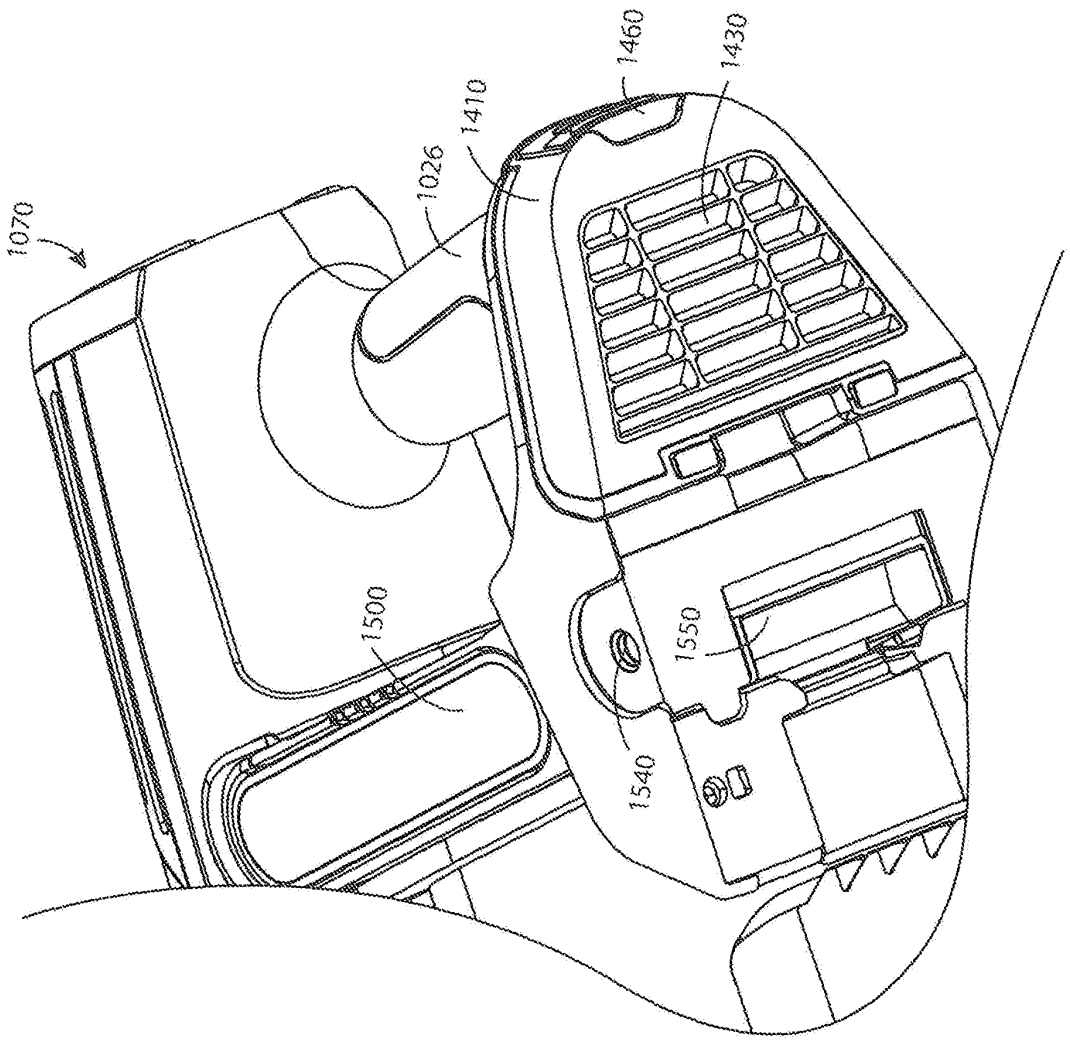


FIG. 23

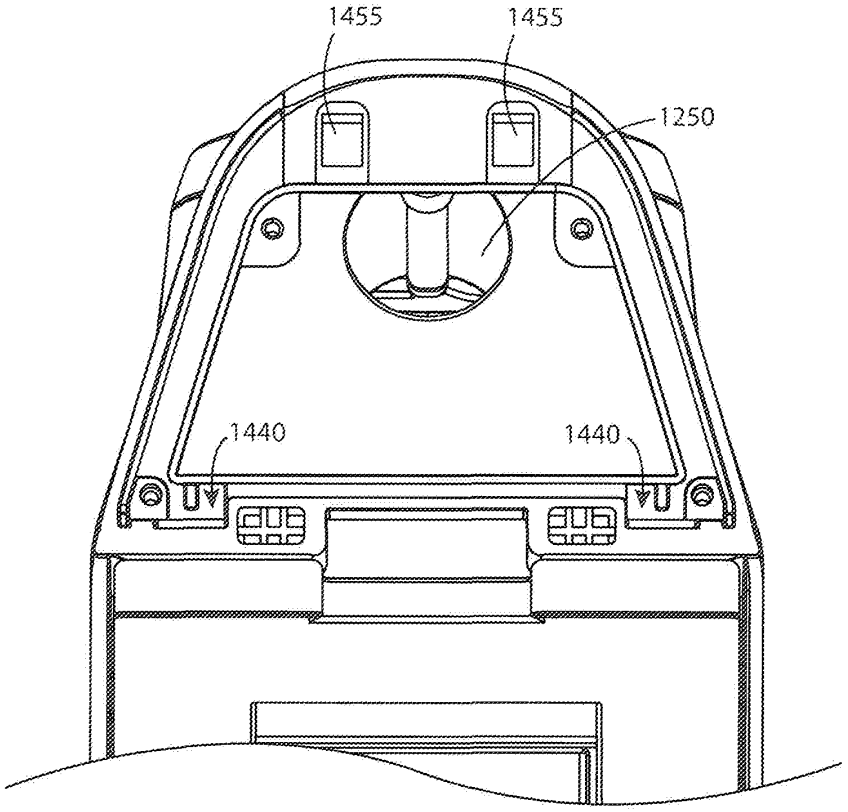


FIG. 24

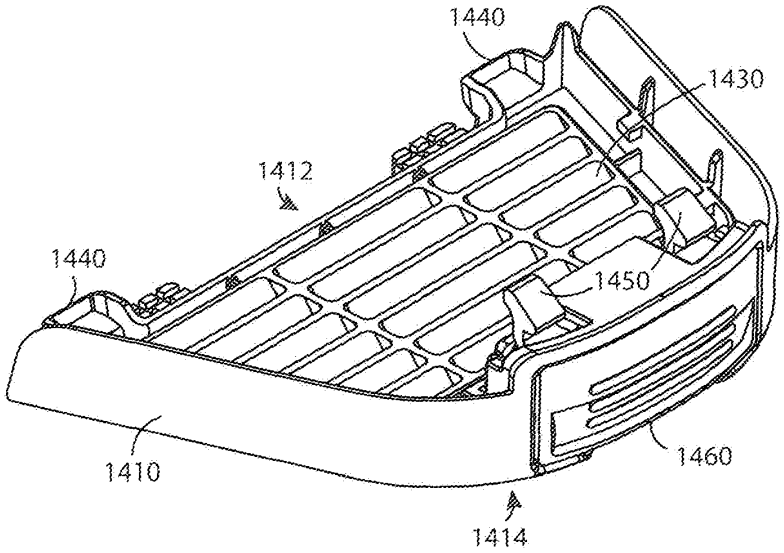


FIG. 25

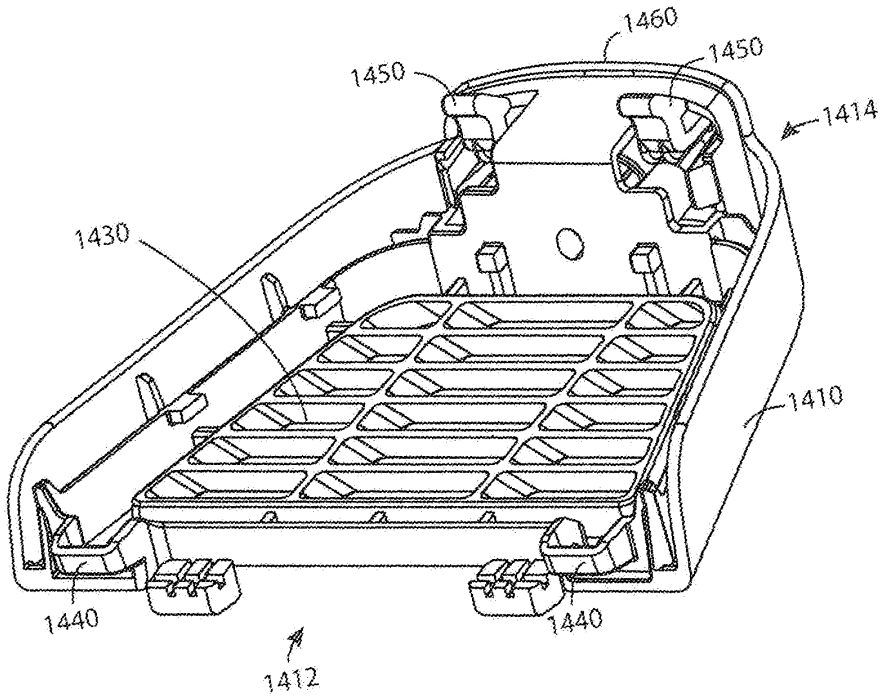


FIG. 26

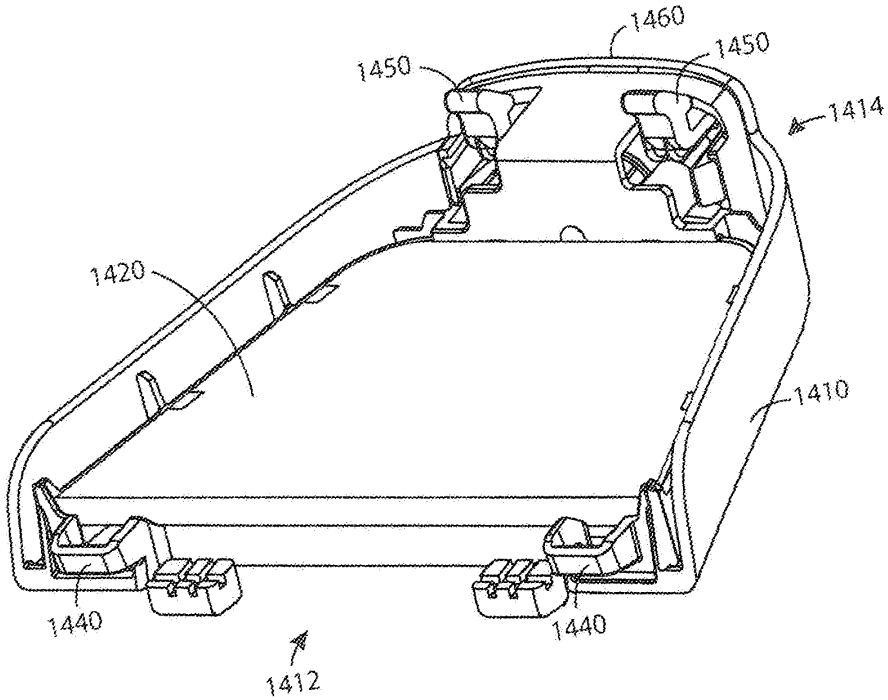


FIG. 27

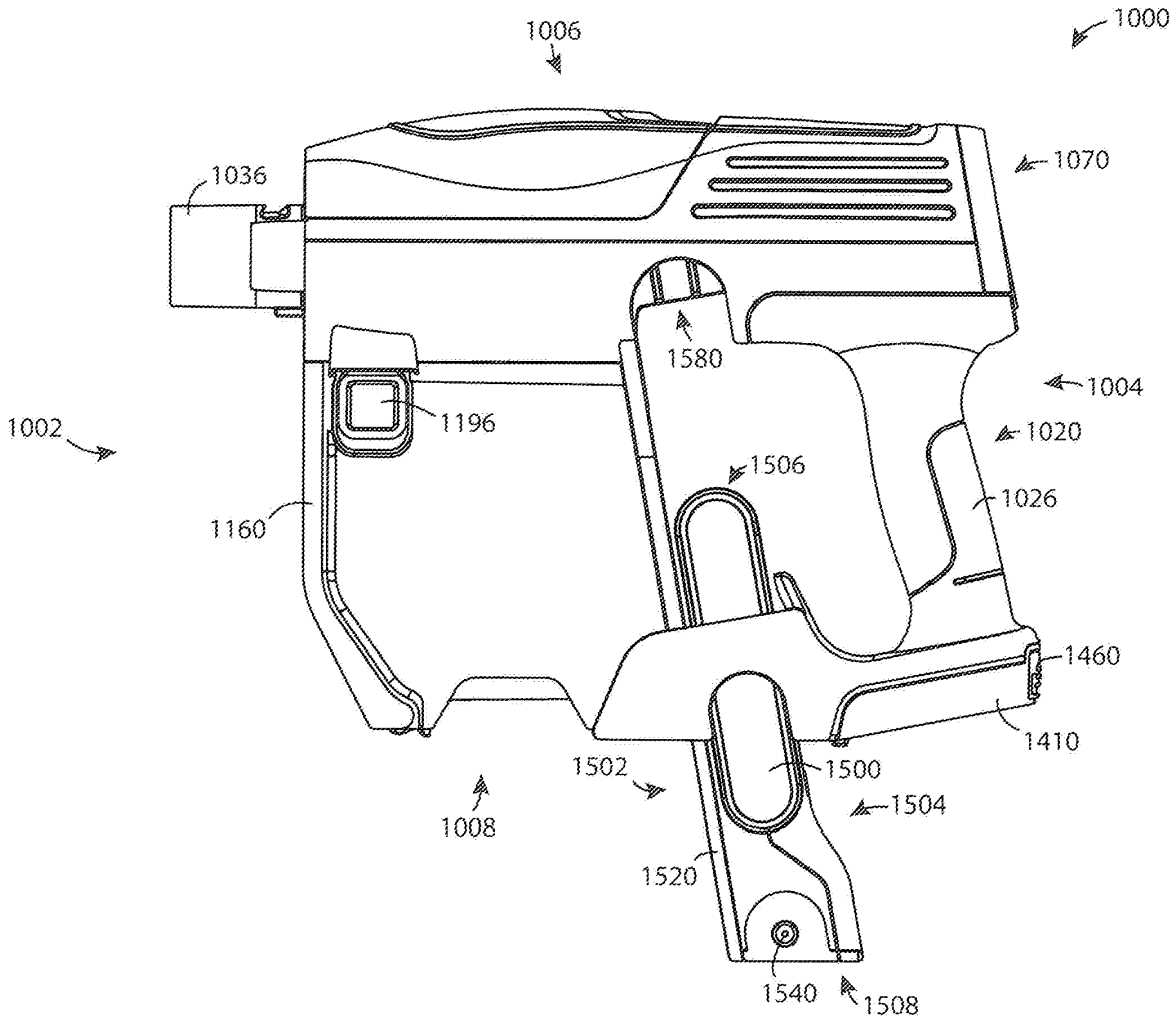

1006
1000
1036
1070
1580
1004
1002
1196
1020
1506
1026
1160
1460
1410
1502
1500
1504
1008
1520
1540
1508

FIG. 28

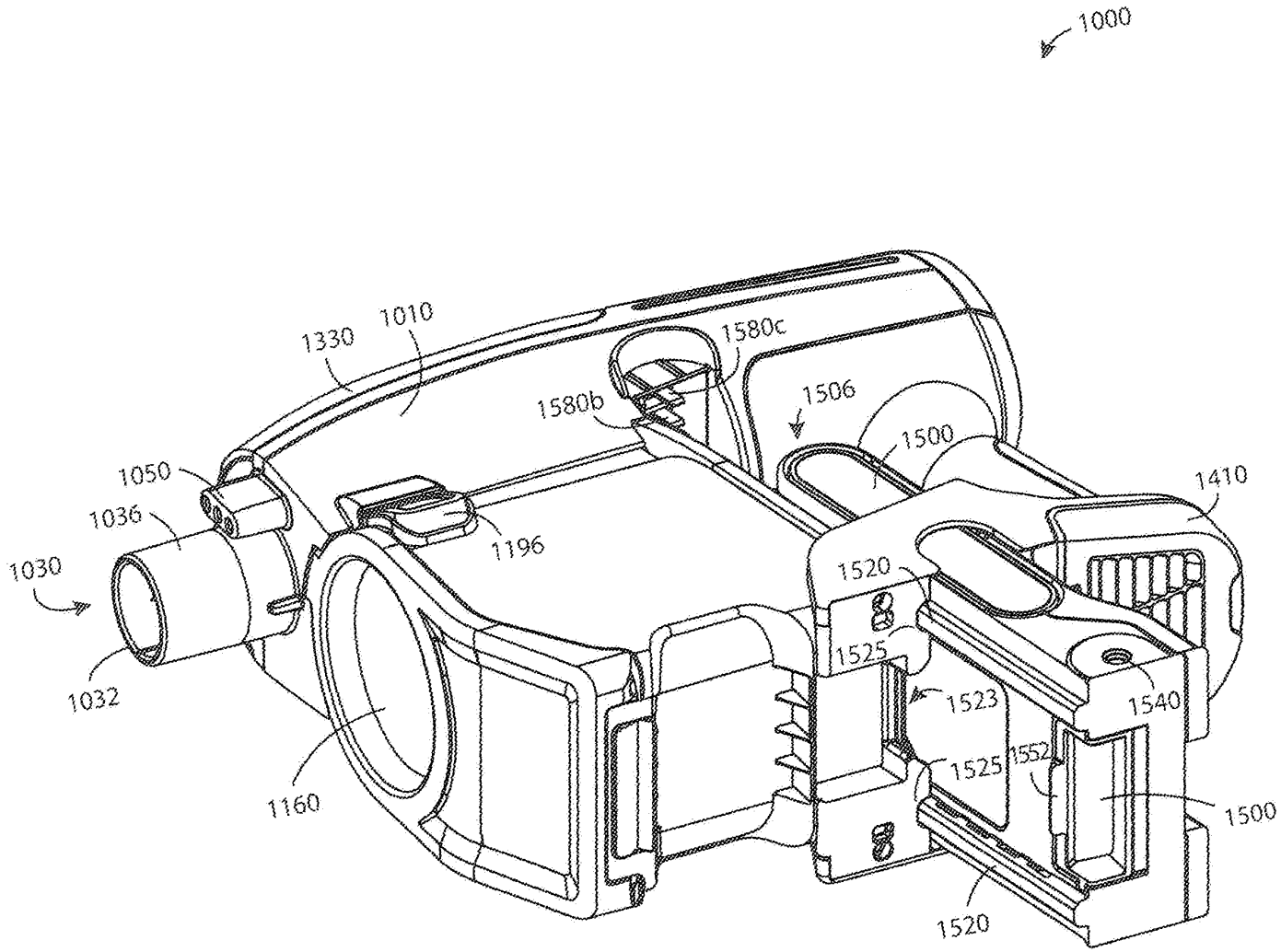


FIG. 29

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Page 54

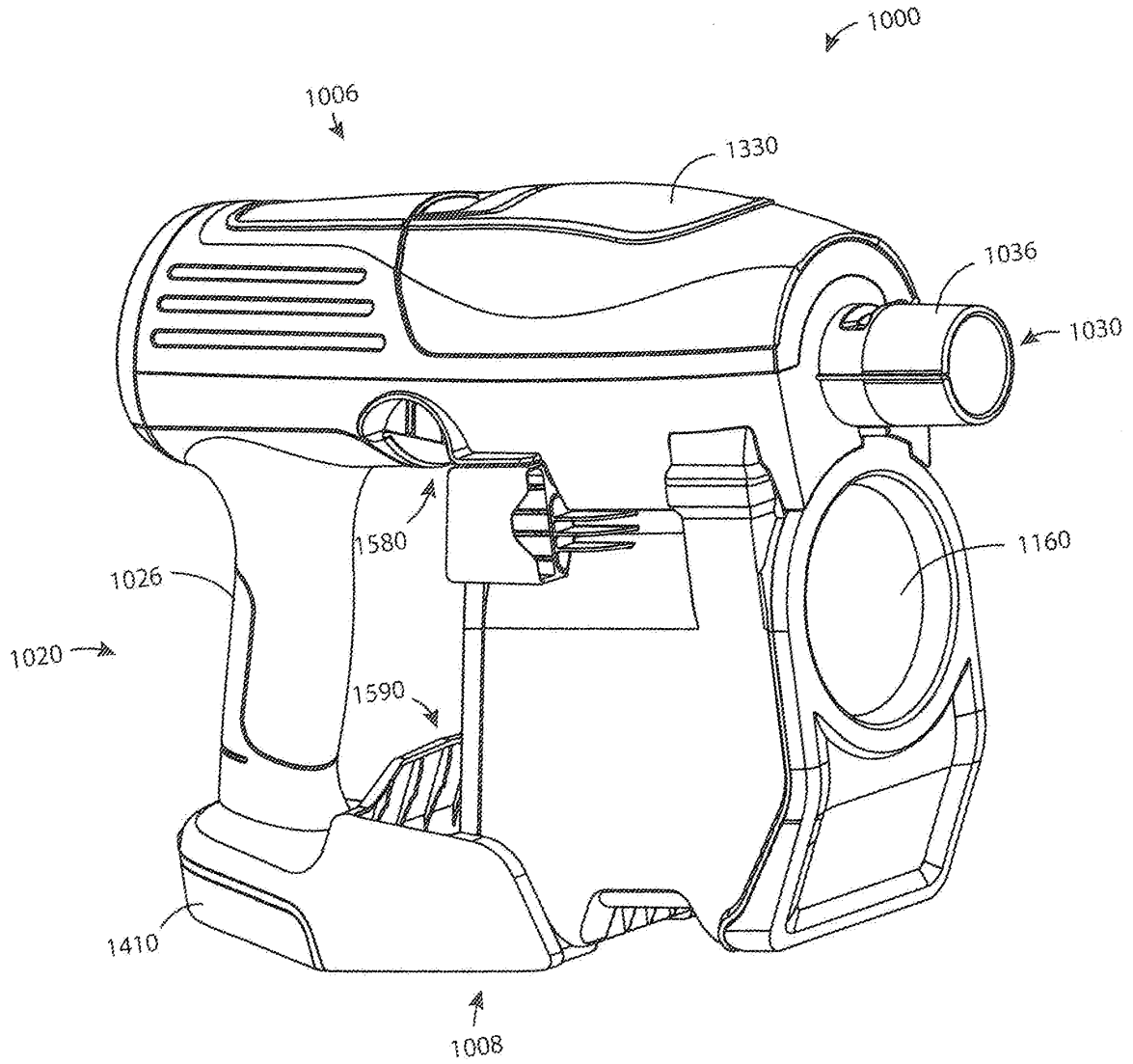


FIG. 30

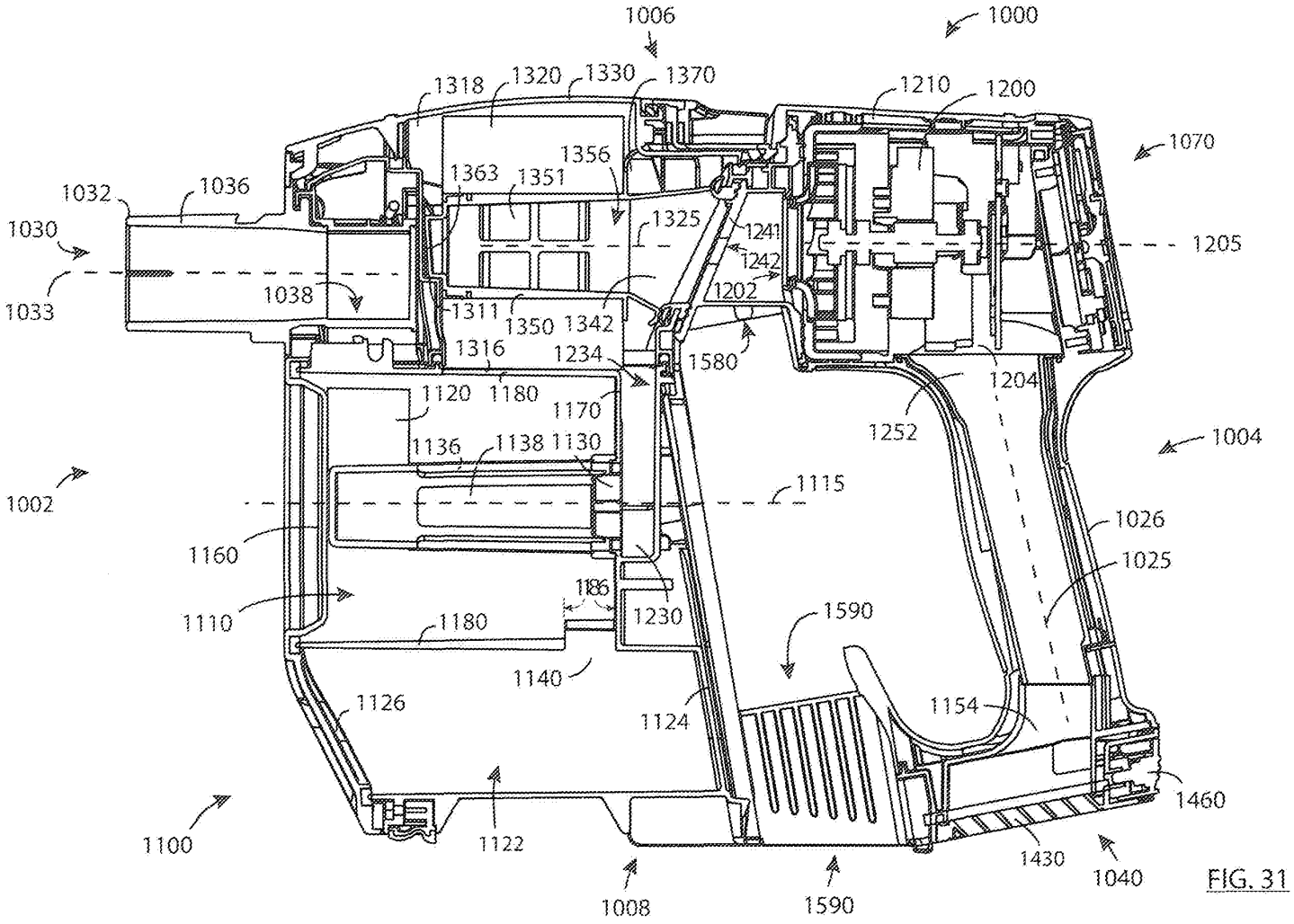

1006
1000
1318
1320
1330
1370
1210
1200
1070
1356
1363
1351
1032
1036
1030
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1241
1205
1242
1033
1038
1202
1311
1350
1342
1316
1234
1580
1204
1120
1180
1170
1252
1004
1136
1138
1130
1002
1115
1026
1160
1025
1186
1110
1230
1590
1180
1140
1126
1124
1154
1460
1100
1122
1430
1040
1008
1590

FIG. 31

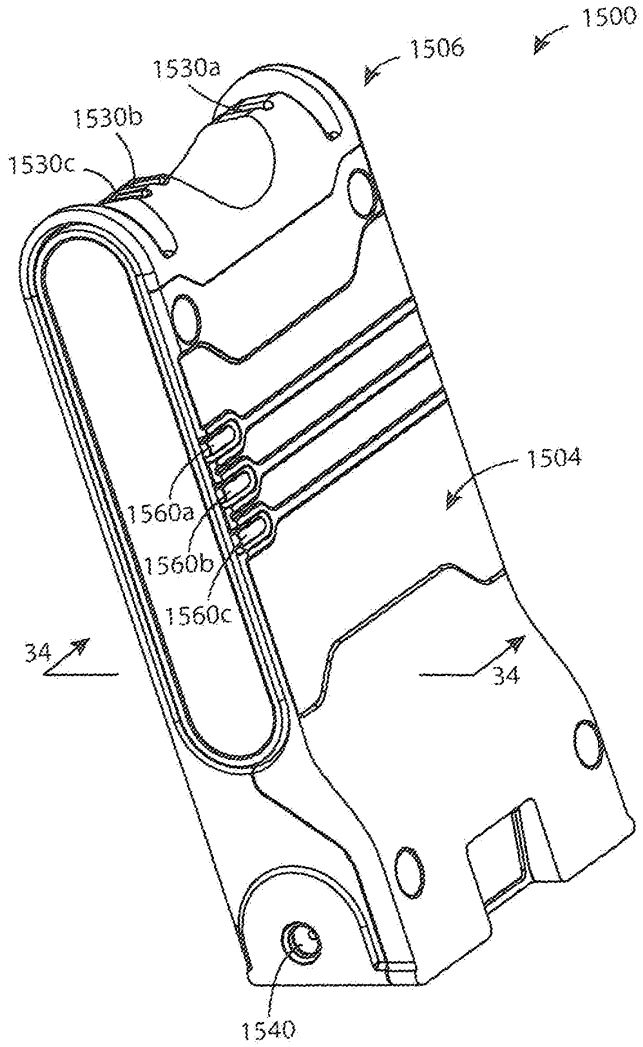

1500
1506
1530a
1530b
1530c
1504
1560a
1560b
1560c
34
34
1540

FIG. 32

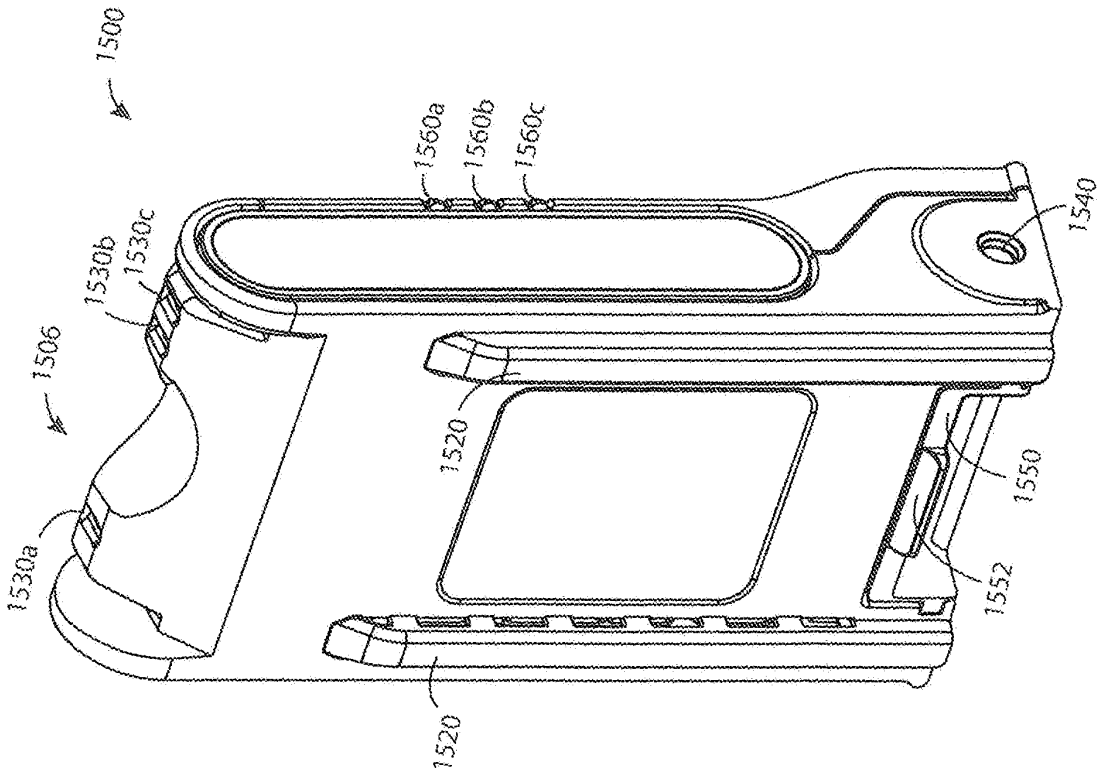

1500
1560a
1560b
1560c
1530b
1530c
1506
1540
1520
1550
1530a
1552
1520

FIG. 33

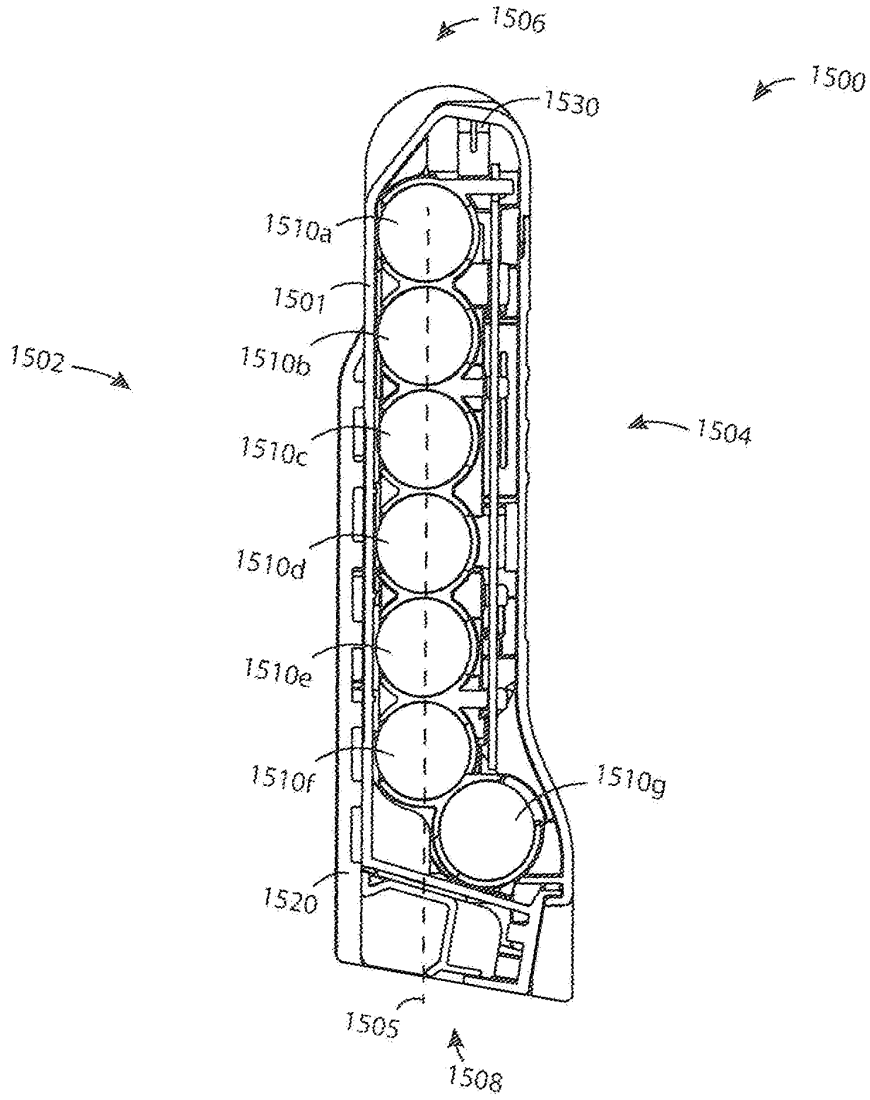


FIG. 34

Dyson Ex1004
Page 59

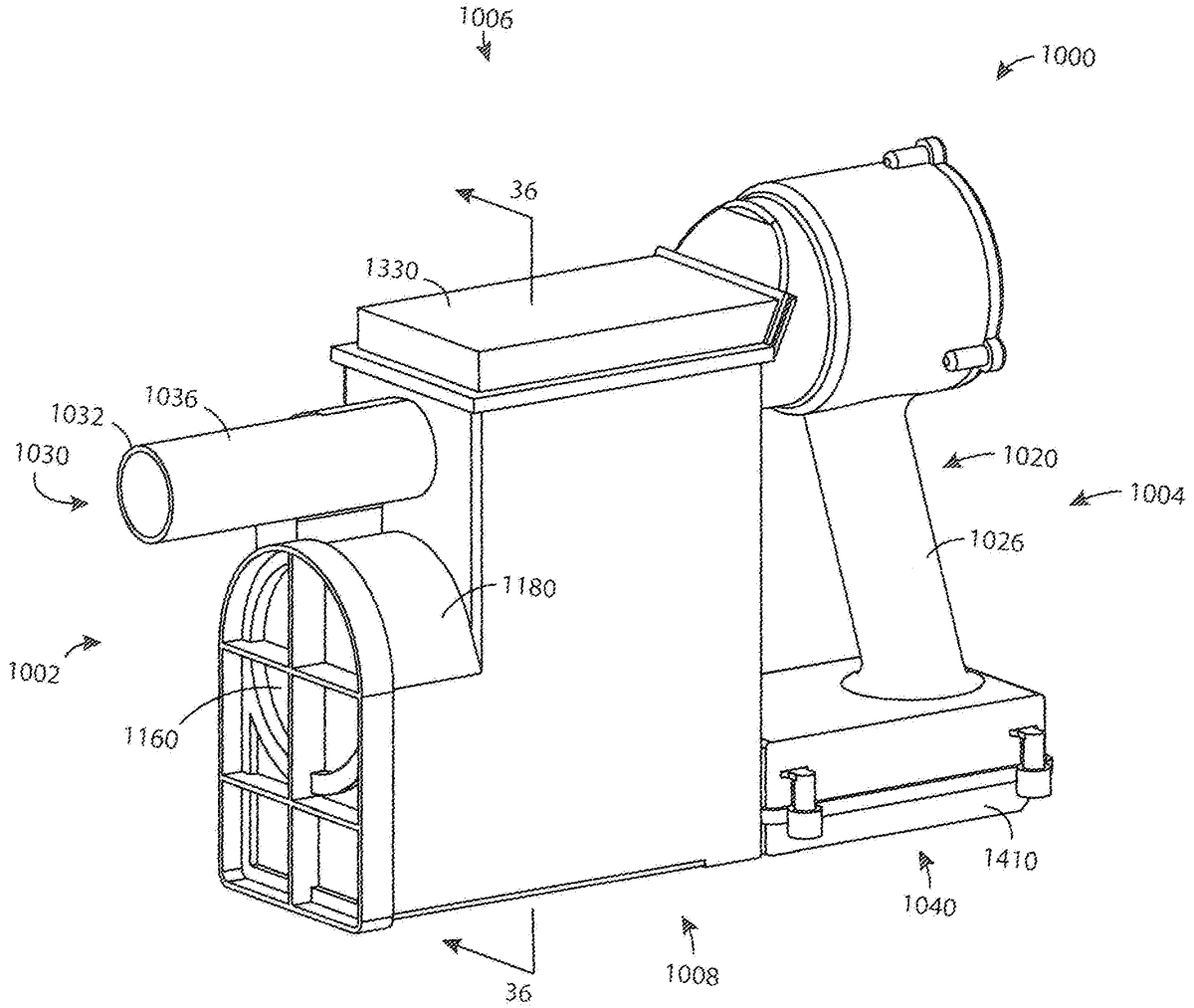

1006
1000
36
1330
1032
1036
1030
1020
1004
1026
1180
1002
1160
1410
1040
1008
36

FIG. 35

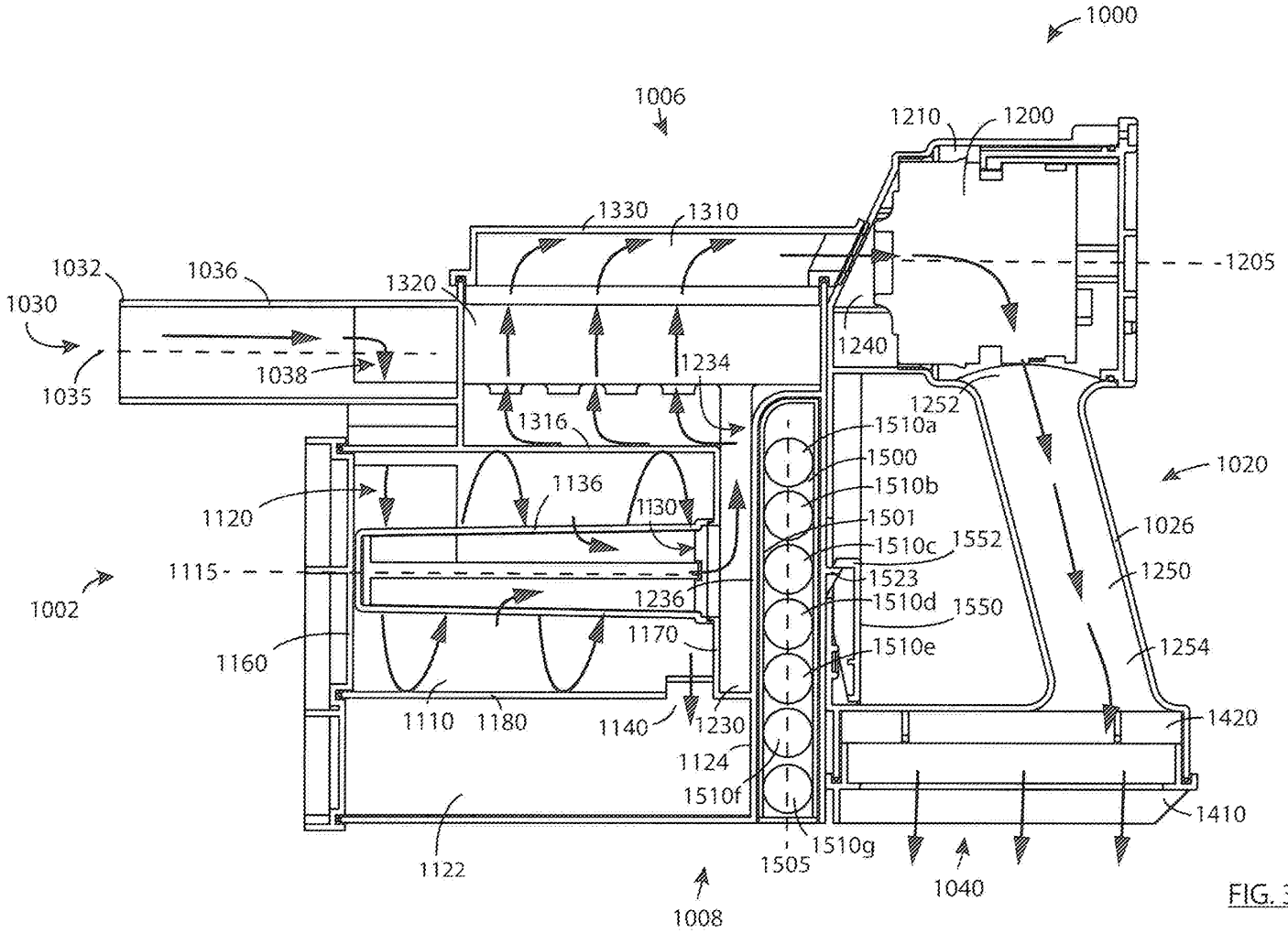

1000
1006
1210
1200
1330
1310
1205
1032
1036
1320
1030
1240
1035
1038
1234
1252
1316
1510a
1500
1020
1136
1510b
1120
1130
1501
1026
1510c
1552
1115
1523
1250
1236
1510d
1550
1002
1170
1254
1160
1510e
1420
1110
1180
1140
1230
1124
1510f
1410
1122
1505
1510g
1040
1008

FIG. 36

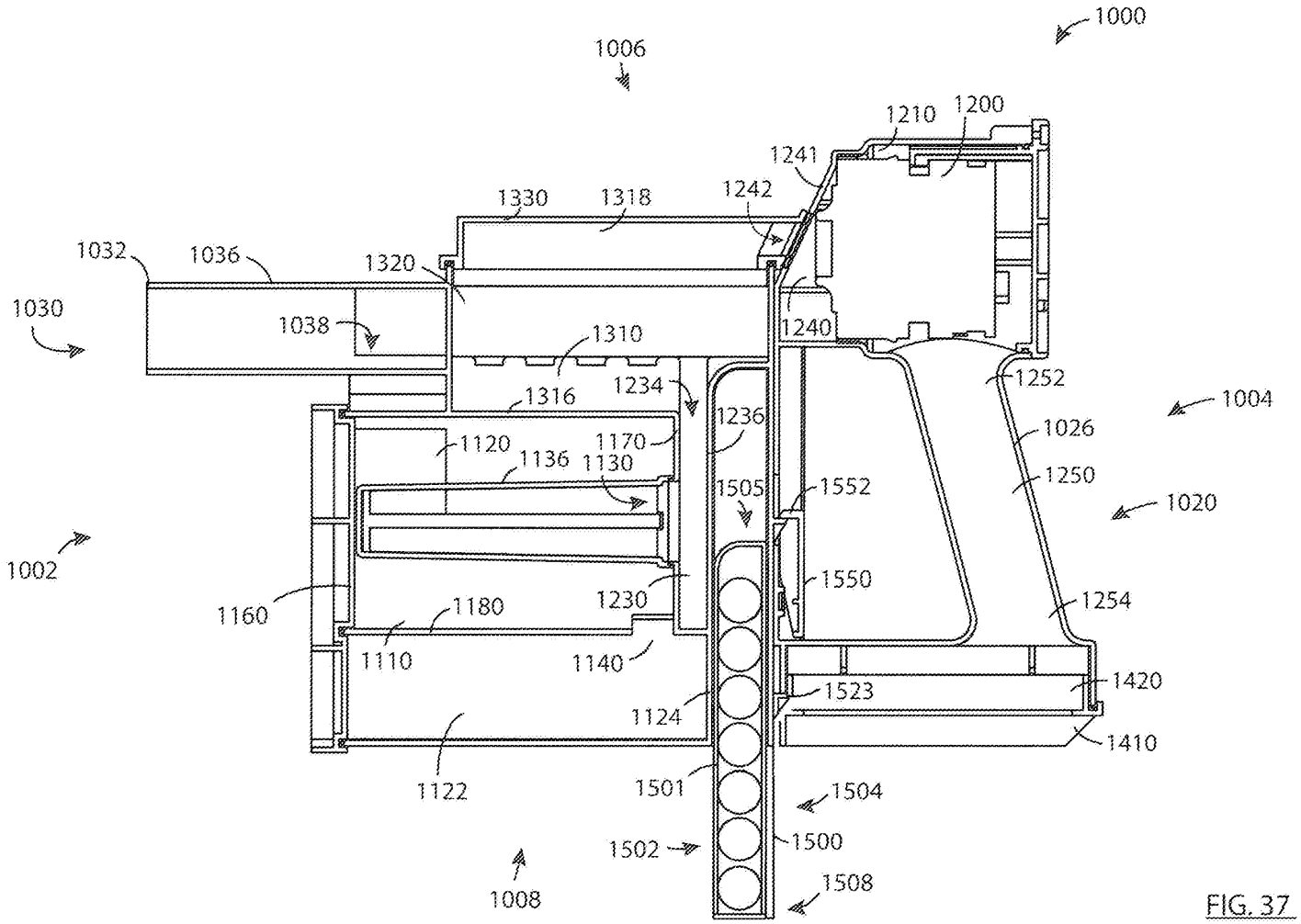

1000
1006
1210
1200
1241
1242
1330
1318
1032
1036
1320
1030
1038
1310
1240
1252
1234
1316
1004
1236
1026
1120
1170
1136
1130
1250
1505
1552
1020
1002
1550
1160
1230
1254
1180
1110
1140
1420
1523
1124
1410
1122
1501
1504
1502
1500
1008
1508

FIG. 37

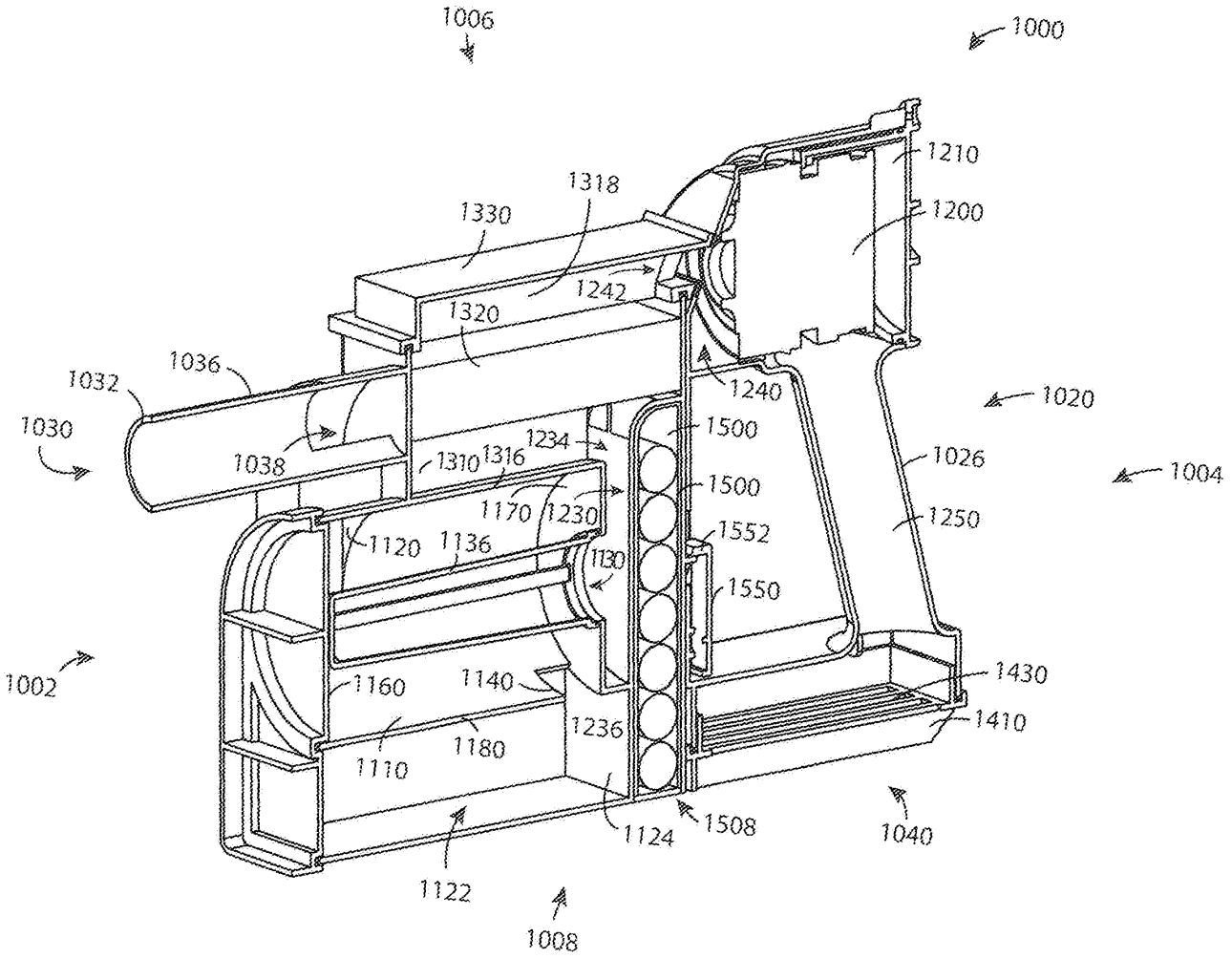

1006
1000
1210
1318
1330
1200
1242
1320
1036
1032
1240
1020
1030
1038
1310
1316
1234
1500
1026
1004
1500
1170
1230
1552
1250
1120
1136
1130
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1002
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1140
1430
1236
1410
1180
1110
1124
1508
1040
1122
1008

FIG. 38

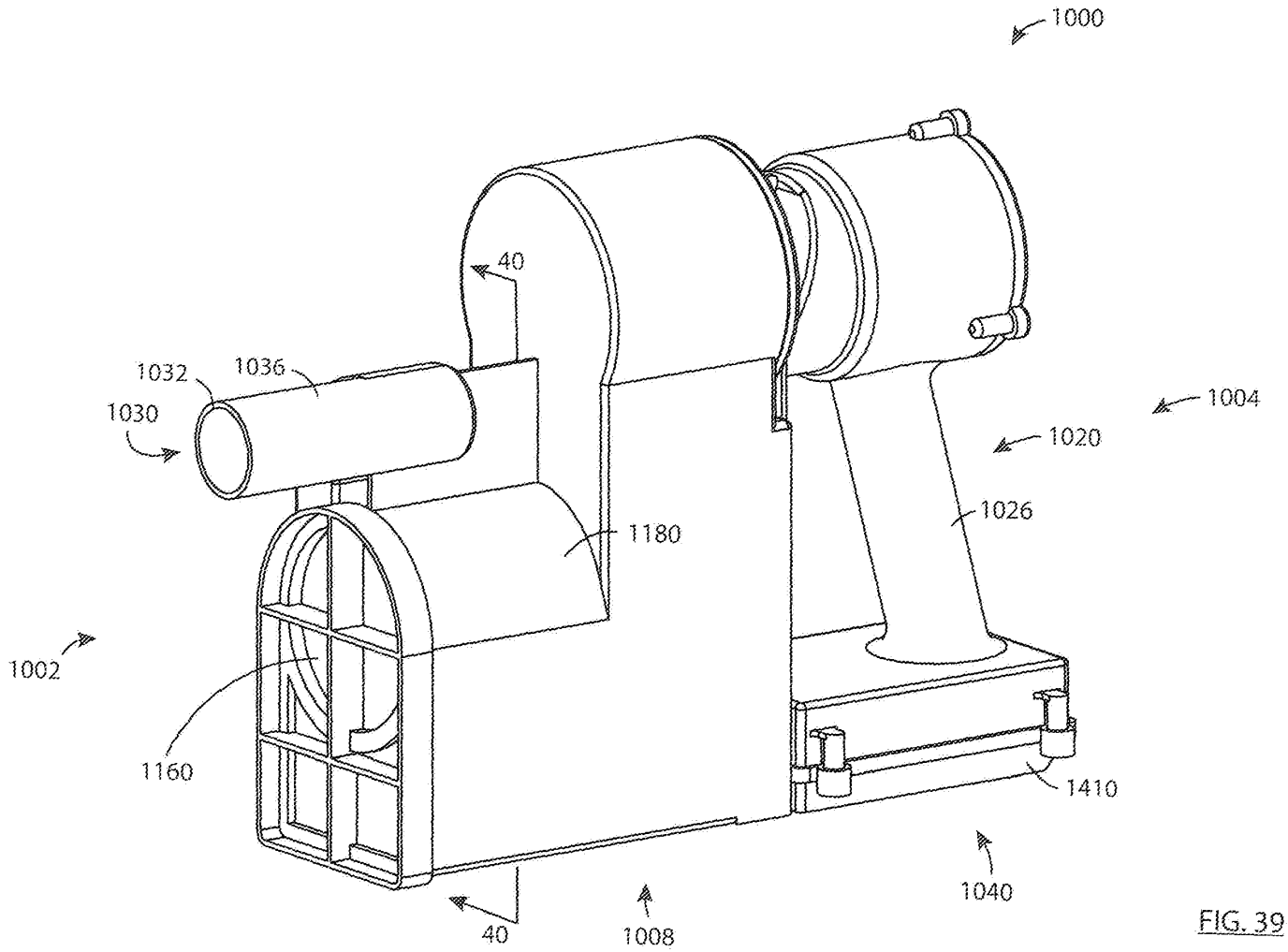

1000
40
1032
1036
1030
1004
1020
1026
1180
1002
1160
1410
1040
40
1008

FIG. 39

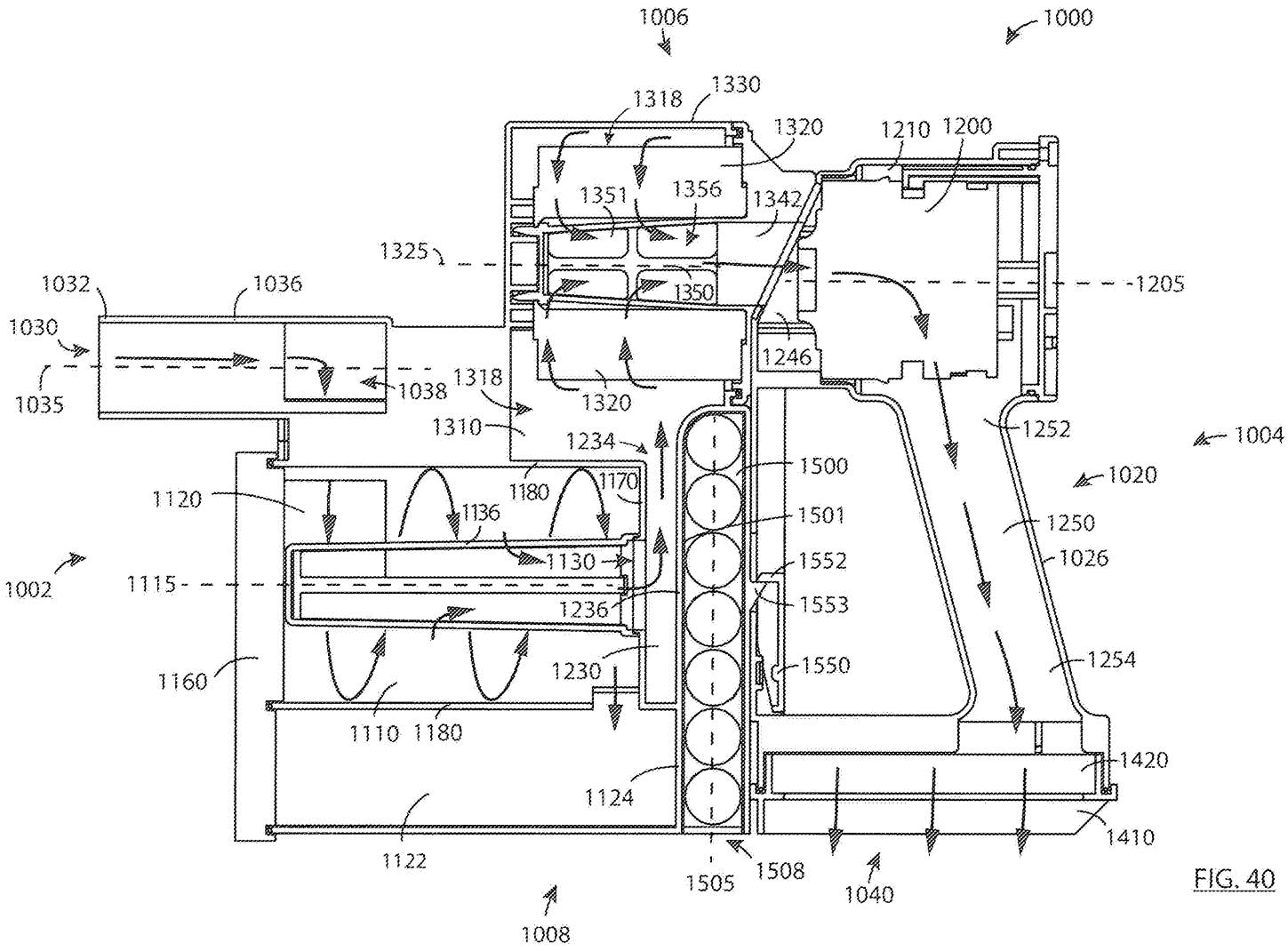

1006
1000
1318
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1320
1210
1200
1351
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1342
1325
1205
1032
1036
1350
1030
1246
1035
1038
1318
1320
1310
1252
1004
1234
1500
1020
1180
1170
1120
1136
1501
1250
1130
1552
1026
1002
1115
1236
1553
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1230
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1254
1110
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1420
1124
1410
1122
1505
1508
1040
1008

FIG. 40

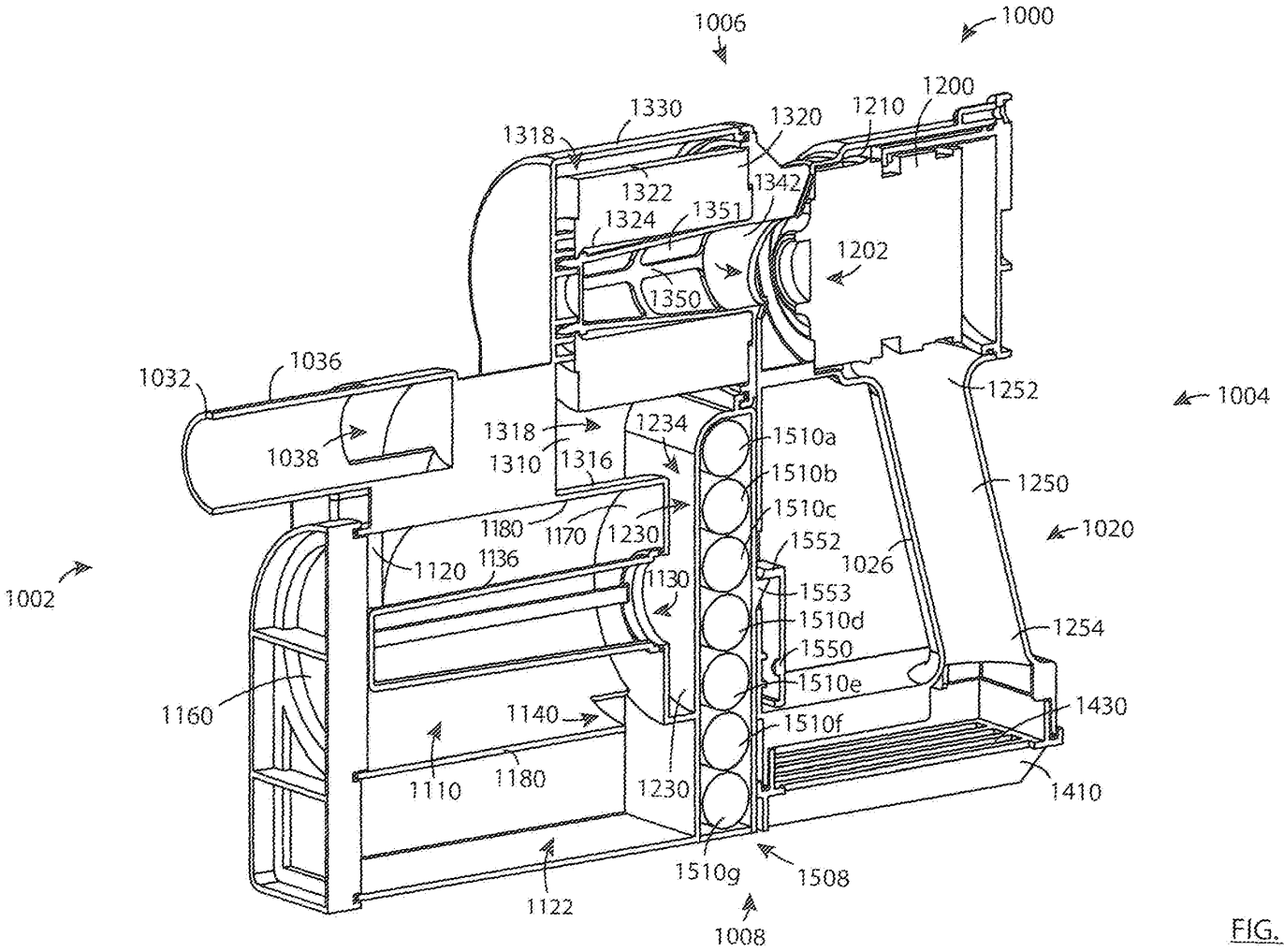

1006
1000
1330
1320
1210
1200
1318
1322
1342
1324
1351
1202
1350
1032
1036
1038
1318
1234
1310
1316
1510a
1510b
1510c
1180
1170
1230
1552
1120
1136
1130
1553
1510d
1550
1510e
1140
1510f
1160
1110
1180
1230
1510g
1508
1122
1008
1002
1004
1252
1250
1020
1026
1254
1430
1410

FIG. 41

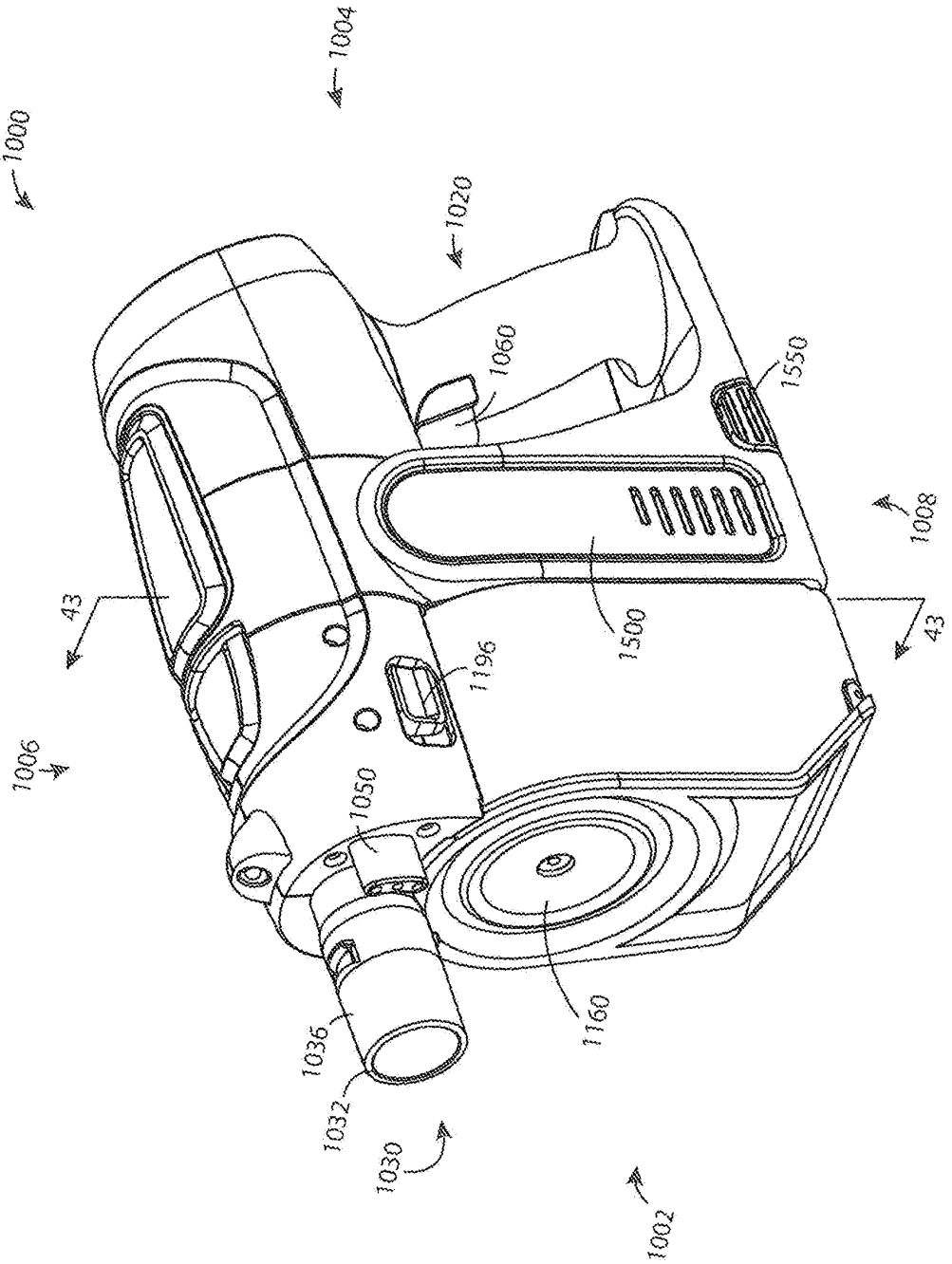

1000
1004
1020
1060
1550
1008
43
43
1500
1196
1006
1050
1036
1160
1032
1030
1002

FIG. 42

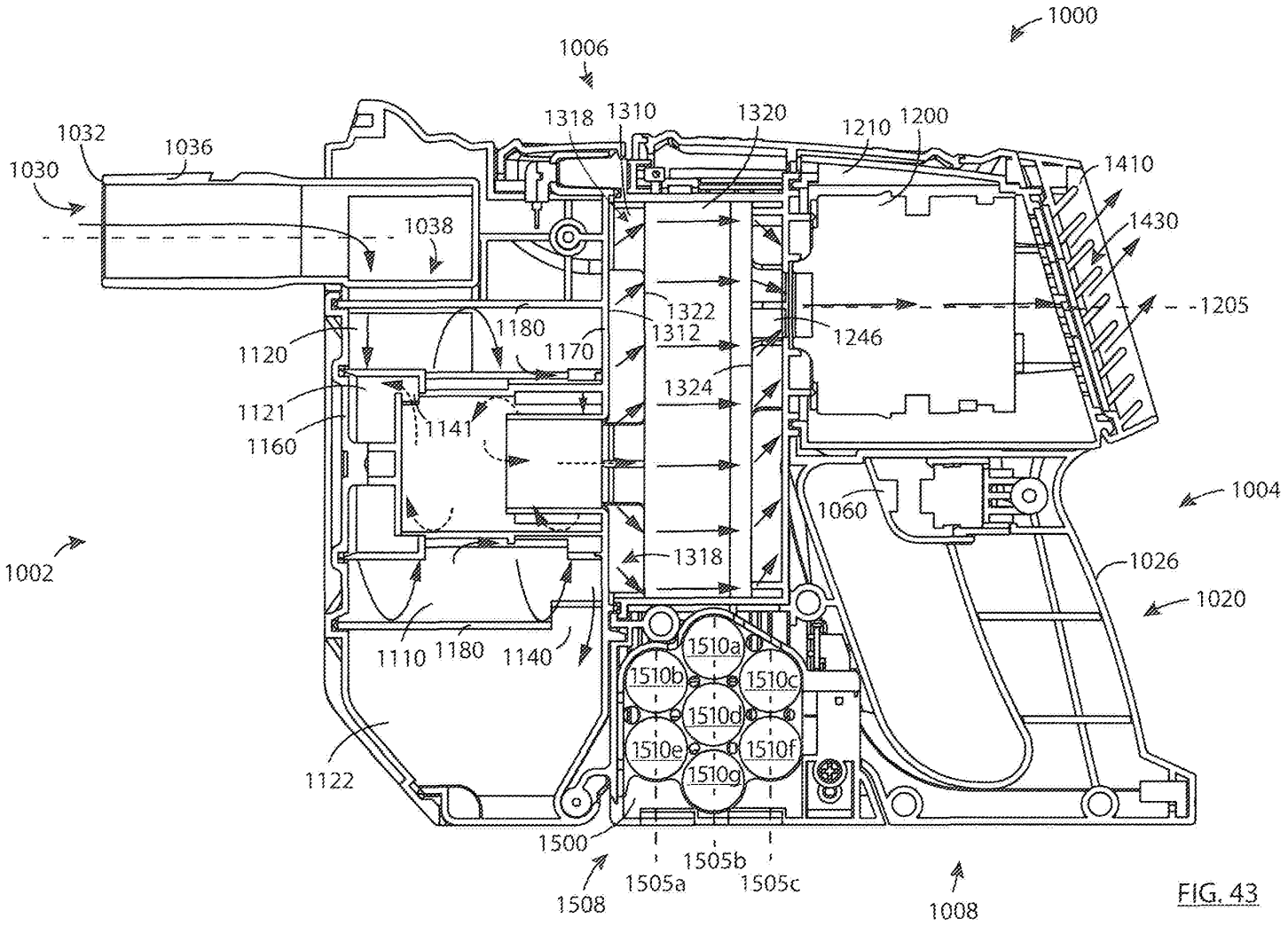

1000
1006
1318
1310
1320
1210
1200
1032
1036
1030
1038
1410
1430
1205
1322
1312
1246
1180
1120
1170
1324
1121
1160
1141
1004
1060
1002
1318
1026
1020
1110
1180
1140
1510a
1510b
1510c
1510d
1510e
1510f
1510g
1122
1500
1505b
1505a
1505c
1508
1008

FIG. 43

1000
1020
1026
1430
1500
1060
1246
1200
1234
1322
1324
1210
1124
1140
1320
1318
1141
1121
1110
1170
1120
1122
1038
1160
1036
1032

FIG. 44

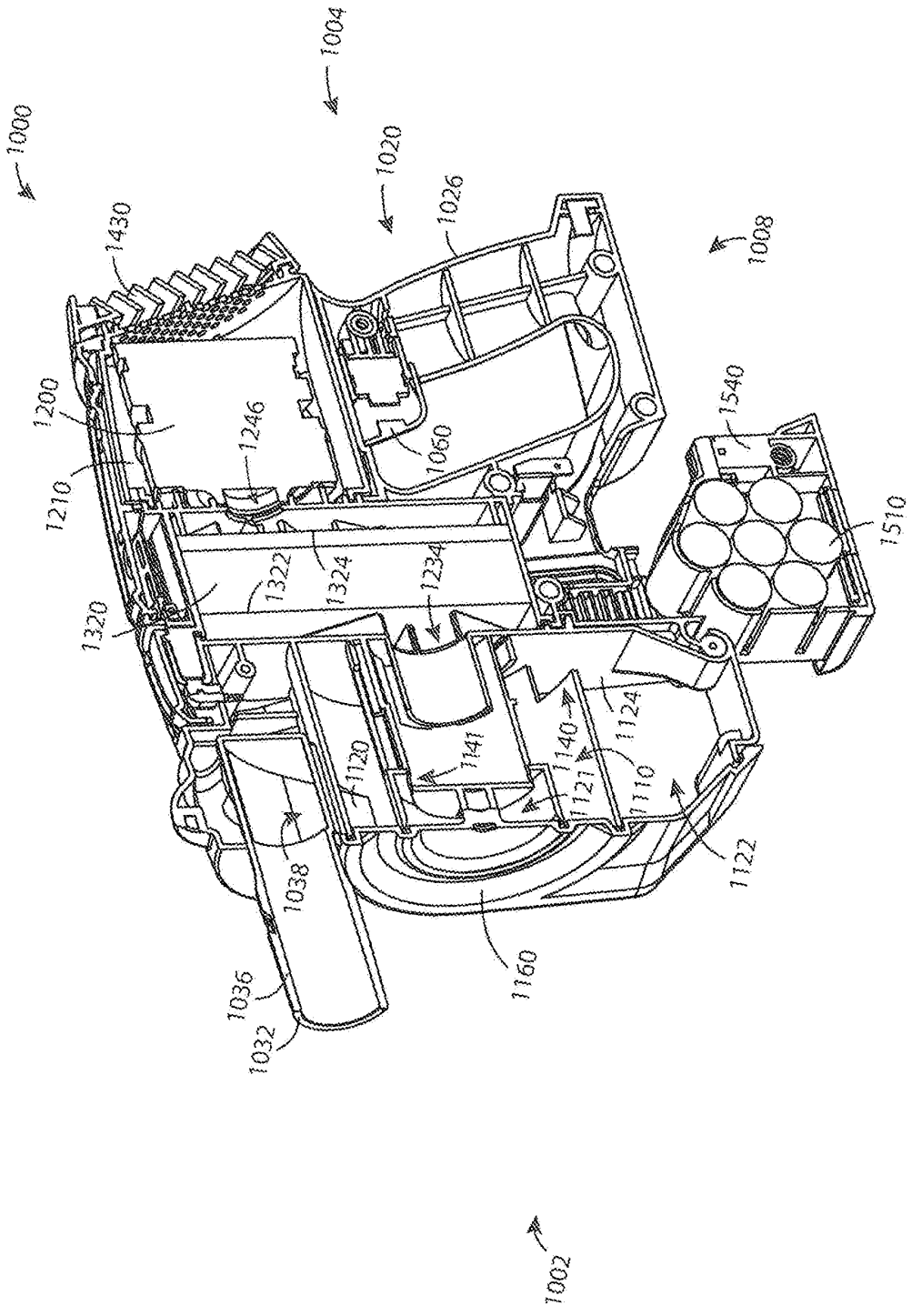

1000
1004
1020
1026
1430
1008
1200
1246
1060
1540
1210
1322
1324
1234
1510
1320
1124
1140
1141
1120
1121
1110
1122
1038
1160
1036
1032
1002

FIG. 45

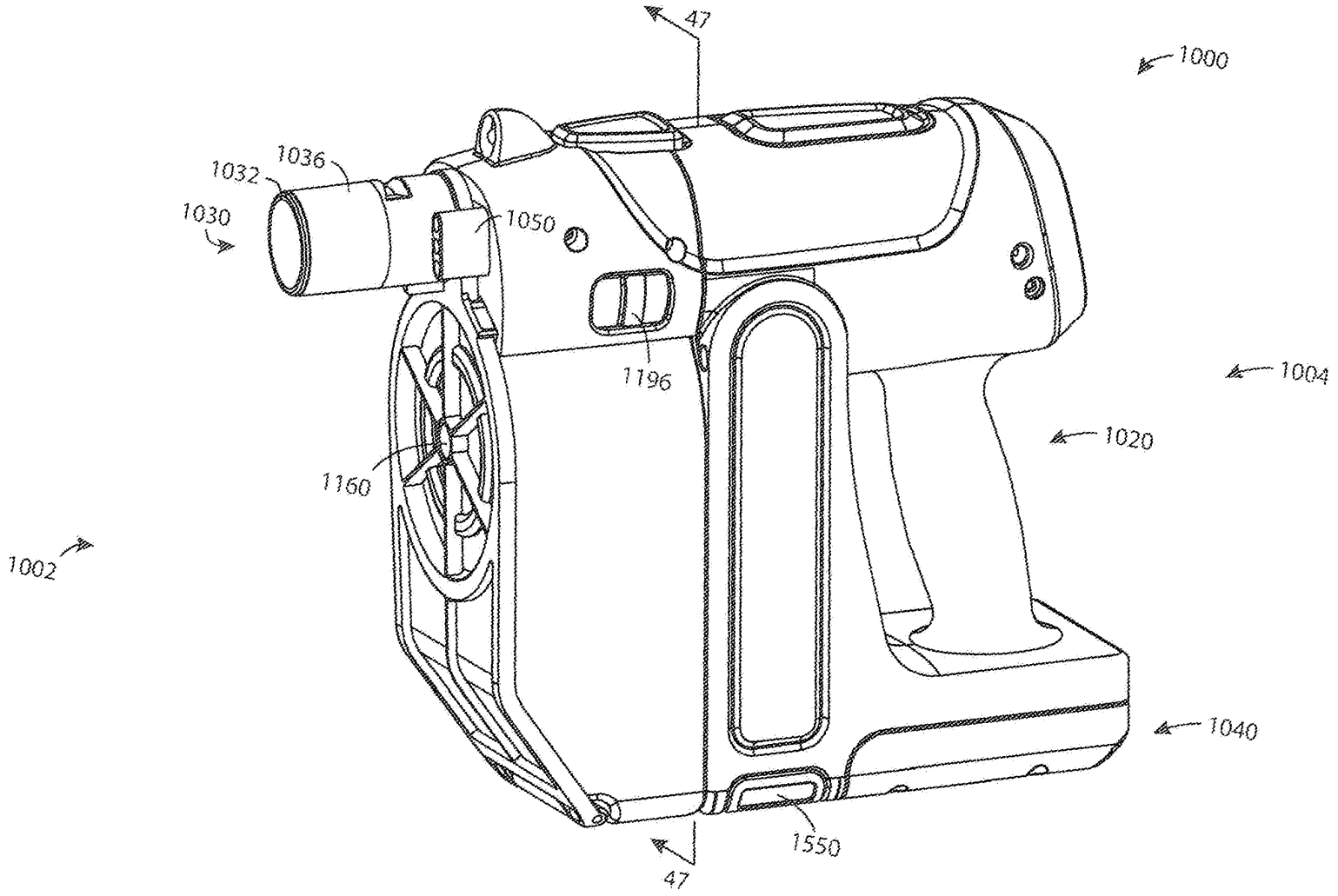


FIG. 46

Dyson Ex1004
Page 71

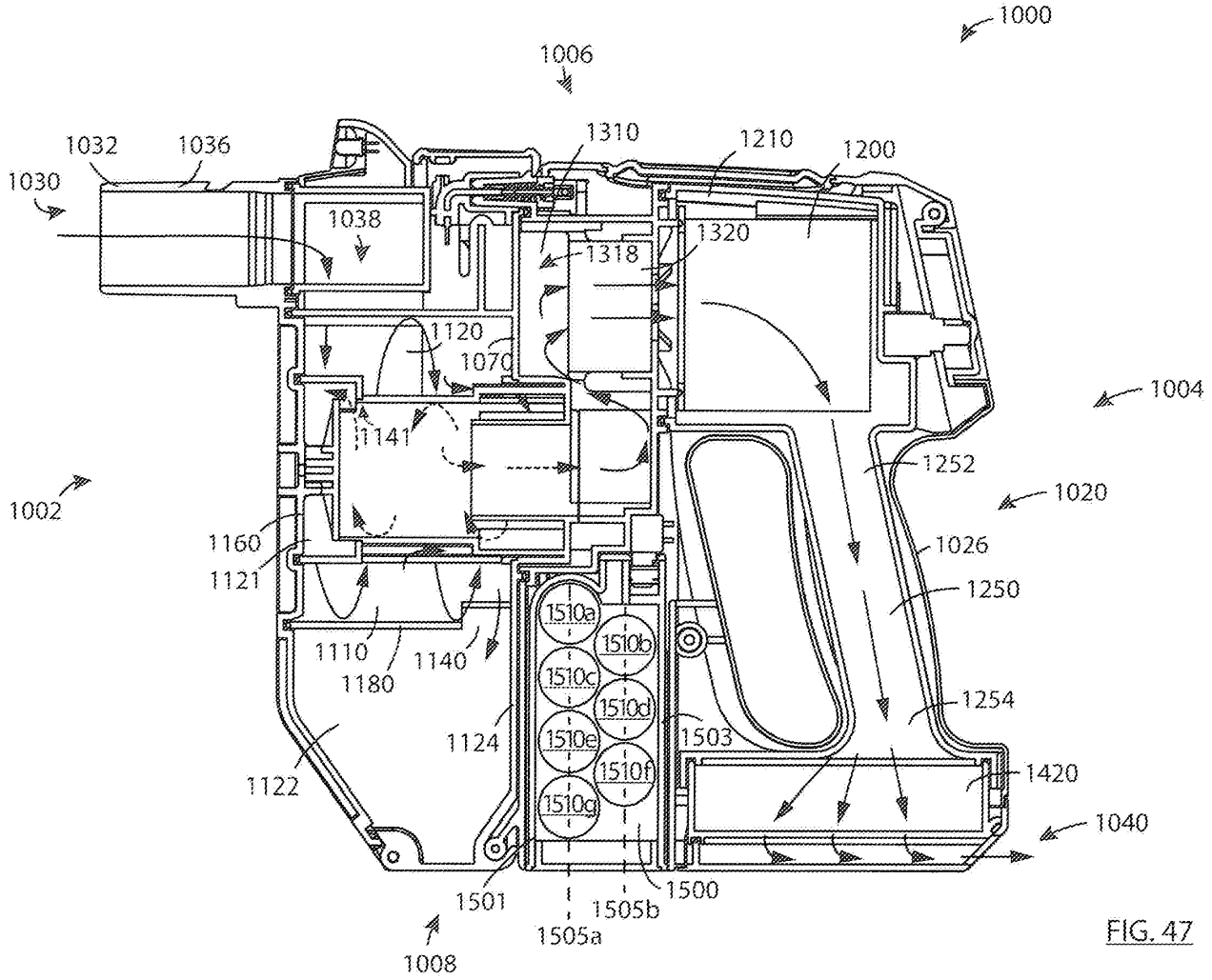

1000
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FIG. 47

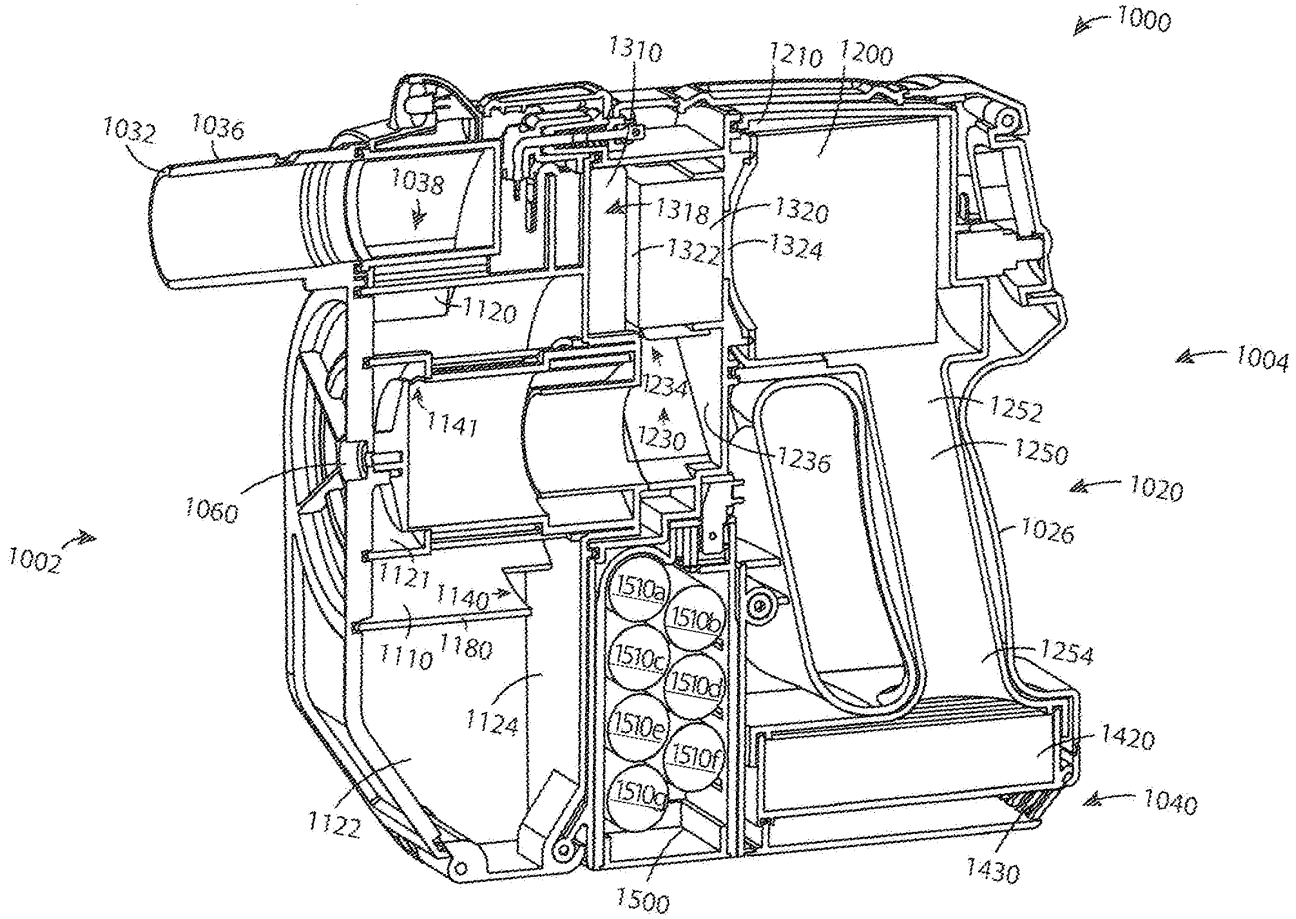

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FIG. 48

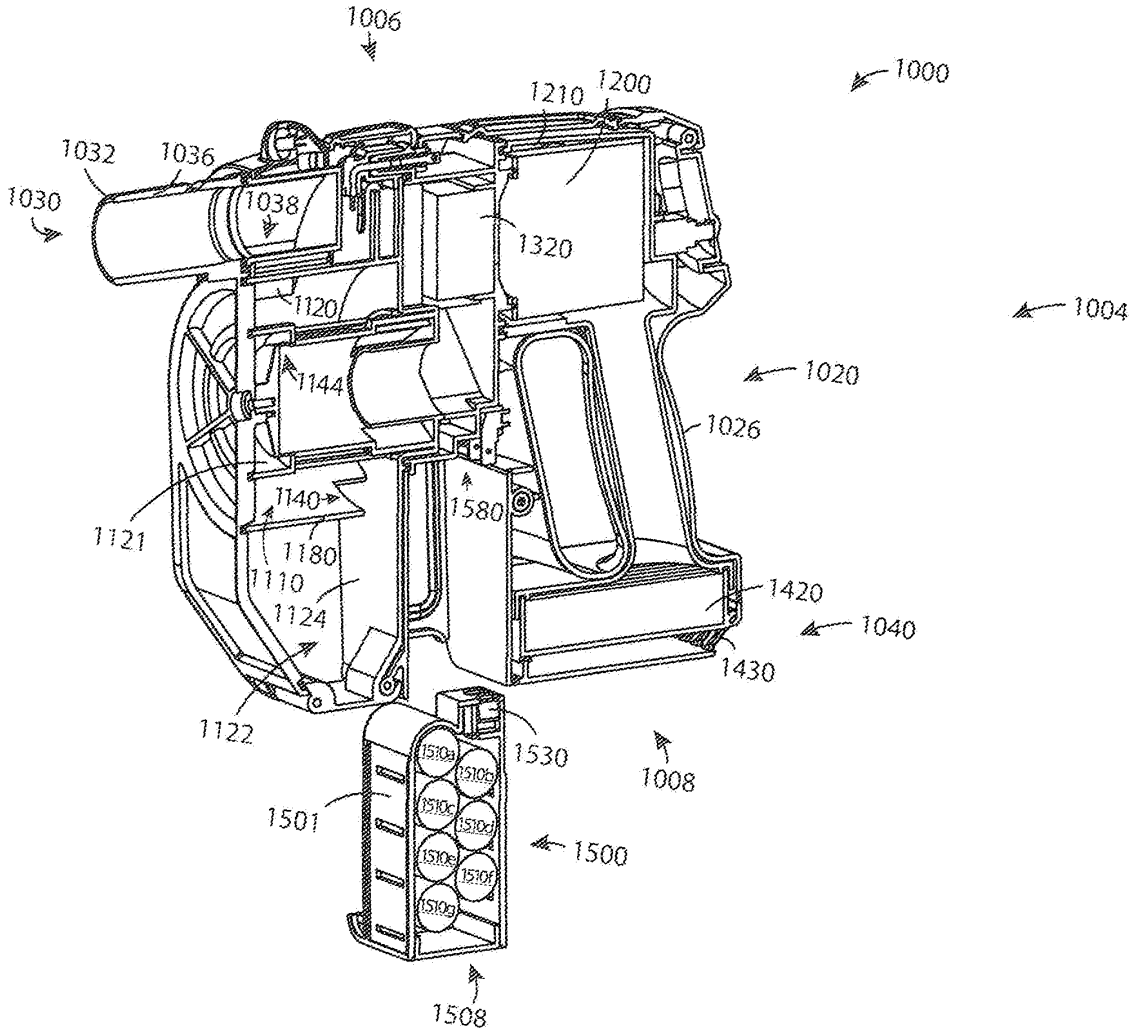

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FIG. 49

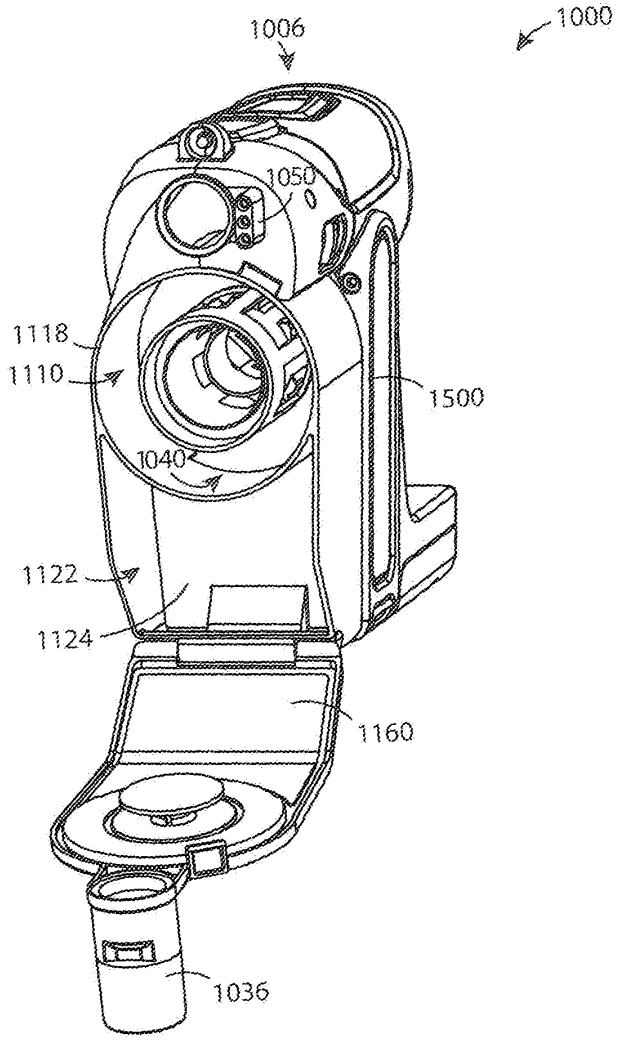


FIG. 50

HANDHELD SURFACE CLEANING APPARATUS

INVENTOR: WAYNE ERNEST CONRAD

CROSS-REFERENCE

[0001] This application is a continuation of United States Patent Application No. 18/346,834, filed on July 4, 2023, which itself is a continuation of United States Patent Application No. 17/342,299, filed on June 8, 2021 and issued as United States Patent No. 11,737,621 on August 29, 2023, which itself is a continuation of United States Patent Application No. 16/900,465, filed on June 12, 2020 and issued as United States Patent No. 11,445,875 on September 20, 2022; which itself is a continuation of United States Patent Application No. 15/642,781, filed July 6, 2017 and issued as United States Patent No. 10,722,086 on July 28, 2020, the disclosure of each of which is incorporated herein by reference.

FIELD

[0002] This disclosure relates generally to surface cleaning apparatus. In a preferred embodiment, the surface cleaning apparatus comprises a portable surface cleaning apparatus, such as a hand vacuum cleaner.

INTRODUCTION

[0003] The following is not an admission that anything discussed below is part of the prior art or part of the common general knowledge of a person skilled in the art.

[0004] Various types of surface cleaning apparatus are known, including upright surface cleaning apparatus, canister surface cleaning apparatus, stick surface cleaning apparatus, central vacuum systems, and hand carriable surface cleaning apparatus such as hand vacuums. Further, various designs for cyclonic hand vacuum cleaners, including battery operated cyclonic hand vacuum cleaners are known in the art.

SUMMARY

[0005] The following introduction is provided to introduce the reader to the more detailed discussion to follow. The introduction is not intended to limit or define any claimed or as yet unclaimed invention. One or more inventions may reside in any combination or sub-combination of the elements or process steps disclosed in any part of this document including its claims and figures.

[0006] In accordance with one aspect of this disclosure, which may be used alone or in combination with any other aspect, a hand vacuum cleaner may be powered by an onboard energy source, such as a battery pack or other energy storage member. The energy storage member may include a chemical battery, such as a rechargeable battery. Some chemical batteries, such as lithium-ion batteries, may produce heat while being discharged (e.g. while supplying power to an electric motor). As disclosed herein, a hand vacuum cleaner may have an airflow path in which air exiting a cyclone chamber impinges on a wall of an energy storage chamber in which one or more energy storage devices are located. By directing relatively high-velocity airflow directly against a wall of such a chamber, cooling of an energy storage member (e.g. battery) located in the chamber may be promoted, particularly during discharge of the battery.

[0007] In accordance with this broad aspect, there is provided a hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a cyclone chamber positioned in the air flow path and having a cyclone air inlet, a cyclone air outlet, and a cyclone axis of rotation;

(c) a suction motor positioned in the air flow path upstream of the clean air outlet; and,

(d) at least one energy storage member positioned in an energy storage chamber having an energy storage chamber wall wherein the cyclone air outlet faces the energy storage chamber wall whereby air exiting the cyclone chamber impinges on the energy storage chamber wall.

[0008] In some embodiments, the cyclone axis of rotation may extend generally in a forward/rearward direction.

[0009] In some embodiments, the at least one energy storage member may comprise a plurality of energy storage members wherein at least some of the plurality of energy storage members are arranged one above another in a generally upwardly extending configuration when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0010] In some embodiments, the energy storage members may be arranged one above another comprise longitudinally extending members each having a longitudinal axis which that extends laterally.

[0011] In some embodiments, the cyclone axis of rotation may intersect a volume defined by the generally upwardly extending configuration of energy storage members.

[0012] In some embodiments, the cyclone axis of rotation may extend generally in a forward/rearward direction.

[0013] In some embodiments, the at least one energy storage member may be removably receivable in the energy storage chamber.

[0014] In some embodiments, the at least one energy storage member may comprise a battery pack that is removably receivable in the energy storage chamber.

[0015] In some embodiments, the air flow path may comprise a portion that extends from the cyclone air outlet to the suction motor and is defined in part by the energy storage chamber wall.

[0016] In some embodiments, the portion of the air flow path may extend generally upwardly from the cyclone air outlet to the suction motor when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0017] In some embodiments, the suction motor may be positioned above the cyclone axis of rotation when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0018] In some embodiments, the portion of the air flow path may extend generally downwardly from the cyclone air outlet to the suction motor when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0019] In some embodiments, the suction motor may be positioned below the cyclone axis of rotation when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0020] In some embodiments, the hand vacuum cleaner may further comprise a handle having a hand grip portion that extends upwardly and forwardly when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner wherein the handle is positioned rearward of the at least one energy storage member.

[0021] In some embodiments, the at least one energy storage member may comprise a plurality of energy storage members wherein at least some of the plurality of energy storage members are arranged one above another in a generally upwardly extending configuration when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0022] In some embodiments, the hand vacuum cleaner may further comprise a finger gap positioned between the handle and the energy storage chamber.

[0023] In accordance with another aspect of this disclosure, which may be used alone or in combination with any other aspect, a hand vacuum cleaner may have a cyclone chamber, a suction motor, and pre-motor filter positioned downstream of the cyclone chamber and upstream of the suction motor. The pre-motor filter may be vertically spaced from the cyclone chamber, and air may travel generally rearwardly from the pre-motor filter to the suction motor. Promoting air to travel in this manner may help reduce or eliminate the need for additional bends or air flow direction changes between an air outlet of the pre-motor filter and the suction motor, thereby reducing backpressure and/or air flow losses through this portion of the hand vacuum cleaner due to a reduction in the number of bends in the air flow path.

[0024] In accordance with this broad aspect, there is provided a hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a cyclone assembly comprising a cyclone chamber positioned in the air flow path and having a cyclone air inlet, a cyclone air outlet, and a cyclone axis of rotation, wherein the cyclone axis of rotation extends generally in a forward/rearward direction;

(c) a pre-motor filter positioned downstream of the cyclone air outlet; and,

(d) a suction motor positioned in the air flow path downstream of the pre-motor filter and upstream of the clean air outlet and having a suction motor axis of rotation;

wherein the pre-motor filter is vertically spaced from the cyclone axis of rotation when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner, and

wherein air travels generally rearwardly from the pre-motor filter to the suction motor.

[0025] In some embodiments, the pre-motor filter may be vertically spaced from the cyclone chamber when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0026] In some embodiments, the cyclone assembly may comprise a sidewall that extends generally parallel to the cyclone axis of rotation and the pre-motor filter may have an upstream surface that extends generally parallel to the sidewall of the cyclone assembly.

[0027] In some embodiments, the pre-motor filter may have a downstream surface that is opposed to the upstream surface, and air may exit the downstream surface in a generally vertical direction when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0028] In some embodiments, the pre-motor filter may at least partially overlie the cyclone chamber.

[0029] In some embodiments, the suction motor axis of rotation may be generally parallel to the cyclone axis of rotation.

[0030] In some embodiments, the suction motor may be positioned rearward of the cyclone chamber and the suction motor axis of rotation may be generally parallel to the cyclone axis of rotation.

[0031] In some embodiments, the pre-motor filter may comprise a generally cylindrical filter having a hollow interior wherein the suction motor has an inlet end that faces towards the hollow interior.

[0032] In some embodiments, the generally cylindrical filter may have an outer upstream surface and an inner downstream surface defining the hollow interior and the suction motor axis of rotation may intersect the hollow interior.

[0033] In some embodiments, the cyclone assembly may comprise a sidewall that extends generally parallel to the cyclone axis of rotation and the upstream surface of the pre-motor filter may extend generally parallel to the sidewall of the cyclone assembly.

[0034] In some embodiments, the pre-motor filter may at least partially overlie the cyclone chamber.

[0035] In some embodiments, the hand vacuum cleaner may further comprise a handle having a hand grip portion that extends upwardly and forwardly when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner wherein the suction motor is located at an upper end of the handle.

[0036] In some embodiments, the suction motor may be positioned rearward of the cyclone chamber.

[0037] In some embodiments, the suction motor may be located at an upper end of the hand grip portion.

[0038] Also in accordance with this broad aspect, there is provided a hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a cyclone assembly comprising a cyclone chamber positioned in the air flow path and having a cyclone air inlet, a cyclone air outlet and a cyclone axis of rotation, wherein the cyclone axis of rotation extends generally in a forward/rearward direction;

(c) a generally cylindrical pre-motor filter positioned downstream of the cyclone air outlet and having a hollow interior; and,

(d) a suction motor positioned in the air flow path downstream of the pre-motor filter and upstream of the clean air outlet and having a suction motor

axis of rotation that is generally parallel to the cyclone axis of rotation, wherein the suction motor has an inlet end that faces towards the hollow interior.

[0039] In some embodiments, the generally cylindrical filter may have an outer upstream surface and an inner downstream surface defining the hollow interior and the suction motor axis of rotation may intersect the hollow interior.

[0040] In some embodiments, the cyclone assembly may comprise a sidewall that extends generally parallel to the cyclone axis of rotation and the upstream surface of the pre-motor filter may extend generally parallel to the sidewall of the cyclone assembly.

[0041] In some embodiments, the pre-motor filter may at least partially overlie the cyclone chamber.

[0042] In accordance with another aspect of this disclosure, which may be used alone or in combination with any other aspect, it may be desirable for a hand vacuum cleaner to have a compact overall form, for example so it can be maneuvered around and/or between objects when being carried by a user while cleaning one or more surfaces. A compact form may also improve the ergonomics of the hand vacuum (e.g. the perceived balance or 'hand feel' when carried by a user). Typically, the suction motor and energy storage members (e.g. one or more batteries) may be among the heavier (if not the heaviest) individual components of the hand vacuum cleaner. While positioning the suction motor and energy storage members adjacent to each other may promote a compact design, such an arrangement may promote an undesirable concentration of mass relative to a handle of the hand vacuum cleaner. Positioning the suction motor at an upper end of a forwardly-inclined handle and rearward of at least some of the energy storage members, particularly when some or all of the energy storage members are forward of the handle, may help distribute the weight of the motor and batteries, and may affect the hand feel and/or perceived balance of the hand vacuum.

[0043] In accordance with this broad aspect, there is provided a hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a handle having a hand grip portion that extends upwardly and forwardly when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner;

(c) a cyclone chamber positioned in the air flow path and having a cyclone air inlet, a cyclone air outlet, and a cyclone axis of rotation;

(d) at least one energy storage member positioned in an energy storage chamber; and,

(e) a suction motor positioned in the air flow path upstream of the clean air outlet, wherein the suction motor is located at an upper end of the handle and rearward of the at least one energy storage member when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0044] In some embodiments, the suction motor may be located at an upper end of the hand grip portion.

[0045] In some embodiments, the at least one energy storage member may comprise a plurality of energy storage members wherein at least some of the plurality of energy storage members may be arranged one above another in a generally upwardly extending configuration when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner and the suction motor may be positioned rearward of at least some of the energy storage members when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0046] In some embodiments, the cyclone axis of rotation may intersect a volume defined by the generally upwardly extending configuration of energy storage members.

[0047] In some embodiments, the cyclone axis of rotation may extend generally in a forward/rearward direction.

[0048] In some embodiments, the at least one energy storage member may comprise a plurality of energy storage members wherein at least some of the plurality of energy storage members may be arranged one above another in a generally upwardly extending configuration when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner and the suction motor may be positioned rearward of an upper end of the plurality of energy storage members when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0049] In some embodiments, the cyclone axis of rotation may extend generally in a forward/rearward direction.

[0050] In some embodiments, the suction motor may be positioned above the cyclone axis of rotation when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0051] In some embodiments, the hand vacuum may further comprise a pre-motor filter positioned in the air flow path downstream of the cyclone chamber, the pre-motor filter comprising a generally cylindrical filter having a hollow interior wherein the suction motor has an inlet end that faces towards the hollow interior.

[0052] In some embodiments, the generally cylindrical filter may have an outer upstream surface and an inner downstream surface defining the hollow interior and the suction motor axis of rotation may intersect the hollow interior.

[0053] In some embodiments, the cyclone chamber may comprise a sidewall that extends generally parallel to the cyclone axis of rotation and the

upstream surface of the pre-motor filter may extend generally parallel to the sidewall of the cyclone chamber.

[0054] In some embodiments, the pre-motor filter may at least partially overlie the cyclone chamber.

[0055] In some embodiments, the dirty air inlet may have a dirty air inlet axis that extends generally rearwardly and may be positioned above the cyclone chamber.

[0056] In some embodiments, the dirty air inlet axis may intersect a volume defined by a pre-motor filter housing.

[0057] In some embodiments, the dirty air inlet axis may intersect the suction motor.

[0058] In some embodiments, the hand vacuum may further comprise a pre-motor filter positioned in the air flow path downstream of the cyclone chamber, the pre-motor filter comprising a generally cylindrical filter having a hollow interior wherein the dirty air inlet has a dirty air inlet axis that extends generally rearwardly and intersects the hollow interior.

[0059] In some embodiments, the dirty air inlet axis may intersect the suction motor.

[0060] In accordance with another aspect of this disclosure, which may be used alone or in combination with any other aspect, a hand vacuum cleaner may have an energy storage member (e.g. a battery pack that includes one or more battery cells) that is inclined so that a portion of a dirt collection region may be located below a portion of the energy storage member. Providing at least some vertical overlap between an energy storage member and a dirt collection region may help provide a relatively larger dirt chamber capacity while helping to reduce the overall size of the hand vacuum. Also, as the energy storage members (e.g. one or more batteries) may typically be among the heavier individual components

of the hand vacuum cleaner, such a configuration may help provide a compact overall design, while distributing the weight of the batteries to promote a desirable hand feel and/or perceived balance of the hand vacuum.

[0061] In accordance with this broad aspect, there is provided a hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a cyclone assembly positioned in the air flow path and having a cyclone assembly air inlet, a cyclone assembly air outlet, a dirt collection region, and a cyclone axis of rotation;

(c) a suction motor positioned in the air flow path upstream of the clean air outlet; and,

(d) a longitudinally extending battery pack wherein the battery pack extends upwardly and forwardly when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner,

wherein a portion of the dirt collection region is located below a portion of the battery pack.

[0062] In some embodiments, the dirt collection region may have an upper portion and a lower portion when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner and the lower portion of the dirt collection region may be positioned rearwardly of the upper portion of the dirt collection region.

[0063] In some embodiments, a rear wall of the dirt collection chamber may be at a first angle to a vertical axis.

[0064] In some embodiments, the battery pack may be located in a battery pack chamber, the battery pack chamber having a front wall that is at a second angle to a vertical axis.

[0065] In some embodiments, the first and second angles may be about the same.

[0066] In some embodiments, the battery pack may extend generally linearly.

[0067] In some embodiments, the battery pack may be removably receivable in the hand vacuum cleaner.

[0068] In some embodiments, the battery pack may be removably receivable in the hand vacuum cleaner, a rear wall of the dirt collection chamber may be at a first angle to a vertical axis and the battery pack may have a front wall that is at a second angle to a vertical axis, wherein the first and second angles may be about the same.

[0069] In some embodiments, the dirt collection region may be at a lower end of the hand vacuum cleaner and the battery pack may be slidably insertable into the lower end of the hand vacuum cleaner.

[0070] Also in accordance with this broad aspect, there is provided a hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a cyclone assembly positioned in the air flow path and having a cyclone assembly air inlet, a cyclone assembly air outlet, a dirt collection region, and a cyclone axis of rotation;

(c) a suction motor positioned in the air flow path upstream of the clean air outlet; and,

(d) a plurality of energy storage members arranged one above another in a generally upwardly extending configuration when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner, the configuration having a forward side and a rearward side,

wherein a lower end of the forward side of the configuration of energy storage members is positioned rearward of an another portion of the forward side of the configuration when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner, and,

wherein a portion of the dirt collection region is located below at least a portion of one of the energy storage members.

[0071] In some embodiments, the dirt collection region may have an upper portion and a lower portion when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner and the lower portion of the dirt collection region may be positioned rearwardly of the upper portion of the dirt collection region.

[0072] In some embodiments, a rear wall of the dirt collection chamber may be at a first angle to a vertical axis.

[0073] In some embodiments, the energy storage members may be located in an energy storage member chamber, and the energy storage member chamber may have a front wall that is at a second angle to a vertical axis.

[0074] In some embodiments, the first and second angles may be about the same.

[0075] In some embodiments, the configuration of energy storage members may extend generally linearly.

[0076] In some embodiments, the energy storage members may be removably receivable in the hand vacuum cleaner.

[0077] In some embodiments, the energy storage members may be removably receivable in the hand vacuum cleaner, a rear wall of the dirt collection chamber may be at a first angle to a vertical axis and the configuration of energy storage members may have a front side that is at a second angle to a vertical axis, wherein the first and second angles may be about the same.

[0078] In some embodiments, the dirt collection region may be at a lower end of the hand vacuum cleaner and the energy storage members may be slidably insertable into the lower end of the hand vacuum cleaner.

[0079] Also in accordance with this broad aspect, there is provided a hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a cyclone assembly positioned in the air flow path and having a cyclone assembly air inlet, a cyclone assembly air outlet, a dirt collection region, and a cyclone axis of rotation;

(c) a suction motor positioned in the air flow path upstream of the clean air outlet; and,

(d) a power pack that extends upwardly and forwardly when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner,

wherein the dirt collection region has a rear wall that extends upwardly and forwardly when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner whereby at least a portion of the dirt collection region is below at least a portion of the power pack.

[0080] In some embodiments, the dirt collection region may be at a lower end of the hand vacuum cleaner and the rear wall of the dirt collection chamber may be located proximate a front side of the power pack.

[0081] In accordance with another aspect of this disclosure, which may be used alone or in combination with any other aspect, a hand vacuum cleaner may have an energy storage member (e.g. a battery pack that includes one or more battery cells) that is positioned rearward of a dirt collection region and at least partially underlies at least a portion of one or both of a cyclone chamber and a pre-

motor filter. Providing at least some vertical overlap between an energy storage member and a cyclone chamber and/or a pre-motor filter may help to reduce the overall size (length front to back) of the hand vacuum and may therefore reduce the torque exerted on the hand of a user as the moment arm between the front of the hand vacuum cleaner and the handle may be reduced. Also, as the energy storage member (e.g. one or more batteries) may typically be among the heavier individual components of the hand vacuum cleaner, such a configuration may help provide a compact overall design without adversely affecting the hand feel and/or perceived balance of the hand vacuum.

[0082] In accordance with this broad aspect, there is provided hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a cyclone assembly positioned in the air flow path and having a cyclone assembly air inlet, a cyclone assembly air outlet, a cyclone chamber, a dirt collection region, and a cyclone axis of rotation;

(c) a pre-motor filter downstream of the cyclone chamber;

(d) a suction motor positioned in the air flow path upstream of the clean air outlet; and,

(e) a battery pack wherein at least a portion of the battery pack is positioned rearward of the dirt collection region and at least a portion of the battery pack underlies at least a portion of one or both of the cyclone chamber and the pre-motor filter.

[0083] In some embodiments, the cyclone axis of rotation may extend generally in a forward/rearward direction.

[0084] In some embodiments, at least a portion of, or substantially all of or the entire battery pack may underlie at least a portion of the cyclone chamber, substantially all of the cyclone chamber or the entire cyclone chamber.

[0085] In some embodiments, at least a portion of, or substantially all of or the entire battery pack may underlie at least a portion of the pre-motor filter, substantially all of the pre-motor filter or the entire pre-motor filter.

[0086] In some embodiments, the battery pack may comprise at least a plurality of energy storage members wherein the energy storage members may be arranged in at least two columns in the forward/rearward direction.

[0087] In some embodiments, the dirt collection region may be at a lower end of the hand vacuum cleaner and the battery pack may be slidably insertable into the lower end of the hand vacuum cleaner.

[0088] In some embodiments, the hand vacuum may further comprise a handle and a finger gap positioned between the handle and the battery pack.

[0089] Also in accordance with this broad aspect, there is provided a hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a cyclone assembly positioned in the air flow path and having a cyclone assembly air inlet, a cyclone assembly air outlet, a cyclone chamber, a dirt collection region, and a cyclone axis of rotation;

(c) a pre-motor filter downstream of the cyclone chamber;

(d) a suction motor positioned in the air flow path upstream of the clean air outlet; and,

(e) a plurality of energy storage members provided in a lower portion of the hand vacuum cleaner, wherein some of the energy storage members

are arranged one above another and some are arranged one behind another and wherein at least some of the energy storage members underlie at least a portion of one or both of the cyclone chamber and the pre-motor filter.

[0090] In some embodiments, at least a portion of the energy storage members may be positioned rearward of the dirt collection region.

[0091] In some embodiments, the cyclone axis of rotation may extend generally in a forward/rearward direction.

[0092] In some embodiments, the at least a portion of, or substantially all of or all of the energy storage members may underlie at least a portion of the cyclone chamber, substantially all of the cyclone chamber or the entire cyclone chamber

[0093] In some embodiments, the at least a portion of, or substantially all of or all of the energy storage members may underlie at least a portion of the pre-motor filter, substantially all of the pre-motor filter or the entire pre-motor filter.

[0094] In some embodiments, the dirt collection region is at a lower end of the hand vacuum cleaner and the energy storage members are slidably insertable into the lower end of the hand vacuum cleaner.

[0095] In some embodiments, at least a portion of the energy storage members may be positioned rearward of the dirt collection region.

[0096] In some embodiments, the hand vacuum may further comprise a handle and a finger gap positioned between the handle and the energy storage members.

[0097] In accordance with another aspect of this disclosure, which may be used alone or in combination with any other aspect, a hand vacuum cleaner may have a cyclone chamber with a cyclone axis of rotation that extends in a forward/rearward direction, and a suction motor with a suction motor axis that also extends in a forward/rearward direction, where the suction motor is located at an

upper end of a handle of the vacuum cleaner and the suction motor axis is vertically displaced from the cyclone axis of rotation. Such a configuration may have one or more advantages. For example, it may facilitate the reduction of conduit bends and/or air flow direction changes between a dirty air inlet and a clean air outlet, thereby reducing backpressure and/or air flow losses through this portion of the hand vacuum cleaner due to a reduction in the number of bends in the air flow path. Additionally, or alternatively, such a configuration may help provide a compact overall design of the hand vacuum cleaner without adversely affecting the hand feel and/or perceived balance of the hand vacuum.

[0098] In accordance with this broad aspect, there is provided a hand vacuum cleaner having a front end, a rear end, an upper end, a lower end, and first and second laterally spaced apart sides, and comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) a handle having a hand grip portion that extends upwardly and forwardly when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner, the handle being positioned at the rear end of the hand vacuum cleaner;

(c) a cyclone chamber positioned in the air flow path and having a cyclone air inlet, a cyclone air outlet, and a cyclone axis of rotation that extends in a forward/rearward direction;

(d) a pre-motor filter positioned downstream of the cyclone chamber and upstream of the suction motor; and,

(e) a suction motor positioned in the air flow path upstream of the clean air outlet, wherein the suction motor has a suction motor axis of rotation that extends in a forward/rearward direction, wherein the suction motor is located at an upper end of the handle, and wherein the suction motor axis of rotation is vertically displaced from the cyclone axis of rotation when the

upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[0099] In some embodiments, the suction motor may be located at an upper end of the hand grip portion.

[00100] In some embodiments, the cyclone axis of rotation may intersect the hand grip portion.

[00101] In some embodiments, the suction motor may be located rearward of the cyclone chamber.

[00102] In some embodiments, the suction motor may have an inlet that faces towards the pre-motor filter.

[00103] In some embodiments, the suction motor axis of rotation may intersect a volume defined by a pre-motor filter housing.

[00104] In some embodiments, the suction motor axis of rotation may extend through a central portion of a volume containing the pre-motor filter.

[00105] In some embodiments, the pre-motor filter may be positioned above the cyclone axis of rotation when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[00106] In some embodiments, the pre-motor filter may be positioned above the cyclone chamber when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[00107] In some embodiments, the cyclone axis of rotation may intersect the hand grip portion, the pre-motor filter may be positioned above the cyclone axis of rotation when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner, and the suction motor axis of rotation may extend through a pre-motor filter housing.

[00108] In some embodiments, the pre-motor filter may comprise a generally cylindrical filter having a hollow interior wherein the suction motor axis of rotation intersects the hollow interior.

[00109] In some embodiments, after exiting a downstream side of the pre-motor filter, air travels generally linearly to the suction motor.

[00110] In some embodiments, the pre-motor filter may comprise a generally cylindrical filter having a hollow interior wherein the dirty air inlet has a dirty air inlet axis that extends generally rearwardly and intersects the hollow interior.

[00111] In some embodiments, the dirty air inlet axis may intersect the suction motor.

[00112] In some embodiments, the cyclone axis of rotation may intersect the hand grip portion.

[00113] In some embodiments, the hand vacuum may further comprise a plurality of energy storage members wherein at least some of the plurality of energy storage members are arranged one above another in a generally upwardly extending configuration when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner, and the suction motor may be positioned rearward of at least some of the energy storage members when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner.

[00114] In accordance with another aspect of this disclosure, which may be used alone or in combination with any other aspect, a surface cleaning apparatus may have a removable pre-motor filter assembly having an outlet conduit wherein a terminal end of the outlet conduit extends at a first angle to a direction of air flow through the outlet conduit. An advantage of this design is that the terminal end of the outlet conduit may be positioned substantially flush against another air conduit having a similarly angled terminal end without requiring lateral movement of the

outlet conduit towards other conduit. Accordingly, a filter assembly may be removed and inserted by moving the filter assembly substantially perpendicular to the direction of airflow exiting the filter assembly. Such an arrangement may, for example, facilitate the use of a gasket or other sealing member between the ends of the conduits to provide an improved seal between the conduits. Such an arrangement may also eliminate the need for a biasing or other retaining mechanism to exert a force on the filter assembly to maintain a seal between the conduits.

[00115] In accordance with this broad aspect, there is provided a surface cleaning apparatus comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet;

(b) an air treatment member positioned in the air flow path; and

(c) a removable pre-motor filter assembly positioned downstream of the air treatment member and upstream of a suction motor, the pre-motor filter assembly comprising a pre-motor filter and a filter support member, the filter support member having an outlet conduit wherein a terminal end of the outlet conduit extends at a first angle to a direction of air flow through the outlet conduit.

[00116] In some embodiments, the pre-motor filter may comprise a generally cylindrical filter having a hollow interior positioned about a body portion of the filter support member having an internal filter conduit, wherein the outlet conduit is in air flow communication with the hollow interior via the internal filter conduit.

[00117] In some embodiments, the outlet conduit may be aligned with the hollow interior.

[00118] In some embodiments, the body portion of the filter support member may include a porous portion located in the hollow interior and positioned between a downstream surface of the pre-motor filter and the internal filter conduit.

[00119] In some embodiments, the hollow interior may comprise a longitudinally extending passage having an outlet end from which the outlet conduit extends away and an opposed end wherein the opposed end is sealed.

[00120] In some embodiments, the opposed end may be sealed by a sealing member that extends into the hollow interior, the sealing member having a solid wall extending inwardly and located between a downstream surface of the pre-motor filter and the passage.

[00121] In some embodiments, the filter support member may have a body portion having an internal filter conduit that may extend into a hollow interior of the pre-motor filter, the body portion may have a solid wall extending inwardly and located between a downstream surface of the pre-motor filter and the internal filter conduit.

[00122] In some embodiments, the body portion of the filter support member may include a porous portion located in the hollow interior and positioned between a downstream surface of the pre-motor filter and the internal filter conduit and is upstream of the outlet conduit.

[00123] In some embodiments, the internal filter conduit may comprise a longitudinally extending passage having an outlet end from which the outlet conduit extends away and a second end, wherein the second end is sealed.

[00124] In some embodiments, the second end may be sealed by a sealing member that extends into the hollow interior, the sealing member having a solid wall extending inwardly and located between a downstream surface of the pre-motor filter and the internal filter conduit.

[00125] In some embodiments, the sealing member and the body portion define a continuous member extending through the hollow interior.

[00126] In some embodiments, the surface cleaning apparatus may further comprise a treated air conduit extending from the outlet conduit towards the

suction motor, wherein an inlet end of the treated air conduit may also extend at about the first angle to a direction of air flow through the outlet conduit.

[00127] In some embodiments, the surface cleaning apparatus may further comprise a treated air conduit extending from the outlet conduit towards the suction motor, wherein an inlet end of the treated air conduit may also extend at a second angle to a direction of air flow through the outlet conduit and the terminal end of the outlet conduit may abut the inlet end of the treated air conduit when the filter assembly is positioned in the air flow path.

[00128] In some embodiments, the first and second angles may be about the same.

[00129] In some embodiments, the surface cleaning apparatus may further comprise a gasket provided at an interface of the terminal end of the outlet conduit and the inlet end of the treated air conduit.

[00130] In some embodiments, the filter assembly may be removable in a filter assembly removal direction that is at an angle to the direction of air flow through the outlet conduit.

[00131] In some embodiments, the filter assembly may be removable through an openable door and a side of the terminal end that is closest to the openable door may extend further in the direction of air flow though the outlet conduit than an opposed side of the terminal end that is further from the openable door.

[00132] In some embodiments, a side of the inlet end of the treated air conduit that is furthest from the openable door may extend further in the direction of air flow though the outlet conduit than an opposed side of the inlet end that is closest to the openable door.

[00133] It will be appreciated by a person skilled in the art that an apparatus or method disclosed herein may embody any one or more of the features contained

herein and that the features may be used in any particular combination or sub-combination.

[00134] These and other aspects and features of various embodiments will be described in greater detail below.

BRIEF DESCRIPTION OF THE DRAWINGS

[00135] For a better understanding of the described embodiments and to show more clearly how they may be carried into effect, reference will now be made, by way of example, to the accompanying drawings in which:

[00136] Figure 1 is a top perspective view of a hand vacuum cleaner in accordance with one embodiment;

[00137] Figure 2 is a bottom perspective view of the hand vacuum cleaner of Figure 1;

[00138] Figure 3 is a side perspective view of the hand vacuum cleaner of Figure 1;

[00139] Figure 4 is a rear perspective view of the hand vacuum cleaner of Figure 1;

[00140] Figure 5 is a front end view of the hand vacuum cleaner of Figure 1;

[00141] Figure 6 is a perspective view of the hand vacuum cleaner of Figure 1, with a front door or lid in an open position;

[00142] Figure 7 is a front end view of the hand vacuum cleaner of Figure 1, with a front door or lid in an open position;

[00143] Figure 8 is a perspective sectional view of the hand vacuum cleaner of Figure 1, taken along line 8-8 in Figure 1;

[00144] Figure 9 is a perspective sectional view of the hand vacuum cleaner of Figure 1, taken along line 9-9 in Figure 5;

[00145] Figure 10 is a cross-section view of the hand vacuum cleaner of Figure 1, taken along line 9-9 in Figure 5;

[00146] Figure 11 is an enlarged view of the upper left portion of Figure 10;

[00147] Figure 12 is an enlarged view of the upper left portion of Figure 10, with a pre-motor filter assembly removed;

[00148] Figure 13 is an enlarged view of the upper left portion of Figure 10, with a pre-motor filter assembly and an openable door removed;

[00149] Figure 14 is a top perspective view of the upper front portion of the hand vacuum cleaner of Figure 1, with an openable door removed to expose a pre-motor filter assembly;

[00150] Figure 15 is a top perspective view of the upper front portion of the hand vacuum cleaner of Figure 1, with a pre-motor filter assembly and an openable door removed;

[00151] Figure 16 is a top plan view of the upper front portion of the hand vacuum cleaner of Figure 1, with a pre-motor filter assembly and an openable door removed;

[00152] Figure 17 is a top perspective view of the upper portion of the hand vacuum cleaner of Figure 1, with a pre-motor filter assembly and an openable door removed;

[00153] Figure 18 is a bottom perspective view of an openable door of a pre-motor filter chamber of the hand vacuum cleaner of Figure 1;

[00154] Figure 19 is a perspective view of a removable pre-motor filter assembly of the hand vacuum cleaner of Figure 1;

[00155] Figure 20 is an end perspective view from the outlet end of the removable pre-motor filter assembly of the hand vacuum cleaner of Figure 19;

[00156] Figure 21 is a perspective section view of the removable pre-motor filter assembly of the hand vacuum cleaner of Figure 19, taken along line 21-21 in Figure 19;

[00157] Figure 22 is a cross section view of the removable pre-motor filter assembly of the hand vacuum cleaner of Figure 19, taken along line 21-21 in Figure 19;

[00158] Figure 23 is a bottom perspective view of the lower rear portion of the hand vacuum cleaner of Figure 1;

[00159] Figure 24 is a bottom perspective view of the lower rear portion of the hand vacuum cleaner of Figure 1, with a post-motor filter and a post-motor filter support removed;

[00160] Figure 25 is a rear perspective view of a post-motor filter support of the hand vacuum cleaner of Figure 1;

[00161] Figure 26 is a front perspective view of the post-motor filter support of Figure 25;

[00162] Figure 27 is a front perspective view of the post-motor filter support of Figure 26 and a post-motor filter;

[00163] Figure 28 is a side view of the hand vacuum cleaner of Figure 1, with an energy storage member partially removed;

[00164] Figure 29 is a bottom perspective view of the hand vacuum cleaner of Figure 1, with an energy storage member partially removed;

[00165] Figure 30 is a side view of the hand vacuum cleaner of Figure 1, with an energy storage member removed;

[00166] Figure 31 is a cross-section view of the hand vacuum cleaner of Figure 1, taken along line 9-9 in Figure 5, with an energy storage member removed;

[00167] Figure 32 is a perspective view of an energy storage member of the hand vacuum cleaner of Figure 1;

[00168] Figure 33 is a front perspective view of the energy storage member of Figure 32;

[00169] Figure 34 is a cross-section view of the energy storage member of Figure 32, taken along line 34-34 in Figure 32;

[00170] Figure 35 is a perspective view of a hand vacuum cleaner in accordance with another embodiment;

[00171] Figure 36 is a cross-section view of the hand vacuum cleaner of Figure 35, taken along line 36-36 in Figure 35;

[00172] Figure 37 is a cross-section view of the hand vacuum cleaner of Figure 35, taken along line 36-36 in Figure 35, with an energy storage member partially removed;

[00173] Figure 38 is a perspective section view of the hand vacuum cleaner of Figure 35, taken along line 36-36 in Figure 35, with a post-motor filter removed;

[00174] Figure 39 is a perspective view of a hand vacuum cleaner in accordance with another embodiment;

[00175] Figure 40 is a cross-section view of the hand vacuum cleaner of Figure 39, taken along line 40-40 in Figure 39;

[00176] Figure 41 is a perspective section view of the hand vacuum cleaner of Figure 39, taken along line 40-40 in Figure 39, with a post-motor filter removed;

[00177] Figure 42 is a perspective view of a hand vacuum cleaner in accordance with another embodiment;

[00178] Figure 43 is a cross-section view of the hand vacuum cleaner of Figure 42, taken along line 43-43 in Figure 42;

[00179] Figure 44 is a perspective section view of the hand vacuum cleaner of Figure 42, taken along line 43-43 in Figure 42;

[00180] Figure 45 is a perspective section view of the hand vacuum cleaner of Figure 42, taken along line 43-43 in Figure 42, with an energy storage member removed;

[00181] Figure 46 is a perspective view of a hand vacuum cleaner in accordance with another embodiment;

[00182] Figure 47 is a cross-section view of the hand vacuum cleaner of Figure 46, taken along line 47-47 in Figure 46;

[00183] Figure 48 is a perspective section view of the hand vacuum cleaner of Figure 46, taken along line 47-47 in Figure 46;

[00184] Figure 49 is a perspective section view of the hand vacuum cleaner of Figure 46, taken along line 47-47 in Figure 46, with an energy storage member removed; and

[00185] Figure 50 is a perspective view of the hand vacuum cleaner of Figure 46, with a front door or lid in an open position.

[00186] The drawings included herewith are for illustrating various examples of articles, methods, and apparatuses of the teaching of the present specification and are not intended to limit the scope of what is taught in any way.

DESCRIPTION OF EXAMPLE EMBODIMENTS

[00187] Various apparatuses, methods and compositions are described below to provide an example of an embodiment of each claimed invention. No embodiment described below limits any claimed invention and any claimed invention may cover apparatuses and methods that differ from those described below. The claimed inventions are not limited to apparatuses, methods and compositions having all of the features of any one apparatus, method or composition described below or to features common to multiple or all of the

apparatuses, methods or compositions described below. It is possible that an apparatus, method or composition described below is not an embodiment of any claimed invention. Any invention disclosed in an apparatus, method or composition described below that is not claimed in this document may be the subject matter of another protective instrument, for example, a continuing patent application, and the applicant(s), inventor(s) and/or owner(s) do not intend to abandon, disclaim, or dedicate to the public any such invention by its disclosure in this document.

[00188] The terms "an embodiment," "embodiment," "embodiments," "the embodiment," "the embodiments," "one or more embodiments," "some embodiments," and "one embodiment" mean "one or more (but not all) embodiments of the present invention(s)," unless expressly specified otherwise.

[00189] The terms "including," "comprising" and variations thereof mean "including but not limited to," unless expressly specified otherwise. A listing of items does not imply that any or all of the items are mutually exclusive, unless expressly specified otherwise. The terms "a," "an" and "the" mean "one or more," unless expressly specified otherwise.

[00190] As used herein and in the claims, two or more parts are said to be “coupled”, “connected”, “attached”, or “fastened” where the parts are joined or operate together either directly or indirectly (i.e., through one or more intermediate parts), so long as a link occurs. As used herein and in the claims, two or more parts are said to be “directly coupled”, “directly connected”, “directly attached”, or “directly fastened” where the parts are connected in physical contact with each other. None of the terms “coupled”, “connected”, “attached”, and “fastened” distinguish the manner in which two or more parts are joined together.

[00191] Furthermore, it will be appreciated that for simplicity and clarity of illustration, where considered appropriate, reference numerals may be repeated among the figures to indicate corresponding or analogous elements. In addition, numerous specific details are set forth in order to provide a thorough

understanding of the example embodiments described herein. However, it will be understood by those of ordinary skill in the art that the example embodiments described herein may be practiced without these specific details. In other instances, well-known methods, procedures, and components have not been described in detail so as not to obscure the example embodiments described herein. Also, the description is not to be considered as limiting the scope of the example embodiments described herein.

General description of a hand vacuum cleaner

[00192] Referring to Figures 1 to 34, an exemplary embodiment of a surface cleaning apparatus is shown generally as 1000. The following is a general discussion of this embodiment which provides a basis for understanding several of the features which are discussed herein. As discussed subsequently, each of the features may be used individually or in any particular combination or sub-combination in this or in other embodiments disclosed herein.

[00193] In the illustrated embodiment, the surface cleaning apparatus is a hand vacuum cleaner, which may also be referred to also as a "handvac" or "hand-held vacuum cleaner". As used herein, a hand vacuum cleaner is a vacuum cleaner that can be operated to clean a surface generally one-handedly. That is, the entire weight of the vacuum may be held by the same one hand used to direct a dirty air inlet of the vacuum cleaner with respect to a surface to be cleaned. For example, the handle and a clean air inlet may be rigidly coupled to each other (directly or indirectly) so as to move as one while maintaining a constant orientation relative to each other. This is to be contrasted with canister and upright vacuum cleaners, whose weight is typically supported by a surface (e.g. a floor) during use.

[00194] As exemplified in Figures 1 to 7, surface cleaning apparatus 1000 includes a main body 1010 having a housing 1011 and a handle 1020, an air treatment member 1100 connected to the main body 1010, a dirty air inlet 1030, a

clean air outlet 1040, and an air flow path extending between the dirty air inlet and the clean air outlet.

[00195] Surface cleaning apparatus 1000 has a front end 1002, a rear end 1004, an upper end or top 1006, and a lower end or bottom 1008. In the embodiment shown, dirty air inlet 1030 is at an upper portion of the front end 1102 and clean air outlet 1040 is at rearward portion of the lower end 1008. It will be appreciated that the dirty air inlet 1030 and the clean air outlet 1040 may be provided in different locations.

[00196] A suction motor 1200 (see e.g. Figure 10) is provided to generate vacuum suction through the air flow path, and is positioned within a motor housing 1210. In the illustrated embodiment, the suction motor is positioned downstream from the air treatment member, although it may be positioned upstream of the air treatment member (e.g., a dirty air motor) in alternative embodiments.

[00197] Air treatment member 1100 is configured to remove particles of dirt and other debris from the air flow and/or otherwise treat the air flow. In the illustrated example, air treatment member 1100 includes a cyclone assembly having a single cyclonic cleaning stage with a single cyclone chamber 1110 and a dirt collection region 1122 external to the cyclone chamber. The cyclone chamber 1110 and dirt collection region 1122 may be of any configuration suitable for separating dirt from an air stream and collecting the separated dirt, respectively.

[00198] The cyclone chamber 1110 may be oriented in any direction. For example, when surface cleaning apparatus 1000 is oriented with the upper end 1106 above the lower end 1108, e.g. positioned generally parallel to a horizontal surface, a central axis or axis of rotation 1115 of the cyclone chamber 1110 may be oriented horizontally, as exemplified in Figure 10. In alternative embodiments, the cyclone chamber may be oriented vertically, or at any angle between horizontal and vertical.

[00199] In alternative embodiments, the cyclone assembly may include two or more cyclonic cleaning stages arranged in series with each other. Each cyclonic cleaning stage may include one or more cyclone chambers (arranged in parallel or series with each other) and one or more dirt collection chambers, of any suitable configuration. The dirt collection chamber or chambers may be external to the cyclone chambers, or may be internal the cyclone chamber and configured as a dirt collection area or region within the cyclone chamber. Alternatively, the air treatment member need not include a cyclonic cleaning stage, and can incorporate a bag, a porous physical filter media (such as foam or felt), or other air treating means.

[00200] As exemplified in Figure 10, hand vacuum cleaner 1000 may include a pre-motor filter housing 1310 provided in the air flow path downstream of the air treatment member 1100 and upstream of the suction motor 1200. Pre-motor filter housing 1310 may be of any suitable construction, including any of those exemplified herein. A pre-motor filter 1320 is positioned within the pre-motor filter housing 1310. Pre-motor filter 1320 may be formed from any suitable physical, porous filter media and having any suitable shape, including the examples disclosed herein with respect to a removable pre-motor filter assembly. For example, the pre-motor filter may be one or more of a foam filter, felt filter, HEPA filter, other physical filter media, electrostatic filter, and the like.

[00201] Optionally, the pre-motor filter housing 1310 may be openable (as described herein), and at least a portion of the sidewall 1316 (e.g. removable or otherwise openable door 1330) and/or one of the end walls 1312 or 1314 may be removable, openable, or otherwise re-configurable to provide access to the interior of the pre-motor filter housing 1310.

[00202] Positioning the pre-motor filter housing 1310 toward the top 1006 of the main body 1010 may help facilitate access to the pre-motor filter 1320 while the hand vacuum is resting on its base. For example, if the hand vacuum cleaner

1000 is rested upon a table or other such surface, an openable door 1330 of the pre-motor filter housing 1310 is provided at the upper end of the housing and is accessible to a user. A user could then open the pre-motor filter housing 1310 by removing or otherwise opening door 1330 while the hand vacuum 1000 rests on the table, to inspect or replace the pre-motor filter 1320, without having to use one hand to grasp the handle 1020 or otherwise support the hand vacuum.

[00203] As exemplified, hand vacuum cleaner 1000 may also include a post-motor filter 1420 provided in the air flow path downstream of the suction motor 1200 and upstream of the clean air outlet 1040. Post-motor filter 1420 may be formed from any suitable physical, porous filter media and having any suitable shape, including the examples disclosed herein. In alternative embodiments, the post-motor filter may be any suitable type of filter such as one or more of a foam filter, felt filter, HEPA filter, other physical filter media, electrostatic filter, and the like.

[00204] In the illustrated embodiment, the dirty air inlet 1030 of the hand vacuum cleaner 1000 is the inlet end 1032 of an inlet conduit 1036. Optionally, inlet end 1032 of the conduit 1036 can be used as a nozzle to directly clean a surface. The air inlet conduit 1036 is, in this example, a generally linear hollow member that extends along an inlet conduit axis 1035 that is oriented in a longitudinal forward/backward direction and is generally horizontal when hand vacuum cleaner 1000 is oriented with the upper end 1006 above the lower end 1008. Alternatively, or in addition to functioning as a nozzle, inlet conduit 1036 may be connected or directly connected to the downstream end of any suitable accessory tool such as a rigid air flow conduit (e.g., an above floor cleaning wand), a crevice tool, a mini brush, and the like. As shown, dirty air inlet 1030 is positioned forward of the air treatment member 1100, although this need not be the case. As exemplified, the dirty air inlet 1030 is positioned above the cyclone chamber. Optionally, the dirty air inlet 1030 may be provided at an alternate location, such as in the front end wall 1160.

[00205] As exemplified in Figures 1, 2, 5, 6, and 7, an optional accessory power coupler 1050 may be provided adjacent to the inlet conduit 1036. Accessory power coupler 1050 includes a set of electrical connectors 1056 that can inter-engage with compatible electrical connectors on an accessory tool in order to provide an electrical connection between e.g. a power source of the hand vacuum and a motor or other electrical device of an accessory tool (e.g. a powered brush roller, a light source, and the like). While the illustrated accessory power coupler 1050 is a male connector (i.e. projecting outwardly from the main body 1010 of the hand vacuum cleaner 1000), in alternative embodiments it may be a female connector (i.e. recessed inwardly) or any other shape suitable for cooperatively engaging with corresponding connectors on an accessory tool or other attachment. As exemplified, the accessory power coupler 1050 may be positioned laterally to one side of the inlet conduit 1036. In other examples, the accessory power coupler 1050 may be located above or below the inlet conduit 1036.

[00206] As exemplified, power may be supplied to the suction motor and other electrical components of the hand vacuum cleaner from an onboard energy storage member which may include, for example, one or more batteries or other energy storage device. In the illustrated embodiment, the hand vacuum cleaner 1000 includes a removable battery pack 1500 provided between the handle 1020 and the air treatment member 1100. Battery pack 1500 is described in further detail herein. In alternative embodiments, a battery pack may not be provided and power may be supplied to the hand vacuum cleaner by an electrical cord connected to the hand vacuum cleaner (not shown) that can be connected to a standard wall electrical outlet.

[00207] Optionally, a forward surface of the handle 1020 and a rearward surface of the battery pack 1500 may cooperatively define a finger gap 1028 therebetween (see e.g. Figure 10). An advantage of this design is that the absence of an intervening portion of main housing 1010 between the handle and the energy storage member may facilitate a more compact overall size of hand vacuum 1000.

[00208] As exemplified, a power switch 1060 may be provided to selectively control the operation of the suction motor (e.g. either on/off or variable power levels or both), for example by establishing a power connection between the batteries and the suction motor. The power switch may be provided in any suitable configuration and location, including a button, rotary switch, sliding switch, trigger-type actuator and the like. As illustrated in Figure 4, power switch 1060 is in the form of a button located toward upper end of the rear end 1004 of the hand vacuum cleaner, above a hand grip portion 1026 of the handle 1020. In this position, a user may be able to access the button 1060 while holding the hand vacuum via the hand grip, e.g. with the thumb of the hand holding the handle, and/or with a digit of their other hand.

[00209] The power switch or an alternate controller may also be configured to control other aspects of the hand vacuum (brush motor on/off, etc.). Optionally, instead of being provided at an upper end of the handle, the power switch may be provided on the main body (such as on the motor housing or other suitable location).

[00210] As exemplified in Figure 4, an optional information display device 1070 may be provided to display one or more visual indications to a user. For example, the display device 1070 may provide a visual indication of: when suction motor is on; the current power level of the suction motor (if applicable); the current battery charge level; an estimated time until the battery charge will be depleted, and/or similar information. The display device 1070 may include one or more light sources (e.g. light emitting diodes (LEDs)), display screens (e.g. a liquid crystal, an LED screen, an organic light emitting diode (OLED) screen, and the like. The screen, and associated electronics, may be used to display status information of one or more electrical components of the hand vacuum cleaner.

[00211] In the illustrated embodiment, the information display device is in the form of a display screen 1070 that is provided at the upper end 1022 of the handle

1020. A first display portion 1072 is configured to display an indication of whether the hand vacuum cleaner is in a floor cleaning mode or in a carpet cleaning mode (e.g. where power is being supplied to a brush roller of an accessory tool via electrical connectors 1056), and a second portion 1074 is configured to display an indication of a power mode of the suction motor (e.g. a regular power mode, a higher power mode, and/or a higher power 'burst' mode).

Air flow path through a hand vacuum cleaner

[00212] The following is a description of different features of an air flow path through a hand vacuum cleaner. These features may be used by themselves in any surface cleaning apparatus or in any combination or sub-combination with any other feature or features described herein. For example, any of the airflow configurations described herein may be used with any of the pre-motor filter assemblies, relative positioning of the suction motor and energy storage members, inclined battery packs, battery pack configurations, airflow cooling configurations, and other features described herein.

[00213] As exemplified, the air treatment member 1100 of the hand vacuum cleaner 1000 may optionally be a single cyclonic cleaning stage with unidirectional air flow or a 'uniflow' cyclone chamber 1110 (i.e. where the cyclone air inlet and cyclone air outlet are at opposite ends of the cyclone chamber). Referring primarily to Figures 9 and 10, hand vacuum cleaner 1000 includes a single cyclonic cleaning stage with a cyclone chamber 1110 that has a cyclone air inlet 1120 in fluid communication with the inlet conduit 1036, a cyclone air outlet 1130, and a dirt outlet 1140 that is in communication with a dirt collection chamber 1122.

[00214] Optionally, the cyclone chamber 1110 may be generally horizontally oriented so that the cyclone air inlet 1120 is located toward the front end 1002 of the hand vacuum cleaner 1000, and the cyclone air outlet 1130 is spaced rearwardly behind the cyclone air inlet 1120, at a rear end 1114 of the cyclone

chamber 1110. From the cyclone air outlet 1130, an upflow duct or conduit 1230 directs the airflow upwards to a pre-motor filter chamber 1310 that is vertically spaced from the cyclone chamber 1110. After passing through the pre-motor filter 1320, air may travel generally rearwardly from the pre-motor filter 1320 to an inlet end 1202 of the suction motor 1200. An advantage of this arrangement is that, by promoting air to travel in this manner, the need for air flow direction changes between an air outlet of the pre-motor filter and the suction motor may be reduced or eliminated, thereby reducing backpressure and/or air flow losses through this portion of the hand vacuum cleaner. An additional, or alternative, advantage of providing a pre-motor filter chamber 1310 that is vertically spaced from the cyclone chamber 1110 is that the need for air flow direction changes between a cyclone air outlet and the suction motor may be reduced, thereby reducing backpressure and/or air flow losses through this portion of the hand vacuum cleaner. For example, any airflow in a forward direction may take place within the pre-motor filter chamber or header 1310, as opposed to taking place in a (typically narrower) conduit that directs airflow in a direction opposite to the airflow through the dirty air inlet. An additional, or alternative, advantage of providing a pre-motor filter chamber 1310 that is vertically spaced from the cyclone chamber 1110, and optionally above the cyclone chamber 1110, is that the length (front to back) of the hand vacuum cleaner may be reduced, providing a more compact configuration.

[00215] Figures 1 to 34 exemplify one embodiment of a hand vacuum cleaner 1000 having a cyclone unit that includes a uniflow cyclone chamber 1110 and a dirt collection chamber 1122 that is positioned exterior to the cyclone chamber 1110 and is in communication with the dirt outlet 1140 to receive dirt and debris dis-entrained from a dirty air flow by the cyclone chamber 1110. In the illustrated example, the cyclone air inlet 1120 and dirt outlet 1140 are positioned toward opposing ends of the cyclone chamber 1110, and the cyclone air outlet 1130 is provided toward the same end as the dirt outlet 1140 (the rear end as illustrated). In this configuration, dirty air can enter at the front end of the cyclone chamber,

while cleaner air and the separated dirt particles both exit the cyclone chamber at the opposing rear end.

[00216] In this embodiment, the cyclone chamber 1110 has a front end wall 1160 and an opposing rear end wall 1170 that is spaced apart from the front end wall along the cyclone axis 1115 about which air circulates within the cyclone chamber 1110 during operation of the hand vacuum cleaner. A cyclone chamber sidewall 1180 extends between the front and rear end walls 1160, 1170. In the illustrated example, when the hand vacuum is oriented with the upper end above the lower end, the cyclone axis 1115 is generally horizontal, and is closer to horizontal than vertical, e.g., ±20°, ±15°, ±10°, or ±5° from the horizontal. As exemplified, the cyclone axis 1115 is substantially parallel to, e.g. within ±20°, ±15°, ±10°, or ±5°, and vertically offset below the conduit axis 1035 of the air inlet conduit 1036, and the cyclone chamber 1110 and dirt collection chamber 1122 are both below the inlet conduit axis 1035. As illustrated in Figure 10, when the hand vacuum 1000 is horizontal (as illustrated), the pre-motor filter 1320 is vertically spaced from (e.g. above) the cyclone axis 1115, and the suction motor 1200 is positioned rearward of the pre-motor filter 1320, so that air travels generally rearwardly from the pre-motor filter to the suction motor.

[00217] In this embodiment, the cyclone air inlet 1120 is a tangential air inlet that, as exemplified, terminates at an aperture or port that is formed in cyclone sidewall 1180, optionally an upper portion 1182 of the cyclone sidewall 1180, adjacent the front end wall 1160. Optionally, the cyclone air inlet 1120 may be provided at an alternate location, such as in the front end wall 1160.

[00218] The cyclone air inlet 1120 is fluidly connected with the outlet end of the conduit 1036 via a corresponding air outlet aperture or port 1038 that may be provided in a lower portion of the air inlet conduit 1036. The cyclone air inlet 1120 may have any suitable arrangement and/or configuration, and in the illustrated example is configured as a tangential air inlet that is directly connected to the air

outlet aperture 1038. Connecting the air inlet 1120 to the air outlet aperture 1038 in this manner may help reduce the need for additional conduits to fluidly connect the dirty air inlet 1030 to the cyclone chamber 1110, and may reduce or eliminate the need for additional bends or air flow direction changes between the dirty air inlet 1030 and the cyclone chamber 1110. Reducing the conduit length and number of bends may help reduce the backpressure and air flow losses within the air flow path.

[00219] Positioning the cyclone air inlet 1120 toward the front of the cyclone chamber 1110 may help facilitate a desired air flow configuration within the cyclone chamber 1110. For example, in this configuration the cyclone chamber 1110 itself functions as part of the air flow path that conveys air rearwardly from the front 1002 of the hand vacuum 1000, without the need for a separate fluid conduit.

[00220] In the illustrated example, cyclone air inlet 1120 is directly adjacent the front wall 1160. Alternatively, cyclone air inlet 1120 may be axially spaced from the front end wall 1160, and may be located at another location along the length of the cyclone chamber 1110. Preferably, cyclone air inlet 1120 is provided in the front half of the cyclone chamber 1110 (i.e. forward of the axial mid-point of the cyclone chamber sidewall 1080) in order to help reduce the distance between the dirty air inlet 1030 and the cyclone air inlet 1120.

[00221] As shown in Figure 10, the cyclone air outlet 1130 is provided in the rear end wall 1170 of the cyclone chamber 1110, and an axially extending vortex finder conduit 1136 extends from the rear end wall 1170 and is aligned with the cyclone air outlet 1130. Optionally, a mesh screen (not shown) may be positioned over some or all of the inlet apertures 1138 of the vortex finder conduit 1136 to help inhibit lint, hair, and other such debris from entering the vortex finder conduit 1136. Positioning the air outlet 1130 toward the rear end (and optionally in the rear end wall 1170) may help facilitate the desired air flow through the cyclone chamber

1110, such that air, while swirling, travels generally axially though the cyclone chamber 1110 from the front end wall 1160 toward the rear end wall 1170.

[00222] Positioning the air outlet 1130 in the rear end wall 1170 of the cyclone chamber 1110 may also help facilitate the air flow connection between the cyclone chamber 1110 and other downstream components in the hand vacuum, such as the pre-motor filter housing 1310 and suction motor housing 1210 described herein. In the illustrated embodiment the air outlet 1130 is provided in the rear end wall 1170 and is connected to the pre-motor filter housing 1310 through an upflow duct or conduit 1230. This may help simplify the air flow path and construction of the hand vacuum. Alternatively, the air flow path may include one or more additional conduits connected downstream from the cyclone air outlet.

[00223] In this arrangement, air travelling through the hand vacuum 1000 will travel generally rearwardly along the air inlet conduit 1036 (i.e. parallel to the conduit axis 1035 and then enter a tangential air inlet which essentially changes the direction of the air to travel generally downwardly through the cyclone air inlet 1120 (i.e. generally orthogonal to the cyclone axis 1115). The air can then circulate within the cyclone chamber 1110, and travel generally rearwardly toward the cyclone air outlet 1130, and ultimately exit the cyclone chamber 1110 via the cyclone air outlet 1130 while travelling through the vortex finder conduit 1136 in a rearward direction (i.e. generally parallel to the cyclone axis 1115). In this configuration, the air flow changes direction only once (and by only approximately 90° which may be accomplished by a tangential air inlet), between entering the dirty air inlet 1030 and exiting the cyclone air outlet 1130.

[00224] The cyclone dirt outlet 1140 may be of any suitable configuration, and in the illustrated embodiment is a slot 1140 that is provided in the cyclone chamber side wall 1180, toward the rear end wall 1170. The slot 1140 may extend around at least a portion of the perimeter of the cyclone side wall 1180, and may have any suitable length 1186 in the axial direction (see e.g. Figure 10). As

exemplified, the slot may be provided only in a lower portion of the sidewall. Accordingly, when dirty air inlet 1030 faces downwardly during use, dirt will exit into an upper end of an external dirt collection chamber. Positioning the dirt collection chamber below the cyclone chamber, and not surrounding the cyclone chamber, reduces the width of the hand vacuum. While shown directly adjacent the rear end wall 1170, such that the slot 1140 is partially bounded by the cyclone side wall 1180 and the rear end wall 1170, the slot 1140 may be located at another location along the length of the cyclone side wall 1180, and need not be directly adjacent the rear end wall 1170. Alternatively, the dirt outlet 1140 may be provided toward the mid-point of the cyclone chamber sidewall 1180, or may be provided toward the front end wall 1160. While illustrated with a single dirt outlet 1140, the cyclone chamber 1110 may include two or more dirt outlets that are in communication with the same dirt collection chamber, or optionally with different dirt collection chambers.

[00225] Preferably, at least a portion of the air treatment member may be openable for emptying. For example, at least one end, and optionally both ends of the dirt collection chamber 1122 may be openable for emptying. Optionally, at least one end, and optionally both ends of the cyclone chamber 1110 may also be openable for emptying.

[00226] Referring primarily to Figures 9 and 10, the front end wall 1160 of the cyclone chamber 1110 and the front end wall 1126 of the dirt collection chamber 1122 are both provided by portions of an openable front door 1190 that covers the front end of the cyclone assembly. In this arrangement, opening the front door 1190 will concurrently open the front end walls 1160 and 1126 of the cyclone and dirt collection chambers 1110, 1122. In the illustrated example, a user may hold the hand vacuum 1000 via the handle 1020 with one hand and open the front door 1190 with the other hand. The front end wall 1160 of the cyclone chamber 1110 and the front end wall 1126 of the dirt collection chamber 1122 may be concurrently openable and may cover all of a substantial portion of the front end of the cyclone

chamber and the dirt collection chamber. For example, the front end wall 1160 of the cyclone chamber 1110 and the front end wall 1126 of the dirt collection chamber 1122 may be a one piece assembly (i.e. they may be integrally formed).

[00227] The front door 1190 may be openably connected (e.g., pivotally openable or removably mounted) to the rest of the cyclone assembly using any suitable mechanism, including a hinge or other suitable device. Optionally, the front door 1190 may be secured in the closed position using any suitable type of locking mechanism, including a latch mechanism that may be released by a user. In the embodiment of Figures 1 to 34, the front door 1190 may be opened by pivoting it about a hinge assembly 1192 from a closed position (e.g. as shown in Figure 1) to an open position (e.g. as shown in Figure 6). The front door 1190 may be secured in the closed position by a friction fit when connected as illustrated in Figure 1, and/or by an assembly door lock 1194 or other suitable locking mechanism. Preferably, the assembly door lock may include at least one release actuator 1196 so that a user may unlock the assembly door lock, e.g. by depressing the actuator. The actuator for opening/ releasing the openable portion of the cyclone assembly may be provided on the cyclone assembly 1100 or on any other portion of the hand vacuum 1000 (such as the handle 1020).

[00228] In the embodiments described herein, the surface cleaning apparatus includes a pre-motor filter housing 1310 positioned in the air flow path between the cyclone chamber and the suction motor. It will be appreciated that in some embodiments, the pre-motor filter may be of any configuration and the direction of air flow through the pre-motor filter 1320 may be any particular direction.

[00229] Referring primarily to Figures 9 and 10, as exemplified, in some embodiments, the main body 1010 may be configured such that the suction motor housing 1210 is located rearward of the pre-motor filter housing 1310 and, preferably, axially aligned with the pre-motor filter housing 1310 such that air

exiting the pre-motor filter may travel generally linearly to the suction motor. It will be appreciated that suction motor housing 1210 and pre-motor filter housing 1310 may be of any configuration

[00230] As exemplified herein, the pre-motor filter 1320 may be configured as a generally cylindrical foam filter with a hollow, open interior and is preferably part of a removable pre-motor filter assembly, as discussed elsewhere herein. The pre-motor filter 1320, which may be a foam filter, extends longitudinally along a filter axis 1325, which may be generally parallel with the suction motor axis of rotation and accordingly is exemplified as being generally horizontal in the illustrated embodiment. The interior, downstream surface of filter 1320 is in communication with the air outlet 1242 via an outlet conduit 1340 of the pre-motor filter assembly. An advantage of a cylindrical filter is that a relatively large upstream surface area may be provided in a small space. A further advantage of this configuration is that, if the suction motor housing 1210 is located rearward of, and generally axially aligned with, the pre-motor filter housing 1310, air exiting the pre-motor filter may travel rearwardly through the hollow interior and then travel rearwardly to the suction motor.

[00231] In the illustrated example, the pre-motor filter housing 1310 is positioned such that the pre-motor filter 1320 is vertically spaced from and mostly, and optionally entirely, located above the cyclone axis 1115 and also above the cyclone chamber. Put another way, pre-motor filter 1320 mostly, and optionally entirely, overlies the cyclone chamber. In other embodiments, only a portion of the pre-motor filter may be above the cyclone axis 1115 and optionally also above the cyclone chamber.

[00232] Referring to Figure 10, in the illustrated example the pre-motor filter housing 1310 has forward and rear end walls 1312 and 1314, and a chamber sidewall 1316 defining a pre-motor filter chamber or plenum 1318. Optionally, the pre-motor filter is removable, such as proving a removable or otherwise openable

door 1330. Door 1330 may extend between forward and rear end walls 1312 and 1314. The housing 1310 also has an air inlet 1234 that is connected downstream from the cyclone air outlet 1130 via upflow duct 1230, and an air outlet 1242 positioned in the rear end wall 1314. In the illustrated example, the housing air inlet 1234 is located toward the rear end of the housing 1310. To travel from the air inlet 1234 to the air outlet 1242, air passes through the pre-motor filter 1320 positioned within the chamber 1318.

[00233] As the pre-motor filter 1320 is positioned above the cyclone air outlet, air travels upwardly to the pre-motor filter chamber 1318. As exemplified herein, the pre-motor filter may be in the shape of a hollow cylinder which has a central axis that is generally parallel with the suction motor axis of rotation. An advantage of this configuration is that, after the air travels upwardly to the pre-motor filter chamber 1318, in order to try to balance the forces in the pre-motor filter chamber 1318, the air will tend to spread across the chamber. Therefore, without using a 90^0 bend to direct the air to the front part of the pre-motor filter, a plenum is used to distribute the air across the upstream surface of the pre-motor filter. In accordance with this configuration, air travels to the filter housing 1310 in a generally upward direction, where it disperses in the pre-motor filter chamber 1318 and circulates around and through the outer, upstream surface of filter 1320, and exits the housing air outlet 1242 in a generally rearward direction into the suction motor housing inlet end 1212.

[00234] In the illustrated example, the suction motor 1200 is generally horizontally oriented, such that the suction motor axis of rotation 1205 is generally horizontal (e.g., ±20°, ±15°, ±10°, or ±5° from horizontal) when the hand vacuum cleaner is positioned with the upper end above the lower end (as illustrated in Figure 10). In this arrangement, the suction motor axis 1205 is generally parallel to the cyclone axis 1115 and the pre-motor filter axis 1325.

[00235] In the example configuration illustrated in Figure 10, an inlet end 1202 of the suction motor 1200 faces towards a hollow interior of the pre-motor filter. In such a configuration, air may travel generally linearly from the pre-motor filter 1320 to the suction motor 1200. An absence of air flow direction changes between an air outlet of the pre-motor filter and the suction motor may reduce backpressure and/or air flow losses through this portion of the hand vacuum cleaner.

[00236] Also, positioning the suction motor at an upper end of a handle of the vacuum cleaner with the suction motor axis vertically displaced from the cyclone axis of rotation may facilitate the reduction of air flow conduit bends and/or air flow direction changes between a dirty air inlet and a clean air outlet, thereby reducing backpressure and/or air flow losses through the hand vacuum cleaner. Additionally, or alternatively, such a configuration may help provide a compact overall design of the hand vacuum cleaner without adversely affecting the hand feel and/or perceived balance of the hand vacuum.

[00237] It will be appreciated that the air may exit the hand vacuum cleaner via a grill located in an upper portion of the main body (e.g., via an air outlet provided in the rear end of the main body or a sidewall adjacent the rear end). Alternately, air may exit through a lower portion of the main body. This may be achieved by conveying the air downwardly through the handle of the hand vacuum cleaner. Accordingly, as exemplified, at least a portion of the air flow path between the dirty air inlet 1030 and the clean air outlet 1040 may flow through the handle 1020. This may help facilitate a variety of different air flow path configurations and clean air outlet 1040 locations. This may also allow at least some of the air being exhausted by the suction motor 1200 to flow over, and optionally help cool, operating components that are located in the handle. Examples of such components may include controllers, circuit boards, other internal electronics and the like. One example of such electronics can include a printed circuit board (PCB)

provided to control optional information display device 1070 and/or power switch 1060.

[00238] In the illustrated embodiment, a handle air flow passage 1250 has an inlet end 1252 that is located toward the top 1022 of the handle downstream from the suction motor 1200, and an outlet end 1254 that is located toward the bottom 1024 of the handle. This may help channel the air through substantially the entire length of the hand grip portion 1026 of the handle 1020.

[00239] As exemplified, the air exhausted from the suction motor 1200 is routed through the handle, and the clean air outlet 1040 is provided in the form of a plurality of slots 1430 that are formed in the lower end 1024 of the handle. Air entering the inlet end 1252 is directed through the handle 1020 and exits via the slots 1430. In this example, the slots or grill 1430 are oriented such that air exiting the clear air outlet 1040 travels generally downwardly and rearwardly from the lower end 1024 of the handle 1020. It will be appreciated that the clean air outlet may be of any design and may be located anywhere in the lower portion of the hand vacuum cleaner.

[00240] Optionally, one or more post-motor filters may be placed in the air flow path between the suction motor 1200 and the clean air outlet 1040. The post-motor filter may be provided at the clean air outlet 1040. The post motor filter may be in an openable housing. For example, as exemplified, the clean air outlet 1040 may be an openable grill. Further, the openable access panel may support the post-motor filter. For example, in the embodiment of Figures 1 to 34, a post-motor filter 1420 is supported by a removable tray 1410 that covers the lower end of the post-motor filter housing 1400 and provides the clean air outlet 1040 in the form of a grill. The illustrated post-motor filter 1420 is a physical foam media filter, but optionally the post-motor filters may be any suitable type of filter and may include one or more of foam filters, felt filters, HEPA filters, other physical filter media, electrostatic filters, and the like.

[00241] With references to Figures 23-27, removable tray 1410 includes a pair of rigid engaging projections 1440 provided on a front end 1412, and a pair of movable engaging projections 1450 extending upwardly from a rear end 1414 and resiliently biased towards the rear end. To separate the tray from the main body 1010, actuating (e.g. depressing) button 1460 results in forward movement of the movable engaging projections 1450, resulting in their disengagement from corresponding recesses 1455 in the main body, allowing the rearward end 1414 of tray 1410 to be pivoted downwardly from handle 1020. Once tray 1410 has been so pivoted, it may be translated rearwardly to remove engaging projections 1440 from corresponding recesses 1445 in the main body. To connect the tray 1410 to the main body 1010, the process may be generally reversed. That is, projections 1440 may be inserted into recesses 1445, and tray 1410 subsequently pivoted upwardly until engaging projections 1450 are secured in recesses 1455. It will be appreciated that any other constructions may be used to removably secure tray 1410 in position on the main body.

[00242] While the figures exemplify positioning the pre-motor filter and suction motor vertically spaced above the cyclone axis, it will be appreciated that the pre-motor filter and suction motor vertically spaced below the cyclone axis.

Removable pre-motor filter assembly

[00243] The following is a description of different features of a removable pre-motor filter assembly for a surface cleaning apparatus. These features may be used by themselves in any surface cleaning apparatus or in any combination or sub-combination with any other feature or features described herein. For example, any of the pre-motor filter configurations described herein may be used with any of the air flow paths, relative positioning of the suction motor and energy storage members, inclined battery packs, battery pack configurations, airflow cooling configurations, and other features described herein.

[00244] In accordance with this feature, the outlet conduit of the filter assembly may be inclined at an angle to the removal direction of the pre-motor filter assembly with the upper (or outermost portion of the outlet conduit in the removal direction) extending further in the downstream direction than the lower (or innermost portion of the outlet conduit in the removal direction). The mating downstream conduit may be similarly oriented. An advantage of this configuration is that the downstream face of the pre-motor filter assembly (which may have a sealing gasket) may be placed on the upstream face of the downstream conduit (which may have a sealing gasket) instead of one face sliding across the other, which could damage one or both gaskets.

[00245] In accordance with this feature, as exemplified, the pre-motor filter 1320 of the hand vacuum cleaner 1000 is optionally part of a removable pre-motor filter assembly 1300. Figures 19 to 22 exemplify one embodiment of a removable pre-motor filter assembly 1300 that includes a generally cylindrical filter 1320 supported by a filter support member 1340. Filter support member 1340 has an outlet conduit 1342 for directing an air flow after it has passed through the filter 1320. In use, air flows from an outer or upstream side 1322 of the filter 1320, through the filter media and to an inner or downstream side 1324 of the filter 1320, and to the outlet conduit 1342.

[00246] Optionally, the outlet conduit 1342 generally faces an inlet end 1202 of suction motor 1200. Therefore, as exemplified, the filter support member 1340 may be generally horizontally oriented so that the pre-motor filter axis 1325 extends in a generally forwards/rearwards direction (from front end 1321 to rear end 1323 of the pre-motor filter assembly) when the hand vacuum cleaner 1000 is oriented with the upper end above the lower end, and the outlet conduit 1342 faces generally rearwardly, and optionally directly faces an inlet end 1202 of suction motor 1200. From the outlet conduit 1342, a treated air conduit 1246 directs the airflow rearwards to an inlet end 1202 of suction motor 1200 that is horizontally spaced from the pre-motor filter 1320.

[00247] As illustrated in Figures 19 to 22, filter support member 1340 has a main body portion 1350 that is located in a hollow interior of the generally cylindrical filter 1320. In the illustrated embodiment, an outer surface of main body portion 1350 is flush with a downstream or inner surface 1324 of filter 1320, and the downstream surface 1324 is in air flow communication with an internal filter conduit 1356. More specifically, in the illustrated example a plurality of apertures 1351 define a porous portion of the filter support member 1340 between a first end 1352 and a second end 1354 of the main body portion 1350. It will be appreciated that more or fewer apertures may be provided in alternative embodiments. Accordingly, if filter 1320 is sealed to or seats securely on body portion 1350, air will be inhibited from travelling between the outer surface of main body portion 1350 and the inner surface 1324 of filter 1320 to thereby bypass the filter media.

[00248] The outlet conduit 1342 extends from the second end 1354 of the main body portion 1350. The second or opposed end 1352 of the main body portion 1350 may be sealed to or may seat securely on the second end 1354 of the main body portion 1350 to inhibit and preferably prevent air from exiting the internal filter conduit 1356 from the second end, so that substantially and preferably all of the air that exits the downstream side 1324 of the pre-motor filter 1320 is directed through outlet conduit 1342.

[00249] In order to inhibit or prevent air exiting through the front end of the internal filter conduit 1356, the front end of the main body portion 1350 may be closed. As exemplified, an end wall 1362 is provided to cap the opposed end 1352 of the main body portion 1350. Optionally, end wall 1362 has an outwardly projecting portion 1363 to facilitate positioning the pre-motor filter assembly 1300 in a surface cleaning apparatus, as discussed further below.

[00250] Optionally, flanges or other sealing members may be provided at one or both ends of the main body portion 1350 to inhibit or prevent airflow from flowing between pre-motor filter 1320 and filter support member 1340 and to the internal

filter conduit 1356, e.g. effectively bypassing the pre-motor filter. In the illustrated example, a circumferential bypass flange 1358 is provided at the second end 1354 of the main body portion 1350.

[00251] The pre-motor filter assembly may be seated in position in the pre-motor filter housing by any means known in the art. As exemplified, one or more alignment or seating members may be provided on one or both of the front and rear ends 1321, 1323 of the pre-motor filter assembly.

[00252] In the illustrated example, a pair of alignment flanges 1370 extend from an axially longer (outermost) side of outlet conduit 1342. Flanges 1370 may facilitate in the seating and/or alignment of pre-motor filter assembly 1300 within a pre-motor filter chamber. For example, in the illustrated example the flanges 1370 may be configured to act as camming surfaces with one or more projections from an internal surface of the openable door 1330 of the pre-motor filter chamber. As shown in Figure 18, openable door 1330 has an inwardly extending projection 1338 that has a width approximately equal to a radial distance between flanges 1370. In this arrangement, as openable door 1330 is closed, projection 1338 is configured to come into contact with both flanges 1370, thereby promoting a predetermined orientation of pre-motor filter assembly 1300 relative to the pre-motor filter housing 1310 as well as locating the outlet conduit to be aligned with the downstream air flow conduit.

[00253] Additionally, or alternatively, flanges 1370 may allow a user to grip and/or manipulate pre-motor filter assembly 1300 without having to come into contact with pre-motor filter 1320, which may become dirty during use.

[00254] Optionally, one or more support projections may be provided on one or both ends of pre-motor filter assembly 1300. In the illustrated example, a pair of support flanges 1372 extend from opposite lateral sides of outlet conduit 1342. Flanges 1372 may facilitate the support and/or alignment of pre-motor filter assembly 1300 within a pre-motor filter chamber. For example, in the illustrated

example the flanges 1372 may be configured to rest on corresponding support surfaces provided at the rearward end of the pre-motor filter chamber. As shown in Figures 15-17, surfaces 1313 are formed in end wall 1344 of the pre-motor filter chamber 1310. Also, a surface 1311 is formed in the opposing end wall 1312. In this arrangement, as pre-motor filter assembly 1300 is lowered into the pre-motor filter chamber 1310, surfaces 1313 are configured to come into contact with and support flanges 1372, and surface 1311 is configured to come into contact with and support outwardly projecting portion 1363 of filter support member 1340, thereby promoting a predetermined vertical position and/or angle of pre-motor filter assembly 1300 relative to the pre-motor filter housing 1310.

[00255] In the illustrated embodiment, filter support member 1340 (including outlet conduit 1342, main body portion 1350, and end wall 1362) is a one piece assembly (e.g. integrally formed). In alternative embodiments, filter support member 1340 may be constructed from two or more parts.

[00256] While in the illustrated example the pre-motor filter 1320 and the filter support member 1340 are co-axial, this may not be the case in alternative embodiments.

[00257] As illustrated in Figure 22, a downstream or terminal end 1344 of the outlet conduit 1342 is at an angle 1357 to a direction of air flow through the outlet conduit (e.g. generally parallel to a central pre-motor filter axis 1325 and/or a central filter support member axis 1355). Outlet conduit 1342 mates with air conduit 1246, which provides the air outlet 1242 from pre-motor filter chamber 1310. As discussed subsequently, the inlet end of outlet conduit 1342 may be similarly angled.

[00258] An advantage of the terminal end of the outlet conduit being at an angle of to a direction through the outlet conduit is that the removable filter assembly may be positioned substantially flush against a downstream air conduit (e.g. a conduit that leads to a suction motor) having a similarly angled terminal end

without requiring lateral movement of the outlet conduit towards other conduit. For example, the filter assembly may be moved in a direction substantially perpendicular to the direction of airflow (e.g., vertically upwardly in the orientation of Figure 11). Such an arrangement may, for example, facilitate the use of a gasket or other sealing member between the ends of the conduits to provide an improved seal between the conduits. For example, if the terminal end of the outlet conduit were perpendicular to a direction of airflow through the conduit, moving the filter assembly in a direction substantially perpendicular to the direction of airflow may shear or otherwise damage a flexible or otherwise deformable gasket (e.g. an elastomeric gasket or the like) provided at the end of the conduit to which the outlet conduit is to be aligned.

[00259] Alternatively, or additionally, such an arrangement may eliminate the need for a biasing or other retaining mechanism to exert a force on the filter assembly to maintain a seal between the conduits. For example, if the terminal end of the outlet conduit were perpendicular to a direction of airflow through the conduit, to avoid damaging a gasket or other sealing member between the conduit ends, at least the final motion to align the conduit ends may be in a direction parallel to a direction of airflow through the conduit. In such a situation, it may be necessary to maintain the application of an axial force to the pre-motor filter assembly in order to maintain an adequate seal.

[00260] As illustrated in Figures 11 to 17, a terminal end 1241 of the treated air conduit 1246 may also be optionally provided at an angle 1257 (see Figure 11) to a direction of air flow through the treated air conduit 1246 that leads to the suction motor 1200. In the illustrated example, the angle 1257 is about the same as the angle 1357 between the direction of air flow through the outlet conduit 1342 of the pre-motor filter assembly and the terminal end 1344 of the outlet conduit 1342. This arrangement allows the outlet conduit 1342 and the treated air conduit 1246 to cooperatively define a generally linear air flow passage despite the angled terminal ends of the respective conduits.

[00261] Optionally, a gasket 1247 or other sealing member may be provided to help provide a substantially air tight seal between the terminal end 1344 of the outlet conduit 1342 and the terminal end 1241 of the treated air conduit 1246. In the illustrated example, the gasket 1247 has a generally consistent axial length about its perimeter, e.g. to facilitate a seal between the ends 1344, 1241 that are generally parallel to each other due to angles 1357, 1257 being about the same. Alternatively, gasket 1247 may have a variable axial length about its perimeter, e.g. to facilitate a seal where angles 1357, 1257 are different from each other (e.g. where ends 1344, 1241 are not parallel.

[00262] Another advantage of the terminal end of the outlet conduit and the inlet end of conduit 1246 being at an angle to a direction through the outlet conduit is that the outlet face of the pre-motor filter assembly may be placed onto the inlet or upstream face of conduit 1246 during insertion of the pre-motor filter assembly. Further, when door 1330 is placed in the closed position, the engagement of inwardly extending projection 1338 and flanges 1370 may apply sufficient pressure to seal the end face and inhibit leakage out of the air flow conduits.

[00263] Another advantage of the terminal end of the outlet conduit being at an angle of to a direction through the outlet conduit is that the removable filter assembly may only be positionable within the surface cleaning apparatus in a single pre-determined orientation. In other words, a user may only be able to mount to the pre-motor filter assembly in a single orientation relative to the surface cleaning apparatus. This may prevent, for example, the pre-motor filter from being installed e.g. upside-down from its designed orientation, or otherwise mis-aligned. Accordingly, an asymmetric pre-motor filter media may be provided without the risk of a user improperly positioning the filter within a surface cleaning apparatus.

[00264] It will be appreciated that some of the embodiments disclosed herein may not use any of the features of the pre-motor filter assembly disclosed herein

and that, in those embodiments, a pre-motor filter of any kind known in the art may be used, or a pre-motor filter may not be provided.

Inclined battery pack

[00265] The following is a description of different features of a hand vacuum cleaner with an inclined battery pack. These features may be used by themselves in any surface cleaning apparatus or in any combination or sub-combination with any other feature or features described herein. For example, any of the battery pack configurations described herein may be used with any of the air flow paths, pre-motor filter assemblies, relative positioning of the suction motor and energy storage members, battery pack configurations, airflow cooling configurations, and other features described herein.

[00266] In accordance with this feature, an upper end of the battery pack may be inclined in a forward direction. Accordingly, the lower end of the battery pack may extend further rearwardly. If the dirt collection region is located adjacent a forward face of the battery pack, then the dirt collection region may extend further rearwardly, thereby enabling a larger dirt collection region to be provided.

[00267] It will be appreciated that, in many embodiments, power may be supplied to the hand vacuum cleaner 1000 by an electrical cord connected to the hand vacuum (not shown) that can be connected to a standard wall electrical outlet. In such embodiments, the suction motor 1200 and other electronics may run on AC power supplied from a wall socket. In accordance with this feature, alternatively, or in addition to being powered by an electrical cord, the hand vacuum cleaner may include one or more onboard power sources. The power sources may be any suitable device, including, for example one or more batteries. Optionally, the batteries and battery packs may be rechargeable or may be replaceable, non-rechargeable batteries.

[00268] Battery pack 1500 may include any suitable number of cells 1510, and may include, for example, lithium ion battery cells. Any number of cells may be used to create a power source having a desired voltage and current, and any type of battery may be used, including NiMH, alkaline, and the like. Battery pack 1500 may be of any known design and may be electrically connected to the hand vacuum cleaner by any means known in the art.

[00269] Figures 32 to 34 exemplify a battery pack 1500. As exemplified, battery pack 1500 has an upper end 1506, a lower end 1508, a front face 1502, and a rear face 1504. In the illustrated example, battery pack 1500 is generally rectangular, but alternative embodiments may have any suitable shape.

[00270] In the illustrated examples, battery pack 1500 has a power coupling 1540 for supplying power (e.g. charging) the cells 1510. Any suitable power coupling may be used, for example, a female coupling configured to receive a male coupling of an electrical cord that is connectable to a source of AC or DC power, such as a household power socket. Optionally, power coupling 1540 is accessible when the battery pack 1500 is electrically connected to hand vacuum cleaner 1000. An advantage of such a configuration is that the battery pack may be charged without removing it from the hand vacuum cleaner 1000. Another advantage is that it may allow for corded operation of hand vacuum cleaner 1000 when the power cells 1510 are substantially or completely discharged, as power may be supplied to the suction motor via power coupling 1540 instead of (or while) charging the cells 1510.

[00271] Optionally, the battery pack 1500 may be removable from the rest of the hand vacuum using any mechanism known in the art. Referring to Figures 28 and 29, the illustrated example battery pack 1500 is configured to be removable by sliding the battery pack downward through an aperture 1590 (see Figure 31) provided in the lower end 1008 of hand vacuum 1000. Optionally, one or more guiding features may be provided on one or both of the hand vacuum 1000 and

the battery pack 1500. As illustrated in Figure 33, a pair of longitudinal ridges 1520 is provided on the front face 1502 of battery pack 1500. Ridges 1520 are configured to be slidably received in corresponding grooves 1525 on an inner face of aperture 1590 (see Figure 29). Ridges 1520 and grooves 1525 thus cooperatively assist in aligning the battery pack as is it moved upwardly into and/or downwardly out of aperture 1590.

[00272] In the illustrated embodiment, the upper end 1506 of the battery pack 1500 is provided with a plurality of electrical connectors 1530 that can inter-engage with compatible electrical connectors 1580 on the main body 1010 (see e.g. Figure 29). Engagement between the electrical connectors 1530 and 1580 can provide an electrical connection between the batteries 1510 and the suction motor 1200, and optionally other electronics, such as display device 1070. In this arrangement, removing the battery pack 1500 interrupts the supply of power to the suction motor 1200, and the suction motor 1200 is not operable when the battery pack 1500 is detached. It will be appreciated that electrical connectors 1530 may be located elsewhere on the battery pack.

[00273] The battery pack 1500 can be secured to the rest of the main body 1010 using any suitable attachment mechanism, including mechanical latches, retention catches, or any other mechanism attachment structure capable of being released to disengage and remove the battery pack. Optionally, one or more actuators for releasing the attachment mechanism may be provided on the main body 1010 (and remain with the main body when the battery pack is removed), or alternatively may be provided on the battery pack 1500 such that the actuator is removable with the battery.

[00274] Referring to Figures 9 and 33, in the illustrated example battery pack 1500 is configured to be releasably secured to hand vacuum 1000 using a single latch at the lower end 1506. The latch can be released by pressing the release actuator that is provided in the form of button 1550. Pressing rearwardly on the

button 1550 results in a disengagement of a tab 1552 from a corresponding retaining surface 1523 provided proximate to and facing towards aperture 1590. The button 1550 is mounted to the lower end 1506 of battery pack 1500, and is removable with the battery pack.

[00275] Alternatively, a release actuator may be provided on the main body 1010 of the hand vacuum cleaner, and a corresponding retaining surface may be provided on the battery pack 1500. For example, in the example illustrated in Figure 36, a retaining surface 1523 is provided on a rear face 1504 of battery pack 1500, and is removable with the battery pack. A release actuator that is provided in the form of button 1550 is positioned on the main body 1010 of hand vacuum 1000. Pressing forwardly on the button 1550 results in a pivoting and disengagement of a tab 1552 from retaining surface 1523.

[00276] Optionally, the battery pack 1500 may be configured so that it can be connected to one or more other devices/apparatuses, in addition to the hand vacuum 1000. For example, the same battery pack 1500 that is used with the hand vacuum could be connectable to another vacuum, power tool, cleaning device (such as a mop, steam cleaner, carpet extractor, etc.) or any other suitable device to power the other device(s) that the battery pack can be connected to.

[00277] Optionally, the battery pack 1500 may have one or more output devices to e.g. provide an indication of a status of the battery pack and/or of one or more of the individual battery cells 1510. For example, one or more visual indicators such as LEDs and/or an audio output device such as a speaker may be provided. In the example illustrated in Figure 32, a number of LEDs 1560 are provided along an edge between a rear face 1504 and a side face of the battery pack 1500. An advantage of positioning the output devices along an edge of the battery pack is that the indicators may be visible from a greater range of relative orientations than if they were positioned on a single face of the battery pack.

[00278] As illustrated in Figure 4, another advantage of positioning the LEDs 1560a-1560c proximate a side edge of a rear face 1504 is that they may be more readily visible to a user holding the hand vacuum cleaner 1000 in front of them. Accordingly, a user may be able to see the LEDs 1560a-1560c while using the hand vacuum without having to re-orient the hand vacuum cleaner from a typical in-use position.

[00279] As discussed above, battery pack 1500 may include any suitable number of individual battery cells 1510. In example illustrated in Figure 34, battery pack 1500 contains 7 cells 1510a-1510g. Each cell 1510 is generally cylindrical, and the cells are arranged in a generally linear configuration (in a column) along the height of battery pack 1500. More specifically, cells 1510a to 1510f are arranged with their central longitudinal axes positioned along a battery pack axis 1505 that in the illustrated example is parallel to a front wall 1501 of the battery pack 1500, and cell 1510g is positioned with its central longitudinal axis offset rearwardly from axis 1505.

[00280] As shown in Figure 10, in the illustrated example battery pack 1500 extends upwardly and forwardly when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner. For example, battery pack axis 1505 is at an angle 1507 to the horizontal when the inlet conduit axis 1035, cyclone axis 1115, filter axis 1325, and/or suction motor axis 1205 is generally horizontally oriented. For example, battery pack axis 1505 may be generally parallel to a handle axis 1025 (see Figure 31).

[00281] Also, in the configuration shown in Figure 10, a portion 1123 of the dirt collection chamber 1122 adjacent the rear end wall 1124 of the chamber 1122 is located below a portion of the battery pack 1500. An advantage of this design (i.e. providing at least some vertical overlap between an energy storage member and a dirt collection region) is that it may help provide a relatively larger dirt

chamber capacity while helping to reduce the overall size of the hand vacuum 1000.

[00282] In the illustrated example, the rear end wall 1124 of the dirt collection chamber 1122 is at an angle to the vertical. As shown, rear end wall 1124 is generally parallel to the front wall 1501 of the battery pack 1500 and to the battery pack axis 1505, although in alternative embodiments they may not be parallel.

[00283] Also, when the inlet conduit axis 1035, cyclone axis 1115, filter axis 1325, and/or suction motor axis 1205 is generally horizontally oriented, a lower end of the front face 1502 is positioned rearward of an upper portion of the front face 1502.

[00284] It will be appreciated that the dirt collection region may be of various shapes which occupies some or all of the additional volume created by orienting the battery pack 1500 such that the lower end extends further rearwardly.

[00285] It will be appreciated that some of the embodiments disclosed herein may not use the inclined energy storage members as disclosed herein and that, in those embodiments, any suitable positioning of the energy storage members, if provided, may be used.

Positioning of suction motor and energy storage member

[00286] The following is a description of different features of a hand vacuum cleaner with a suction motor positioned an upper end of a forwardly-inclined handle and rearward of at least some of the energy storage members. These features may be used by themselves in any surface cleaning apparatus or in any combination or sub-combination with any other feature or features described herein. For example, any of the relative positioning of the suction motor and energy storage members described herein may be used with any of the air flow paths, pre-

motor filter assemblies, inclined battery packs, battery pack configurations, airflow cooling configurations, and other features described herein.

[00287] In accordance with this feature, the batteries and the suction motor may be positioned so as to reduce the torque experienced by a user operating the hand vacuum cleaner. For example, by positioning a suction motor positioned at or rearward of an upper end of a forwardly-inclined handle and rearward of at least some of the energy storage members, the weight of the suction motor may partially counterbalance the weight of the batteries.

[00288] As previously discussed, in some embodiments, batteries used to power the hand vacuum cleaner 1000 may be provided at a single location, for example as one large battery pack 1500 that may include any suitable number of cells 1510, and may include, for example, lithium ion battery cells.

[00289] Optionally, a battery pack 1500 may be positioned such that some or all of the battery cells 1510 are positioned forward of a suction motor. In this configuration, the distribution of the weight of the battery pack 1500 and the weight of the suction motor 1200 may affect the hand feel and/or perceived balance of the hand vacuum 1000.

[00290] In the example illustrated in Figure 10, suction motor 1200 is positioned rearward of cells 1510a, 1510b, 1510c, 1510d, and 1510e of battery pack 1500. In the example illustrated in Figure 43, suction motor 1200 is positioned rearward of cells 1510a, 1510b, 1510d, 1510e, and 1510g of battery pack 1500. In the examples illustrated in Figures 36, 40, and 47, all of cells 1510a-1510f are positioned forward of the suction motor 1200.

[00291] Suction motor 1200 is preferably positioned at the upper end of a forwardly inclined handle 1020, as shown in the illustrated embodiments, although it may alternatively be positioned rearward of the upper end of the handle or at the lower end or at a mid-point of a handle. Additionally, or alternatively, the handle 1020 may be generally vertical or may be rearwardly inclined.

[00292] Optionally, a battery pack 1500 may be positioned such that a volume defined by the battery cells 1510 is positioned such that an axis of rotation 1115 of a cyclone chamber 1110 may intersect such a volume when the battery pack is secured to the main body 1010. For example, the cyclone chamber 1110 may be oriented horizontally, and the battery pack 1500 may be positioned rearward of the cyclone chamber. An advantage of such a configuration is that it may facilitate a more compact design of hand vacuum 1000.

[00293] It will be appreciated that some of the embodiments disclosed herein may not use the relative positioning of the suction motor, handle, and energy storage members as disclosed herein and that, in those embodiments, any suitable design may be used.

Nested energy storage members

[00294] The following is a description of different features of a hand vacuum cleaner having an energy storage member (e.g. a battery pack that includes one or more battery cells) that is positioned rearward of a dirt collection region and at least partially underlies at least a portion of one or both of a cyclone chamber and a pre-motor filter. These features may be used by themselves in any surface cleaning apparatus or in any combination or sub-combination with any other feature or features described herein. For example, any of the battery pack configurations described herein may be used with any of the air flow paths, pre-motor filter assemblies, relative positioning of the suction motor and energy storage members, inclined battery packs, airflow cooling configurations, and other features described herein.

[00295] In accordance with this feature, the some or all of a battery pack may be located beneath some or all of a cyclone chamber and/or a pre-motor filter. For example, the dirt collection region may be configured to enable the battery pack to nest or partially nest therein. Accordingly, the overall length of the hand vacuum

cleaner (in the forward/rearward direction) may be reduced, thereby providing a more compact hand vacuum cleaner.

[00296] As previously discussed, in some embodiments, batteries used to power the hand vacuum cleaner 1000 may be provided at a single location, for example as one large battery pack 1500 that may include any suitable number of cells 1510, and may include, for example, lithium ion battery cells.

[00297] Optionally, a battery pack 1500 may be positioned such that at least a portion of the battery pack 1500 is nested vertically spaced from a dirt collection region 1122. For example, at least a portion of the battery pack 1500 may underlie at least a portion of one or both of a cyclone chamber 1110 and a pre-motor filter 1320. In such a configuration, the overall size or length of the hand vacuum 1000 may be reduced.

[00298] For example, as illustrated in the embodiment of Figures 36 and 40, as well as the embodiment of Figure 43, a battery pack 1500 is positioned rearward of a dirt collection region 1122, and the entire battery pack 1500 is below a rearward portion of a pre-motor filter 1320.

[00299] In the example illustrated in Figures 47, a battery pack 1500 is positioned rearward of a dirt collection region 1122, and below a rearward portion of the cyclone chamber and below the pre-motor filter.

[00300] As discussed previously, battery pack 1500 may include any suitable number of individual battery cells, and the individual cells may be arranged in any suitable configuration. For example, some of the energy storage members (i.e. individual battery cells 1510) may be arranged one above another and some may be arranged one behind another, e.g. within a single battery pack 1500. For example, the energy storage members within a battery pack may be arranged in at least two columns in the forward/rearward direction. Accordingly, the battery pack may have a reduced height so as to assist in nesting the battery pack under a pre-motor filter and/or a cyclone chamber. An advantage of such configurations

is that they may help provide a compact overall design without adversely affecting the hand feel and/or perceived balance of the hand vacuum.

[00301] As illustrated in Figure 47, cells 1510a-1510g are arranged generally in two linear columns of cells. Specifically, cells 1510a, 1510c, 1510e, and 1510g are arranged in a first generally vertical column along a column axis 1505a that in the illustrated example is adjacent and generally parallel to a front wall 1501 of the battery pack 1500, and cells 1510b, 1510d, and 1510f are arranged in a second generally vertical column along a column axis 1505b that in the illustrated example is adjacent and generally parallel to a rear wall 1503 of the battery pack 1500.

[00302] As illustrated in Figure 43, cells 1510a-1510g are arranged generally in three linear columns of cells. Specifically, cells 1510b and 1510e are arranged in a first generally vertical column along a column axis 1505a that in the illustrated example is adjacent and generally parallel to a front wall of the battery pack 1500, cells 1510a, 1510d, and 1510g are arranged in a second generally vertical column along a column axis 1505b positioned rearward of and generally parallel to column axis 1505a, and cells 1510c and 1510f are arranged in a third generally vertical column along a column axis 1505c positioned rearward of and generally parallel to column axis 1505b.

[00303] It will be appreciated that some of the embodiments disclosed herein may not use the nested energy storage members as disclosed herein and that, in those embodiments, any suitable positioning of the energy storage members, if provided, may be used.

Airflow cooling of an energy storage chamber

[00304] The following is a description of different features of a hand vacuum cleaner having an airflow path in which air exiting a cyclone chamber impinges on a wall of an energy storage chamber. These features may be used by themselves

in any surface cleaning apparatus or in any combination or sub-combination with any other feature or features described herein. For example, any of the airflow configurations described herein may be used with any of the air flow paths, pre-motor filter assemblies, relative positioning of the suction motor and energy storage members, inclined battery packs, battery pack configurations, and other features described herein.

[00305] Optionally, at least a portion of an air flow path between the dirty air inlet 1030 and the clean air outlet 1040 may be directed against a wall of an energy storage chamber. For example, a cyclone air outlet may face a wall of an energy storage chamber, whereby air exiting the cyclone chamber impinges on the energy storage chamber wall. In such a configuration, an airflow generated by suction motor 1200 flowing against and/or over such a wall may help cool one or more energy storage members positioned within the energy storage chamber. For example, energy storage members may include chemical batteries, such as lithium-ion batteries, that produce heat while being discharged (e.g. while supplying power to the hand vacuum 1000). By directing a stream of air directly at, or at an angle to, a wall of a battery chamber, any boundary layer of air (which may act as an insulator) or laminar flow along a wall of a battery chamber is disrupted, thereby enabling enhanced cooling.

[00306] It will be appreciated that the battery pack may be provided in a chamber that receives a battery pack. Accordingly, there may be two walls between the impinging air stream and the batteries, i.e., a wall of the battery pack and a wall of the chamber in which the batter pack is received. Provided the walls contact each other or are adjacent, the impinging air stream will provide a cooling effect.

[00307] For example, in the examples illustrated in Figures 36 and 40, cyclone air outlet 1130 faces a rear wall 1236 of the upflow duct or conduit 1230 that directs air upwardly towards a pre-motor filter 1320. In these embodiments,

rear wall 1236 is also a front wall of a recess in which battery pack 1500 is positioned. That is, rear wall 1236 is a wall of an energy storage chamber in which one or more energy storage members (e.g. individual cells 1510 and/or a battery pack 1500 containing a plurality of cells 1510) are positioned.

[00308] It will be appreciated that some of the embodiments disclosed herein may not use the airflow cooling of an energy storage member as disclosed herein and that, in those embodiments, any suitable airflow design may be used.

[00309] As used herein, the wording "and/or" is intended to represent an inclusive - or. That is, "X and/or Y" is intended to mean X or Y or both, for example. As a further example, "X, Y, and/or Z" is intended to mean X or Y or Z or any combination thereof.

[00310] While the above description describes features of example embodiments, it will be appreciated that some features and/or functions of the described embodiments are susceptible to modification without departing from the spirit and principles of operation of the described embodiments. For example, the various characteristics which are described by means of the represented embodiments or examples may be selectively combined with each other. Accordingly, what has been described above is intended to be illustrative of the claimed concept and non-limiting. It will be understood by persons skilled in the art that other variants and modifications may be made without departing from the scope of the invention as defined in the claims appended hereto. The scope of the claims should not be limited by the preferred embodiments and examples, but should be given the broadest interpretation consistent with the description as a whole.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	HANDHELD SURFACE CLEANING APPARATUS

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [■] The attached application, or
- [ ] United States application or PCT international application number _____

  filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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Inventor: Wayne Ernest Conrad Date (Optional) :_____

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Application or Docket Number: 18/376,975

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	320
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	700
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	800
TOTAL CLAIMS (37 CFR 1.16(i))	18 minus 20 =	* 0			OR	x =	0
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	*				x =	0
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1820

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
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	Application Size Fee (37 CFR 1.16(s))									
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/376,975	10/05/2023		1820	10452-P52585US11	18	2

CONFIRMATION NO. 4138

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Power of Attorney: The patent practitioners associated with Customer Number 01059

Domestic Priority data as claimed by applicant

This application is a CON of 18/346,834 07/04/2023
which is a CON of 17/342,299 06/08/2021 PAT 11,737,621
which is a CON of 16/900,465 06/12/2020 PAT 11,445,875
which is a CON of 15/642,781 07/06/2017 PAT 10,722,086

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
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Early Publication Request: No
Title

HANDHELD SURFACE CLEANING APPARATUS

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/376,975	10/05/2023	Wayne Ernest Conrad	10452-P52585US11	4138

1059 7590 10/27/2023

BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40TH FLOOR
TORONTO, ONTARIO M5H 3Y2
CANADA

EXAMINER
CENTRAL, DOCKET

ART UNIT	PAPER NUMBER
3723	

NOTIFICATION DATE	DELIVERY MODE
10/27/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipprocessingcentre@bereskinparr.com

Decision Granting Request for Prioritized Examination (Track I)	**Application No.** 18/376,975	**Applicant(s)** Conrad, Wayne Ernest	
	Examiner FIKIRTE A GEREMEW	**Art Unit** OMBL	**AIA (FITF) Status** Yes

1. THE REQUEST FILED 05 October 2023 IS **GRANTED** .

The above-identified application has met the requirements for prioritized examination

A. ☑ for an original nonprovisional application (Track I).
B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination**. The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

A. filing a **petition for extension of time** to extend the time period for filing a reply;

B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims** , or a multiple dependent claim;

C. filing a **request for continued examination** ;

D. filing a notice of appeal;

E. filing a request for suspension of action;

F. mailing of a notice of allowance;

G. mailing of a final Office action;

H. completion of examination as defined in 37 CFR 41.102; or

I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to FIKIRTE GEREMEW at (703) 756-1930. In his/her absence, calls may be directed to Petition Help Desk at (571) 272-3282.

/FIKIRTE A GEREMEW/ PROGRAM SUPPORT ASSISTANT, OMBL	

PATENT COOPERATION TREATY

RECEIVED
JUN 30 2010
BERESKIN & PARR LLP

From the INTERNATIONAL SEARCHING AUTHORITY

To:
BERESKIN & PARR LLP/S.E.N.C.R.L.,S.R.L.
40 King Street West
40th floor
TORONTO, Ontario
Canada, M5H 3Y2

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 25 June 2010 (25-06-2010)
Applicant's or agent's file reference 10452-378	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/CA2010/000340	International filing date *(day/month/year)* 09 March 2010 (09-03-2010)

Applicant
G.B.D. CORP. ET AL

1. [X] The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19 :
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46) :

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   MR
   DD ew Aug 25/10 9K

2. [ ] The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. [ ] **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that :

   [ ] the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

   [ ] no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**
   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

   Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the PCT *Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/CA	Authorized officer
Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001-819-953-2476	Maureen Matheson (819) 953-1495

Form PCT/ISA/220 (July 2009) *(See notes on accompanying sheet)*

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide.*

In these Notes, "Article," "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only *(see PCT Applicant's Guide, Annex B).*

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, International Phase, paragraph 296).

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Preliminary Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When? Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How? Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet or sheets containing a complete set of claims in replacement of all the claims previously filed must be submitted.

Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively in Arabic numerals (Section 205(a)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

(i) the claim is unchanged;
(ii) the claim is cancelled;
(iii) the claim is new;
(iv) the claim replaces one or more claims as filed;
(v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]: "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]: "Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]: "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under Article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1bis(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion 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 (Rule 43bis.1(c)).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to,the translation of the claims as filed.
For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide*, National Chapters.

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
BERESKIN & PARR LLP/S.E.N.C.R.L.,S.R.L.
40 King Street West
40th floor
TORONTO, Ontario
Canada, M5H 3Y2

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	25 June 2010 (25-06-2010)
Applicant's or agent's file reference 10452-378	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/CA2010/000340	09 March 2010 (09-03-2010)	11 March 2009 (11-03-2009)

International Patent Classification (IPC) or both national classification and IPC
IPC: ***A47L 9/16*** (2006.01), ***A47L 5/24*** (2006.01), ***A47L 9/00*** (2006.01)

Applicant
G.B.D. CORP. ET AL

DD Jan 11/2011
NR

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

[X]	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
[X]	Box No. V	Reasoned statement under Rule 43*bis*.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
[ ]	Box No. VI	Certain documents cited
[ ]	Box No. VII	Certain defects in the international application
[X]	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 66.1*bis*(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.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/CA	Date of completion of this opinion	Authorized officer
Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001-819-953-2476	03 June 2010 (03-06-2010)	Andrew Pothier (819) 934-2577

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/CA2010/000340

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   [X] 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(a))

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 filed or furnished:

   a. (means)

      [ ] on paper

      [ ] in electronic form

   b. (time)

      [ ] the international application as filed.

      [ ] together with the international application in electronic form

      [ ] subsequently to this Authority for the purposes of search

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 in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments :

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Box No. V **Reasoned statement under Rule 43*bis*.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	5-6, 8, 14, 27-30	YES
	Claims	1-4, 7, 9-13, 15-26, 31-32	NO
Inventive step (IS)	Claims	27-30	YES
	Claims	1-26, 31-32	NO
Industrial applicability (IA)	Claims	1-32	YES
	Claims	NONE	NO

2. Citations and explanations :

Cited References:

D1: US 2008 040883 A1 (BESKOW et al.) 21 February 2008 (21-02-2008)
D2: US 6 991 666 B2 (ORGAN) 31 January 2006 (31-01-2006)

Point of Invention:

A hand vacuum cleaner with a cyclone unit, which comprises at least one cycle and least one removable dirt collection chamber, which stays sealed after it has been removed and can be opened when ready for disposal of the collected dirt.

Novelty (N)

Claims 1-4, 7, 9-13, 15-26 & 31-32 are not novel and do not comply with **Article 33(2) of the PCT**. Document D1 discloses a hand surface cleaning apparatus (104) with a first cyclone unit (1000) that is removable as a sealed unit from the surface cleaning apparatus, comprising a cyclone (1032) a dirt collection chamber (1006) position exterior to the cyclone, and a suction motor (910) and an air flow passage that is removable and formed integrally with the cyclone unit. The cyclone unit may also be formed with an access port (para 102).

Claims 5-6, 8, 14, 27-30 are novel and do comply with **Article 33(2) of the PCT**. The subject matter of claim differs from the prior art in that the cyclone unit is an integrally formed one-piece assembly, has mounting members between the suction housing and cyclone unit that rotationally mount together, it has a second cyclone unit and the airflow inlet shape.

Inventive Step (IS)

Given the objection under Novelty, claims 1-4, 7-13, 15-26 & 31-32 are also considered to lack an inventive step in light of the described prior art (D1) and thus fail to comply with **Article 33(3) of the PCT**.

Claims 5-6, 8 & 14 do not comply with **Article 33(3) of the PCT**. The subject matter described and claimed in this application, of these claims would have been obvious to a person skilled in the art or science to which they pertain, having regard to D1 in view of D2. D1 teaches a majority of the elements as described above. Mounting members rotationally secured together is well know in the art. D2 teaches an integrally formed one-piece assembly cyclone unit (210, paragraph 35, Figures 2-5) and multiple cyclones (paragraph 34).

[X] Continued in Supplemental Box

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made :

Claims 11 & 33 are unclear and do not comply with Article 6 of the PCT. The double inclusion of any element renders the claims indefinite. The following expressions have already been defined previously in the claims and should therefore be referred to using a definite article:

"dirty air inlet" (claim 11, line 15)
"air flow chamber" (claim 33, line 4)

Supplemental Box

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

Continuation of : Box No. V

Claims 27-30 do comply with **Article 33(3) of the PCT**. The subject matter of claims 27-30 is considered to involve an inventive step since the prior art does not fairly suggest the airflow inlet shape.

Industrial Applicability (IA)

The subject matter of claims 1-32 is considered to be industrially applicable and thus complies with the requirements of **Article 33(4) of the PCT**.

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 10452-378	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below
International application No. **PCT/CA2010/000340**	International filing date *(day/month/year)* 09 March 2010 (09-03-2010)	(Earliest)Priority date *(day/month/year)* 11 March 2009 (11-03-2009)
Applicant G.B.D. CORP. ET AL		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 7 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

[X] 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))

b. [ ] This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. [ ] With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I

2. [ ] **Certain claims were found unsearchable** (see Box No. II)

3. [ ] **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

[ ] the text is approved as submitted by the applicant

[X] the text has been established by this Authority to read as follows :

Hand Vacuum Cleaner with Removable Dirt Chamber

5. With regard to the **abstract**,

[X] the text is approved as submitted by the applicant

[ ] the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 6

[X] as suggested by the applicant

[ ] as selected by this Authority, because the applicant failed to suggest a figure

[ ] as selected by this Authority, because this figure better characterizes the invention

b. [ ] none of the figures is to be published with the abstract

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2010/000340

A. CLASSIFICATION OF SUBJECT MATTER
IPC: ***A47L 9/16*** (2006.01) , ***A47L 5/24*** (2006.01) , ***A47L 9/00*** (2006.01)
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC (2006.1): A47L 9/16 A47L 5/24 A47L 9/00
ECLA: A47L 9/16F
USPC: 55/426 55/337

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)
Databases: EPOQUE, Canadian Patent Database
Keywords: cyclon*/vortex/centrifugal, dirt/debris, collect*/chamber/compartment/stage, remov*/detach*m suction/vacuum, seal/airtight, portabl*/hand*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 2008 040883 A1 (BESKOW et al.) 21 February 2008 (21-02-2008) *paragraphs 101, 105, 120; Figures 9-13C*	1-4, 7, 9-13, 15-26, 31-32 5-6, 8, 14
Y	US 6 991 666 B2 (ORGAN) 31 January 2006 (31-01-2006) *paragraph 34; Figures 1-9C*	5-6, 8, 14
A	EP 1 938 736 A2 (OH et al.) 02 July 2008 (02-07-2008) *paragraph 34; Figures 1-7*	1-13, 15-26
A	US 5 035 024 A (STEINER et al.) 30 July 1991 (30-07-1991) *col.6, lines 12-62; Figures 3-8*	1-13, 15-26
A	US 6 375 696 B2 (WEGLIN et al.) 23 April 2002 (23-04-2002) *paragraph 71-72, 81; claim 38, Figures 4-8*	1-13, 15-26

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2007 143953 A1 (HWANG et al.) 28 June 2007 (28-06-2007) *paragraph 88; Figures 1-4, 10-18*	1-26
A	WO 2007 104138 A1 (CONRAD) 20 September 2007 (20-09-2007) *paragraphs 55-145; Figures 1-2a, 6g-6h*	1-26
A	US 7 445 655 B2 (BOCK et al.) 04 November 2008 (04-11-2008) *col. 5, lines 9-46; claim 1*	1-26
A	US 2006 137309 A1 (JEONG et al.) 29 June 2006 (29-06-2006) *paragraphs 15-18; Figures 1-6*	1-26

Dyson Ex1004
Page 160

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
US2008040883A1	21-02-2008	CN101448447A	03-06-2009
		CN101460083A	17-06-2009
		CN101583302A	18-11-2009
		EP2007264A1	31-12-2008
		EP2012638A1	14-01-2009
		EP2111144A2	28-10-2009
		SE531125C2	23-12-2008
		SE0700143A	20-07-2008
		SE0700143L	20-07-2008
		US2009208491A1	20-08-2009
		US2010017997A1	28-01-2010
		US2010024154A1	04-02-2010
		US2010083459A1	08-04-2010
		WO2007117196A1	18-10-2007
		WO2007117197A1	18-10-2007
		WO2008088278A2	24-07-2008
		WO2008088278A3	04-09-2008
		WO2008100563A2	21-08-2008
		WO2008100563A3	18-12-2008
US6991666B2	31-01-2006	AT273654T	15-09-2004
		AT279874T	15-11-2004
		AU2002225207B2	09-12-2004
		AU2002226556B2	20-05-2004
		AU2002226556B8	09-09-2004
		CA2438069A1	06-09-2002
		CA2439250A1	06-09-2002
		CA2439250C	25-03-2008
		CN1556682A	22-12-2004
		CN1290467C	20-12-2006
		CN1492742A	28-04-2004
		CN100522036C	05-08-2009
		DE60201020D1	23-09-2004
		DE60201020T2	08-09-2005
		DE60201020T3	15-05-2008
		DE60201666D1	25-11-2004
		DE60201666T2	01-06-2006
		EP1361814A1	19-11-2003
		EP1361814B1	18-08-2004
		EP1361814B2	10-10-2007
		EP1370172A2	17-12-2003
		EP1370172B1	20-10-2004
		ES2225775T3	16-03-2005
		ES2225775T5	01-04-2008
		ES2230478T3	01-05-2005
		GB0104680D0	11-04-2001
		GB0109390D0	30-05-2001
		GB0109393D0	30-05-2001
		GB0109402D0	30-05-2001
		GB2372434A	28-08-2002
		GB0109406D0	30-05-2001
		JP2004520137T	08-07-2004
		JP3860541B2	20-12-2006
		JP2004528876T	24-09-2004
		JP4002185B2	31-10-2007
		US2004074213A1	22-04-2004
		US2004112022A1	17-06-2004
		US7018439B2	28-03-2006
		WO02067742A2	06-09-2002
		WO02067742A3	02-10-2003
		WO02067750A1	06-09-2002
		WO02067752A1	06-09-2002

EP1938736A2	02-07-2008	CN101209195A	02-07-2008
		EP1938736A3	24-02-2010
		RU2007126417A	20-01-2009
US5035024A	30-07-1991	US4899418A	13-02-1990
		US5005252A	09-04-1991
US6375696B2	23-04-2002	CA2334795A1	06-09-2001
		CA2334795C	21-09-2004
		CA2338399A1	06-09-2001
		CA2338399C	16-11-2004
		CN1312048A	12-09-2001
		CN1267052C	02-08-2006
		GB0105379D0	18-04-2001
		GB2359984A	12-09-2001
		GB2359984B	28-01-2004
		MXPA01002379A	06-08-2002
		US2001018865A1	06-09-2001
		US6596044B1	22-07-2003
		US2002166310A1	14-11-2002
		US6818032B2	16-11-2004
US2007143953A1	28-06-2007	AT449646T	15-12-2009
		AU2006249267A1	28-06-2007
		AU2006249267B2	11-12-2008
		AU2006249267B8	18-12-2008
		AU2006249291A1	06-12-2007
		AU2006249291B2	26-02-2009
		AU2006249292A1	22-11-2007
		AU2006249292B2	26-02-2009
		AU2007200406A1	13-09-2007
		AU2007200406B2	21-08-2008
		AU2007200407A1	13-09-2007
		AU2007200407B2	18-06-2009
		AU2007200408A1	20-03-2008
		AU2007200408B2	18-06-2009
		AU2007200409A1	13-12-2007
		AU2007200409B2	28-05-2009
		AU2007346911A1	21-08-2008
		AU2007356554A1	22-01-2009
		AU2008276858A1	22-01-2009
		CA2598113A1	06-03-2008
		CA2598117A1	06-03-2008
		CN1981688A	20-06-2007
		CN101023852A	29-08-2007
		CN101023853A	29-08-2007
		CN101066199A	07-11-2007
		CN101073480A	21-11-2007
		CN101077286A	28-11-2007
		CN101138478A	12-03-2008
		DE602007003396D1	07-01-2010
		EP1795102A2	13-06-2007
		EP1795102A3	17-02-2010
		EP1825797A2	29-08-2007
		EP1839758A1	03-10-2007
		EP1839758B1	25-11-2009
		EP1852048A2	07-11-2007
		EP1857032A2	21-11-2007
		EP1857032A3	15-07-2009
		EP1859719A2	28-11-2007
		EP1897479A2	12-03-2008
		EP1980327A2	15-10-2008
		EP1985372A2	29-10-2008
		EP1985373A2	29-10-2008
		EP1985374A2	29-10-2008
		EP2120667A1	25-11-2009
		EP2120667A4	17-03-2010

Dyson Ex1004
Page 162

EP2164376A1	24-03-2010
EP2173227A1	14-04-2010
ES2335149T3	22-03-2010
JP2007160091A	28-06-2007
JP2007222613A	06-09-2007
JP2007222614A	06-09-2007
JP2007296316A	15-11-2007
JP2007307352A	29-11-2007
JP2007313293A	06-12-2007
JP2008062017A	21-03-2008
KR100800189B1	01-02-2008
KR20080032449A	15-04-2008
KR100833362B1	28-05-2008
KR20070111239A	21-11-2007
KR100846900B1	17-07-2008
KR20070111236A	21-11-2007
KR100846904B1	17-07-2008
KR20070088022A	29-08-2007
KR100871483B1	05-12-2008
KR20070088023A	29-08-2007
KR100871485B1	05-12-2008
KR20070113353A	29-11-2007
KR100871487B1	05-12-2008
KR100880495B1	28-01-2009
KR100895145B1	23-11-2007
KR20070112324A	23-11-2007
KR100906848B1	23-11-2007
KR20070112325A	23-11-2007
KR100906849B1	11-03-2008
KR20080022467A	11-03-2008
KR100912317B1	21-01-2009
KR20090007911A	21-01-2009
KR20090007914A	21-01-2009
KR100925145B1	05-11-2009
KR20070061643A	14-06-2007
KR20070065636A	25-06-2007
KR20070070993A	04-07-2007
KR20070107508A	07-11-2007
KR20080022468A	11-03-2008
KR20090007908A	21-01-2009
KR20090007912A	21-01-2009
KR20090007915A	21-01-2009
KR20090010267A	30-01-2009
KR20100005769A	18-01-2010
KR20100005770A	18-01-2010
RU2328200C1	10-07-2008
RU2328203C1	10-07-2008
RU2328961C1	20-07-2008
RU2332918C1	10-09-2008
RU2335228C1	10-10-2008
RU2339290C2	27-11-2008
RU2007103560A	10-08-2008
RU2346643C2	20-02-2009
US2007151071A1	05-07-2007
US7582128B2	01-09-2009
US2007256272A1	08-11-2007
US7601188B2	13-10-2009
US2008023035A1	31-01-2008
US2008023036A1	31-01-2008
US2008041421A1	21-02-2008
US2008047094A1	28-02-2008
US2009178231A1	16-07-2009
US2009229072A1	17-09-2009
US2009229073A1	17-09-2009
US2009235956A1	24-09-2009
US2009241286A1	01-10-2009
US2009249578A1	08-10-2009
US2009255083A1	15-10-2009
US2009266382A1	29-10-2009

		US2009293221A1	03-12-2009
		US2009293223A1	03-12-2009
		US2009293915A1	03-12-2009
		WO2008100005A1	21-08-2008
		WO2009011478A1	22-01-2009
		WO2009011482A1	22-01-2009
		WO2010005139A1	14-01-2010
WO2007104138A1	20-09-2007	AU2007224960A1	20-09-2007
		AU2007224961A1	20-09-2007
		AU2007224963A1	20-09-2007
		CA2643127A1	20-09-2007
		CA2643139A1	20-09-2007
		CA2676084A1	20-09-2007
		CA2676087A1	20-09-2007
		CN101437435A	20-05-2009
		CN101437624A	20-05-2009
		CN101466295A	24-06-2009
		DE102007011457A1	25-10-2007
		EP1996059A1	03-12-2008
		EP1996059A4	08-07-2009
		EP1996060A1	03-12-2008
		EP1996060A4	15-07-2009
		EP1996336A1	03-12-2008
		EP1996336A4	15-07-2009
		GB0817538D0	05-11-2008
		GB2449605A	26-11-2008
		GB0817539D0	05-11-2008
		GB2449606A	26-11-2008
		GB0817540D0	05-11-2008
		GB2449607A	26-11-2008
		JP2009529382T	20-08-2009
		JP2009529383T	20-08-2009
		JP2009529384T	20-08-2009
		KR20080108284A	12-12-2008
		KR20080108285A	12-12-2008
		KR20080108286A	12-12-2008
		US2007209334A1	13-09-2007
		US2007209335A1	13-09-2007
		US2007209336A1	13-09-2007
		US2007209337A1	13-09-2007
		US2007209338A1	13-09-2007
		US2007209339A1	13-09-2007
		US2007209340A1	13-09-2007
		US2007209519A1	13-09-2007
		WO2007104139A1	20-09-2007
		WO2007104140A1	20-09-2007
		WO2007104141A1	20-09-2007
US7445655B2	04-11-2008	AU2003276110A1	04-05-2004
		CN1705451A	07-12-2005
		DE10248087A1	29-04-2004
		EP1553865A1	20-07-2005
		PL374585A1	31-10-2005
		RU2005110189A	20-01-2006
		RU2334449C2	27-09-2008
		US2006117519A1	08-06-2006
		WO2004034866A1	29-04-2004
US2006137309A1	29-06-2006	EP1674022A2	28-06-2006
		EP1674022A3	26-12-2007
		KR100553043B1	09-02-2006
		KR100564443B1	20-03-2006
		RU2005140671A	10-07-2007
		RU2311111C2	27-11-2007
		US7645309B2	12-01-2010

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	Attorney Docket Number	10452-P52585US11 PART4

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	1	7488362	B2	2009-02-10	Jeong et al.	
	2	10238250	B2	2019-03-26	Conrad	

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	1	20090282639	A1	2009-11-19	Dyson et al.	

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	1	1020060018004	KR	A	2006-02-28	SAMSUNG ELECTRONICS CO, LTD.		
	2	1020060008365	KR	A	2006-01-26	LG ELECTRONICS INC.		

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	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART4

	3	1020050104614	KR	A	2005-11-03	LG ELECTRONICS INC.		
	4	1020050104613	KR	A	2005-11-03	LG ELECTRONICS INC.		
	5	1020050103343	KR	A	2005-10-31	LG ELECTRONICS INC.		
	6	1020050091838	KR	A	2005-09-15	LG ELECTRONICS INC.		
	7	1020050091837	KR	A	2005-09-15	LG ELECTRONICS INC.		
	8	1020050091830	KR	A	2005-09-15	LG ELECTRONICS INC.		
	9	2007104138	WO	A1	2007-09-20	G.B.D. Corp.		
	10	2007104238	WO	A1	2007-09-20	Positec Power Tools (Suzhou) Co., Ltd.		
	11	2008009887	WO	A1	2008-01-24	Dyson Technology Limited		
	12	2008009890	WO	A1	2008-01-24	Dyson Technology Limited		
	13	2010102396	WO	A1	2010-09-16	G.B.D. CORP.		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART4

	14	2008135708	WO	A1	2008-11-13	Dyson Technology LImited			
	15	2012042240	WO	A1	2012-04-05	Dyson Technology LImited			
	16	2010102394	WO	A1	2010-09-16	G.B.D. Corp.			
	17	2008035032	WO	A2	2008-03-27	Dyson Technology Limited			
	18	2004069021	WO	A	2004-08-19	AKTIEBOLAGET ELECTROLUX			
	19	2008009888	WO	A1	2008-01-24	Dyson Technology Limited			
	20	2008009883	WO	A1	2008-01-24	Dyson Technology Limited			

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	2	English machine translation of KR1020060008365, published on January 26, 2006	

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	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART4

	3	English machine translation of KR1020050104614, published on November 3, 2005	
	4	English machine translation of KR1020050104613, published on November 3, 2005	
	5	English machine translation of KR1020050103343, published on October 31, 2005	
	6	English machine translation of KR1020050091838, published on September 15, 2005	
	7	English machine translation of KR1020050091837, published on September 15, 2005	
	8	English machine translation of KR1020050091830, published on September 15, 2005	
	9	What's the Best Vacuum.com Forum discussion "Dyson DC16 Root 6 Hand Held Vacuum Cleaner; http://www.abbysguide.com/vacuum/legacy/cgi-bin/yabb/2618-YaBB.html; dated October 21, 2006	
	10	"Instruction Manual for Cordless Cleaner", Makita, PP. 1-32	
	11	International Search Report received on the corresponding International Application No. PCT/CA2010/000340, dated June 25, 2010	

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	First Named Inventor	CONRAD, Wayne Ernest
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	Attorney Docket Number	10452-P52585US11 PART4

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	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART4

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	48803432
Application Number:	18376975
International Application Number:	
Confirmation Number:	4138
Title of Invention:	HANDHELD SURFACE CLEANING APPARATUS
First Named Inventor/Applicant Name:	Wayne Ernest Conrad
Customer Number:	1059
Filer:	Philip C. Mendes da Costa/Snezana Lisowsky
Filer Authorized By:	Philip C. Mendes da Costa
Attorney Docket Number:	10452-P52585US11
Receipt Date:	06-NOV-2023
Filing Date:	05-OCT-2023
Time Stamp:	18:28:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS_PART4_2023-11-06_P52585US11.PDF	1329162 064bbb9ea012d3f40730e9e4e36fa59c69a797a3	no	7

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		Total Files Size (in bytes):	57617120		

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<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt	
EFS ID:	48803367
Application Number:	18376975
International Application Number:	
Confirmation Number:	4138
Title of Invention:	HANDHELD SURFACE CLEANING APPARATUS
First Named Inventor/Applicant Name:	Wayne Ernest Conrad
Customer Number:	1059
Filer:	Philip C. Mendes da Costa/Snezana Lisowsky
Filer Authorized By:	Philip C. Mendes da Costa
Attorney Docket Number:	10452-P52585US11
Receipt Date:	06-NOV-2023
Filing Date:	05-OCT-2023
Time Stamp:	18:13:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS_PART3_2023-11-06_P52585US11.PDF	1321254 b3517250753d58067a9766da19154bdd68ed798c	no	12

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
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New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

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	1	8707513	B2	2014-04-29	Ivarsson et al.	
	2	8444731	B2	2013-05-21	Gomiciaga-Pereda et al.	
	3	8424154	B2	2013-04-23	Beskow et al.	
	4	8387204	B2	2013-03-05	Dyson	
	5	8347455	B2	2013-01-08	Dyson et al.	
	6	8302250	B2	2012-11-06	Dyson et al.	
	7	8255456	B2	2012-08-28	Sundarrajan et al.	
	8	8236077	B2	2012-08-07	Gomiciaga-Pereda et al.	

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	Examiner Name	n/a
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	9	8220109	B2	2012-07-17	Medema et al.	
	10	8156609	B2	2012-04-17	Milne et al.	
	11	8127398	B2	2012-03-06	Conrad	
	12	8117712	B2	2012-02-21	Dyson et al.	
	13	8100999	B2	2012-01-24	Ashbee et al.	
	14	7931716	B2	2011-04-26	Oakham	
	15	7887612	B2	2011-02-15	Conrad	
	16	7845046	B2	2010-12-07	Milligan et al.	

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	1	20160367094	A1	2016-12-22	Conrad	

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	2	20140237768	A1	2014-08-28	Conrad	
	3	20130091813	A1	2013-04-18	SMITH	
	4	20130091812	A1	2013-04-18	SMITH	
	5	20130091661	A1	2013-04-18	Smith	
	6	20130091660	A1	2013-04-18	SMITH	
	7	20120304417	A1	2012-12-06	Riley	
	8	20120079671	A1	2012-04-05	STICKNEY et al.	
	9	20120030896	A1	2012-02-09	Crouch et al.	
	10	20110219571	A1	2011-09-15	DYSON et al.	
	11	20110219570	A1	2011-09-15	Conrad	
	12	20110219566	A1	2011-09-15	Dyson et al.	

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	13	20100229322	A1	2010-09-16	Conrad	
	14	20100154150	A1	2010-06-24	MCLEOD	
	15	20100115726	A1	2010-05-13	Groff et al.	
	16	20100045215	A1	2010-02-25	Hawker et al.	
	17	20090313958	A1	2009-12-24	Gomiciaga-Pereda et al.	
	18	20090307864	A1	2009-12-17	Dyson	

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	1	D6049084	JP	S	1985-04-17	Matsushita Electrical Industrial Co.,Ltd.		
	2	D726042	JP	S	1988-03-04	Matsushita Electrical Industrial Co.,Ltd.		
	3	D743318	JP	S	1988-03-04	Hitachi Ltd.		

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	4	D743619	JP	S	1988-06-19	Matsushita Electrical Industrial Co. Ltd.		
	5	D743059	JP	S	1988-09-12	Tokyo Electric Industry Co. Ltd.		
	6	D743445	JP	S	1988-09-14	Hitachi Ltd.		
	7	D743603	JP	S	1988-09-16	Sanyo Electric Co. Ltd		
	8	D743618	JP	S	1988-09-16	Matsushita Electrical Industrial Co. Ltd.		
	9	D743619	JP	S	1988-09-16	Matsushita Electrical Industrial Co. Ltd.		
	10	D745200	JP	S	1988-10-04	Matsushita Electrical Industrial Co. Ltd.		
	11	D943287	JP	S	1988-11-01	Tec Co. Ltd.		
	12	D64-15020	JP	S	1989-01-19	Hitachi Ltd.		
	13	D787941	JP	S	1990-05-15	Toshiba Corporation		
	14	D788426	JP	S	1990-05-23	Matsushita Electrical Industrial Co. Ltd.		

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	15	788427	JP	S	1990-05-23	Matsushita Electrical Industrial Co. Ltd.		
	16	2000083879	JP	A	2000-03-28	Hitachi Ltd.		
	17	D1115813	JP	A	2001-07-16	Sharp Co.		
	18	D1310024	JP	A	2007-09-10	Sharp Co.		
	19	D1370915	JP	A	2009-10-13	Sharp Co., Ltd.		
	20	1020030060539	KR	A	2003-07-16	LG Electronics In		
	21	1020060018004	KR	A	2006-02-28	SAMSUNG ELECTRONICS CO, LTD.		
	22	1020060008365	KR	A	2006-01-26	LG ELECTRONICS INC.		
	23	1020050091835	KR	A	2005-09-15	LG ELECTRONICS INC.		
	24	1020050091836	KR	A	2005-09-15	LG ELECTRONICS INC.		
	25	1020050091834	KR	A	2005-09-15	LG ELECTRONICS INC.		

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	26	1020050091833	KR	A	2005-09-15	LG ELECTRONICS INC.			
	27	1020050091829	KR	A	2005-09-15	LG ELECTRONICS INC.			
	28	1020050091824	KR	A	2005-09-15	LG ELECTRONICS INC.			
	29	1020050091821	KR	A	2005-09-15	LG ELECTRONICS INC.			
	30	1020050091826	KR	A	2005-09-15	LG ELECTRONICS INC.			
	31	1020100084127	KR	A	2010-07-23	SEB S.A.			
	32	1020080039105	KR	A	2008-05-07	LG ELECTRONICS INC.			
	33	1020080029824	KR	A	2008-04-03	VAX LIMITED			
	34	1020060125954	KR	A	2006-12-07	LG ELECTRONICS INC.			
	35	1020060125952	KR	A	2006-12-07	LG ELECTRONICS INC.			
	36	300360565	KR	A	2004-09-01	Kim Kyu-Han			

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	37	1020050104614	KR		2005-11-03	LG ELECTRONICS INC.			
	38	1020050104613	KR		2005-11-03	LG ELECTRONICS INC.			

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	1	English machine translation of JP2000083879, published on March 28, 2000	
	2	English machine translation of KR1020030060539, published on July 16, 2003	
	3	English machine translation of KR1020060018004, published on February 28, 2006	
	4	English machine translation of KR1020060008365, published on January 26, 2006	
	5	English machine translation of KR1020050091835, published on September 15, 2005	
	6	English machine translation of KR1020050091836, published on September 15, 2005	
	7	English machine translation of KR1020050091834, published on September 15, 2005	

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	8	English machine translation of KR1020050091833, published on September 15, 2005	
	9	English machine translation of KR1020050091829, published on September 15, 2005	
	10	English machine translation of KR1020050091824, published on September 15, 2005	
	11	English machine translation of KR1020050091821, published on September 15, 2005	
	12	English machine translation of KR1020050091826, published on September 15, 2005	
	13	English machine translation of KR1020100084127, published on July 23, 2010	
	14	English machine translation of KR1020080039105, published on May 7, 2008	
	15	English machine translation of KR1020080029824, published on April 3, 2008	
	16	English machine translation of KR1020060125954, published on December 7, 2006	
	17	English machine translation of KR1020060125952, published on December 7, 2006	
	18	English machine translation of KR300360565, published on September 1, 2004	

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	19	English machine translation of KR1020050104614, published on November 3, 2005	
	20	English machine translation of KR1020050104613, published on November 3, 2005	

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Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

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Attorney Docket Number	10452-P52585US11 PART2

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	1	7544224	B2	2009-06-09	Tanner et al.	
	2	7526833	B2	2009-05-05	Cochran et al.	
	3	7485164	B2	2009-02-03	Jeong et al.	
	4	7445655	B2	2008-11-04	Bck et al.	
	5	7370387	B2	2008-05-13	Walker et al.	
	6	7028369	B2	2006-04-18	Park et al.	
	7	6991666	B2	2006-01-31	Organ	
	8	6974488	B2	2005-12-13	Dyson	

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	9	6883202	B2	2005-04-26	Steffen et al.	
	10	6840972	B1	2005-01-11	Kim	
	11	6766558	B1	2004-07-27	Matsumoto et al.	
	12	6740144	B2	2004-05-25	Conrad et al.	
	13	6613129	B2	2003-09-02	Gen	
	14	6546592	B1	2003-04-15	Cockburn et al.	
	15	6434785	B1	2002-08-20	Vandenbelt et al.	
	16	6406505	B1	2002-06-18	Oh et al.	
	17	6375696	B2	2002-04-23	Wegelin et al.	
	18	6228260	B1	2001-05-08	Conrad et al.	
	19	D591466	S	2009-04-28	Crawley	

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	20	D498027	S	2004-11-02	Alsruh et al.	

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	1	20090265877	A1	2009-10-29	Dyson et al.	
	2	20090229070	A1	2009-09-17	Medema et al.	
	3	20090165242	A1	2009-07-02	Lee et al.	
	4	20090165239	A1	2009-07-02	Frantzen et al.	
	5	20090113663	A1	2009-05-07	FOLLOWS et al.	
	6	20090056290	A1	2009-03-05	Oh et al.	
	7	20080256744	A1	2008-10-23	Rowntreer et al.	
	8	20080250601	A1	2008-10-16	Coburn	

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	9	20080190080	A1	2008-08-14	Oh et al.	
	10	20080178416	A1	2008-07-31	Conrad	
	11	20080134460	A1	2008-06-12	Conrad	
	12	20080109972	A1	2008-05-15	Mah et al.	
	13	20080047091	A1	2008-02-28	Nguyen	
	14	20080040883	A1	2008-02-21	BESKOW et al.	
	15	20070289266	A1	2007-12-20	Oh	
	16	20070271724	A1	2007-11-29	Hakan et al.	
	17	20070246579	A1	2007-10-25	Blateri	
	18	20070209338	A1	2007-09-13	Conrad	
	19	20070143953	A1	2007-06-28	Hwang et al.	

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	1	202005020767	DE	A1	2006-08-10	SEB S.A.		
	2	102007011457	DE	A1	2007-10-25	ROYAL APPLIANCE MFG		
	3	10110581	DE	C2	2003-11-13	SAMSUNG KWANGJU ELECTRONICS CO		
	4	60201666	DE	T2	2006-06-01	DYSON TECHNOLOGY LTD.		
	5	112010001135	DE	T5	2012-08-02	G.B.D. Corp.		
	6	112007003052	DE	T5	2010-01-14	G.B.D. Corp.		
	7	112007003039	DE	T5	2009-10-29	G.B.D. Corp.		
	8	112006003479	DE	T5	2008-12-18	ROYAL APPLIANCE MFG		
	9	202011003563	DE	U1	2011-05-19	SEB S.A.		

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	10	0489468	EP	A1	1992-06-10	Philips NV			
	11	1356755	EP	B1	2012-05-09	Panasonic Corporation			
	12	1938736	EP	A2	2008-07-02	Samsung Gwangju Electronics Co., Ltd.			
	13	2251178	GB	A	1992-07-01	Azuma Industrial Co. Ltd			
	14	2268875	GB	A	1994-01-26	Bissell Inc.			
	15	2377880	GB	A	2003-01-29	Black & Decker Inc.			
	16	2466290	GB	A	2010-06-23	Dyson Technology Limited			
	17	2478599	GB	B	2014-07-16	Dyson Technology Ltd			
	18	2035787	GB	B1	1982-10-13	L&H Designs Limited			
	19	2409404	GB	B1	2005-11-16	Samsung Gwangju Electronics Co., Ltd.			
	20	2441962	GB	B1	2011-03-02	Dyson TechnolOgy Ltd			

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	21	2478614	GB	B1	2012-02-29	Dyson Technology Limited		
	22	2484146	GB	B1	2013-02-13	Dyson Technology Limited		
	23	60220027	JP	A	1985-11-02	Matsushita Denki Sankyo KK		
	24	63246116	JP	A	1988-10-13	Matsushita Electric Ind Co Ltd		
	25	8289861	JP	A	1996-11-05	Hitachi Ltd.		
	26	2004351234	JP	A	2004-12-16	Sekijima Takayuki		
	27	2010227287	JP	A	2010-10-14	HITACHI APPLIANCES INC.		
	28	2010081968	JP	A	2010-04-15	Sharp KK		
	29	2009261501	JP	A	2009-11-12	YAMADA ELECTRIC IND		
	30	2004121722	JP	A	2004-04-22	SANYO ELECTRIC CO		
	31	D609203	JP	S	1983-09-22	Matsushita Electric Industrial Co.,Ltd.		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

	32	D745201	JP	S	1983-10-05	Matsushita Electric Industrial Co.,Ltd.			
	33	D649078	JP	S	1985-04-17	Matsushita Electric Industrial Co.,Ltd.			
	34	D679295	JP	S	1986-05-21	Matsushita Electric Industrial Co.,Ltd.			
	35	D679390	JP	S	1986-05-22	Matsushita Electric Industrial Co.,Ltd.			
	36	D679426	JP	S	1986-05-22	Matsushita Electric Industrial Co.,Ltd.			
	37	D679806	JP	S	1986-05-26	Toshiba Corporation			
	38	61131720	JP		1986-06-19	Tokyo Denki Kabushiki Gaisha			
	39	D706192	JP	S	1987-05-28	Matsushita Electric Industrial Co.,Ltd.			
	40	D706193	JP	S	1987-05-28	Matsushita Electric Industrial Co.,Ltd.			
	41	D725983	JP	S	1988-02-29	Matsushita Electric Industrial Co.,Ltd.			

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	English machine translation of DE202005020767, published on August 10, 2008	
	2	English machine translation of DE102007011457, published on October 25, 2007	
	3	English machine translation of DE10110581, published on November 13, 2003	
	4	English machine translation of DE60201666, published on June 1, 2006	
	5	English machine translation of DE112010001135, published on August 2, 2012	
	6	English machine translation of DE112007003052, published on January 14, 2010	
	7	English machine translation of DE112007003039, published on October 29, 2009	
	8	English machine translation of DE112006003479, published on December 18, 2008	
	9	English machine translation of DE202011003563, published on May 19, 2011	
	10	English machine translation of JP60220027, published on November 2, 1985	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

	11	English machine translation of JP63246116, published on October 13, 1988	
	12	English machine translation of JP8289861, published on November 5, 1996	
	13	English machine translation of JP2004351234, published on December 16, 2004	
	14	English machine translation of JP2010227287, published on October 14, 2010	
	15	English machine translation of JP2010081968, published on April 15, 2010	
	16	English machine translation of JP2009261501, published on November 12, 2009	
	17	English machine translation of JP2004121722, published on April 22, 2004	
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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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EFS ID:	48803285
Application Number:	18376975
International Application Number:	
Confirmation Number:	4138
Title of Invention:	HANDHELD SURFACE CLEANING APPARATUS
First Named Inventor/Applicant Name:	Wayne Ernest Conrad
Customer Number:	1059
Filer:	Philip C. Mendes da Costa/Snezana Lisowsky
Filer Authorized By:	Philip C. Mendes da Costa
Attorney Docket Number:	10452-P52585US11
Receipt Date:	06-NOV-2023
Filing Date:	05-OCT-2023
Time Stamp:	17:53:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS_PART2_2023-11-06_P52585US11.PDF	1351529 697f5beb53708a0f58b65c2e9b8c0f51e0883d10	no	12

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2	Foreign Reference	FR01_IDS2_DE202005020767U1.PDF	1170956 87d10cc1c6034c55eb57abe5ed3ea71f37ade4d3	no	10
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56	Non Patent Literature	NPL14_IDS2_JP2010227287A_eng.PDF	384352 2097c5c5583f28a3b180f7b9bcea1aa09046a94b	no	13
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58	Non Patent Literature	NPL16_IDS2_JP2009261501.PDF	127837 75ace04a8a1114f5733d920e7cbf04fd6e133826	no	7
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Electronic Acknowledgement Receipt	
EFS ID:	48803146
Application Number:	18376975
International Application Number:	
Confirmation Number:	4138
Title of Invention:	HANDHELD SURFACE CLEANING APPARATUS
First Named Inventor/Applicant Name:	Wayne Ernest Conrad
Customer Number:	1059
Filer:	Philip C. Mendes da Costa/Snezana Lisowsky
Filer Authorized By:	Philip C. Mendes da Costa
Attorney Docket Number:	10452-P52585US11
Receipt Date:	06-NOV-2023
Filing Date:	05-OCT-2023
Time Stamp:	17:28:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Letter specifying the conditions for filing under 37 CFR 1.97	Commissioner_2023-11-06_P52585US11.PDF	202447 08a7723f1ada65bdf82eb7e52c0b6ffb1dea925f	no	2
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6	Foreign Reference	FR04_IDS1_CN102188208A.pdf	816546 c2a641cfe33d35272f65eda86322b318612305d9	no	34
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7	Foreign Reference	FR05_IDS1_CN101822506A_Adobe.pdf	9119818 8028827e906502f3fcd48aa0664e8ccc8d6fa225	no	50
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8	Foreign Reference	FR06_IDS1_CN101657133A.PDF	1367446 03fafd396c0b61309eb074d16abf80c4397686ba	no	51
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9	Foreign Reference	FR07_IDS1_CN101489461A.PDF	489923 1cf37e46cd5d285c4965c05faa33230cfceb97e0	no	10
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10	Foreign Reference	FR08_IDS1_CN101489457A.PDF	596946 2eb68ed80bc4ba37cb3777e6c93597a4e87eb954	no	13
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11	Foreign Reference	FR09_IDS1_CN101489455A.PDF	517750 bd058801aff4a485ed3363731ce6158e274b7581	no	11
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12	Foreign Reference	FR10_IDS1_CN101489453A.PDF	504857 8afd76eb94875607012237f1414383ff7ac9f910	no	11
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13	Foreign Reference	FR11_IDS1_CN101448447A.PDF	616673 53faecf45751124 6203a0d2afce2af1dc0104aaf	no	18
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14	Foreign Reference	FR12_IDS1_CN101288572A.PDF	992857 20b191fac1a9e1cad028071ff5b51f2d1a4aa751	no	30
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15	Foreign Reference	FR13_IDS1_CN101095604A.PDF	722643 bf87f67b6d8e652cf383728c966e41c6bc216471	no	18
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17	Foreign Reference	FR15_IDS1_CN1895148A.PDF	1152676 b3368a85f50db1688cdb8570658a4be03feba3af	no	26
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18	Foreign Reference	FR16_IDS1_CN101061932A.PDF	750177 cec7da8ea9e12ab0fa16be04cd8112a737918c3c	no	20
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19	Foreign Reference	FR17_IDS1_CN101015436_Adobe.PDF	478077 412500087780afda4d2b20e852aca77262c3b6b0	no	11
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Information:					
20	Foreign Reference	FR18_IDS2_CN1626025A.PDF	1818606 f0ca2b8624d191e007999d29a19e64830d759ac1	no	52
Warnings:					
Information:					
21	Foreign Reference	FR19_IDS1_CN202173358U.PDF	225813 35c815a17c27ef204be8ac31d0fff94979e709a2	no	5
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22	Foreign Reference	FR20_IDS1_CN201683850U.PDF	356759 555a03fd95aa9fbf0f27f24b0bf8065a0337fbe3	no	6
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Information:					

23	Foreign Reference	FR21_IDS1_CN85201464_U.pdf	2420416 e121f73e11a38ae724283cdee4ac9b4187cc1e18	no	21
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24	Foreign Reference	FR22_IDS1_CN201523596U.PDF	665936 4549d38076c9da25c4c516465633e8ce6d133b61	no	12
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25	Foreign Reference	FR23_IDS1_CN203724037U.PDF	3670692 6b7adcb08d17c957ad1ad0d593e790180fb72a59	no	8
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26	Foreign Reference	FR24_IDS1_CN201008534Y.PDF	1662717 9ce383b25f14022393f8c6989e6c563721178418	no	16
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27	Non Patent Literature	NPL01_IDS1_CN103169420_ENG.PDF	281120 f9f4ac01c5f17d41992f50a41afca7b031221208	no	12
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28	Non Patent Literature	NPL02_IDS1_CN102256523_Engv2.PDF	348956 6d8c543bb6db28bacf1bdbdf48a6af83bf3b9b57	no	17
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29	Non Patent Literature	NPL03_IDS1_CN102188208A_Eng.PDF	116662 978471961a9fc49d7bd037626ad9be6ed934f941	no	16
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30	Non Patent Literature	NPL04_IDS1_CN101822506A_ENG.PDF	355046 a4334124d8e779cb8ee9fc264177b1bd83d9f17d	no	19
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31	Non Patent Literature	NPL05_IDS1_CN101657133A_Eng.PDF	143027 5b94593b2a2a64b1b5644f6a6e21f028271a4ed1	no	21
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32	Non Patent Literature	NPL06_IDS1_CN101489461A_Eng.PDF	59682 686bbcdc74f2140e62aef2d7fbc8f77d2e2b0da8	no	5
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34	Non Patent Literature	NPL08_IDS1_CN101489455A_Eng.PDF	50882 f3204a5cfe13ed614e600414e2d27013e288f19a	no	5
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37	Non Patent Literature	NPL11_IDS1_CN101288572A_ENG.PDF	118958 229e60b1fd09974cedfb18e5df351e5cbe251fe6	no	12
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39	Non Patent Literature	NPL13_IDS1_CN1969739A_English.PDF	83095 d9ce005c89b7cef4dc22dcc728a6a4bdba5d009a	no	5
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40	Non Patent Literature	NPL14_IDS1_CN1895148A_ENG.PDF	339340 5baffd47f587f7d00cda1ba102f076618b5cb0a2	no	12
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42	Non Patent Literature	NPL16__IDS1_CN101015436A_ENG.PDF	93488 4e4a0fb745368a20f96f6726512165d26c127b3f	no	7
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43	Non Patent Literature	NPL17_IDS1_CN1626025A_ENG.PDF	433508 7c579eeedd4a516ad5e386b4f2385a725084a2cb	no	18
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44	Non Patent Literature	NPL18_IDS1_CN202173358_U_English.pdf	290870 f440fc0290a1a4921fe1cb5a9a7c3cd59e7116f3	no	3
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45	Non Patent Literature	NPL19_IDS1_CN201683850_ENG.PDF	162180 0170f4627c41038d0f904def88855b10b20a72fb	no	3
Warnings:					
Information:					
46	Non Patent Literature	NPL20_IDS1_CN85201464U_engtrans.PDF	798796 ecda38effe81a599987c91a33ee2cac740cc6679	no	29
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Information:					
47	Non Patent Literature	NPL21_IDS1_CN201523596_U_Machine_Translation.pdf	851694 1adb1bf6d0c905fcb1e83c8418ff3671d2942984	no	7
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48	Non Patent Literature	NPL22_IDS1_CN203724037_eng.PDF	223482 c541954e07e9acdafffc04afe147e60b0afa8af2	no	6
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Information:					
49	Non Patent Literature	NPL23_IDS1_CN201008534Y_English.PDF	81311 8856734dd56bca01aa26d23eaf05cf142e8e2264	no	5
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		Total Files Size (in bytes):	49558751		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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Bereskin & Parr

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No	:	18/376,975	Confirmation No. 4138
Applicant	:	Omachron Intellectual Property Inc.	
Filed	:	October 5, 2023	
For	:	HANDHELD SURFACE CLEANING APPARATUS	
T.C./A.U.	:	N/A	
Examiner	:	N/A	
Docket No.	:	10452-P52585US11	
Customer No.	:	01059	

November 6, 2023

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
Under 37 CFR 1.56 and 37 CFR 1.97 (b)(1) and (b)(3)

Sir:

In accordance with 37 CFR 1.97 and 1.98, and in recognition of the duty of disclosure set forth in 37 CFR 1.56, the applicant hereby submits an Information Disclosure Statement including a listing of patents and other publications of which the applicant is aware on e-PTO form SB/08a.

In accordance with the requirements of 1.97 (b)(1) and (b)(3), this Information Disclosure Statement is filed within three months from the filing date of this application and before the mailing of a first substantive Office Action on the merits.

(A) List of References

A list of the patents and other publications of which the applicant is aware is set out in the attached e-PTO Form SB08a.

Bereskin & Parr LLP
Scotia Plaza, 40 King Street West, 40th Floor, Toronto, ON M5H 3Y2 Canada
Tel: 416.364.7311 Fax: 416.361.1398 beresklnparr.com

(B) Copies of References

Copies of the cited foreign references are enclosed. It is respectfully submitted that the Applicant's understanding of the cited non-English foreign citations is merely based on the English machine translation of the respective abstracts.

The filing of this statement shall not be construed as an admission that the information cited in the attached statement is, or is considered to be, material to patentability (37 CFR 1.97(h)), nor as an admission that it constitutes prior art.

Accordingly, the applicant submits that the Information Disclosure Statement is properly considered at this time.

Respectfully submitted,

November 6, 2023

BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
Agent for the Applicant

/Philip C. Mendes da Costa/

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PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	18376975
Filing Date	2023-10-05
First Named Inventor	CONRAD, Wayne Ernest
Art Unit	n/a
Examiner Name	n/a
Attorney Docket Number	10452-P52585US11 PART1

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5839157	A	1998-11-24	Strauser et al.	
	2	5379483	A	1995-01-10	PINO	
	3	5367740	A	1994-11-29	McCray	
	4	5363535	A	1994-11-15	RENCH	
	5	5307538	A	1994-05-03	RENCH	
	6	5287591	A	1994-02-22	RENCH	
	7	5035024	A	1991-07-30	STEINER	
	8	4905342	A	1990-03-06	Ataka	

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	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART1

	9	4704765	A	1987-11-10	Ataka	
	10	4523936	A	1985-06-18	DISANZA	
	11	4279355	A	1981-07-21	Schwartz et al.	
	12	3543325	A	1970-12-01	HAMRICK	
	13	3320727	A	1967-05-23	FARLEY et al.	
	14	D635728	S	2011-04-05	Fjellman	
	15	D436699	S	2001-01-23	Makihara et al.	
	16	D353917	S	1994-12-27	Hoekstra et al.	
	17	D303173	S	1989-08-29	Miyamoto et al.	
	18	D298875	S	1988-12-06	Nakamura	
	19	D290894	S	1987-07-14	Miyamoto et al.	

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	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART1

	20	D280033	S	1985-08-06	Miyamoto et al.	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070079473	A1	2007-04-12	Min et al.	
	2	20070067943	A1	2007-03-29	Makarov	
	3	20070033765	A1	2007-02-15	Walker et al.	
	4	20060207055	A1	2006-09-21	Ivarsson et al.	
	5	20060156508	A1	2006-07-20	Khalil	
	6	20060137309	A1	2006-06-29	Jeong et al.	
	7	20060137304	A1	2006-06-29	Jeong et al.	
	8	20060137132	A1	2006-06-29	Orubor	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART1

	9	20060130448	A1	2006-06-22	Han et al.	
	10	20060123590	A1	2006-06-15	Fester et al.	
	11	20060090290	A1	2006-05-04	Lau	
	12	20060075598	A1	2006-04-13	Follegot et al.	
	13	20050081321	A1	2005-04-21	Milligan et al.	
	14	20040216264	A1	2004-11-04	Shaver et al.	
	15	20040163201	A1	2004-08-26	Murphy et al.	
	16	20040112022	A1	2004-06-17	Vuijk	
	17	20040020005	A1	2004-02-05	Odachi et al.	
	18	20020189048	A1	2002-12-19	Maruyama et al.	
	19	20010023517	A1	2001-09-27	Onishi et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART1

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2658014	CA	A1	2010-09-11	G.B.D. CORP.		
	2	103169420	CN	A	2013-06-26	DYSON TECHNOLOGY LTD.		
	3	102256523	CN	B	2014-11-05	TECHTRONIC FLOOR CARE TECHNOLO		
	4	102188208	CN	A	2011-09-21	G.B.D. CO., LTD.		
	5	101822506	CN	A	2010-09-08	BLACK & DECKER INC		
	6	101657133	CN	A	2010-02-24	GBD CORP		
	7	101489461	CN	A	2009-07-22	Dyson Technology Ltd.		
	8	101489457	CN	A	2009-07-22	Dyson Technology Ltd.		
	9	101489455	CN	A	2009-07-22	Dyson Technology Ltd.		

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	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART1

	10	101489453	CN	A	2009-07-22	Dyson Technology Ltd.			
	11	101448447	CN	A	2009-06-03	ELECTROLUX AB, SE			
	12	101288572	CN	A	2008-10-22	BLACK & DECKER INC.			
	13	101095604	CN	A	2008-01-02	KWONNIE ELECTRICAL PRODUCTS LIMITED			
	14	1969739	CN	A	2007-05-30	SUZHOU YIJIE ELECTRIC APPLIANCE CO., LTD.			
	15	1895148	CN	A	2007-01-17	BLACK & DECKER INC.			
	16	101061932	CN	A	2007-10-31	KWONNIE ELECTRICAL PRODUCTS LIMITED			
	17	101015436	CN	A	2007-08-15	TEK ELECTRICAL (SUZHOU)CO., LTD.			
	18	1626025	CN	A	2005-10-15	BOB HOME HANDELSGES			
	19	202173358	CN	U	2012-03-28	SUZHOU ITAR ELECTRICAL APPLIANCE TECHNOLOGY CO LTD			
	20	201683850	CN	U	2010-12-29	KINGCLEAN ELECTRIC			

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	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART1

	21	85201464	CN	U	1986-02-26	Sharp Co.			
	22	201523596	CN	U1	2010-07-14	Tekfirst Electrical Equipment Suzhou			
	23	203724037	CN	U1	2014-07-23	KWONNIE ELECTRICAL PRODUCTS LTD			
	24	201008534	CN	Y	2008-01-23	SUZHOU KINGCLEAN FLOORCARE CO., LTD.			

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	English machine translation of CN103169420, published on June 26, 2013	
	2	English machine translation of CN102256523, published on November 23, 2011	
	3	English machine translation of CN102188208, published on September 21, 2011	
	4	English machine translation of CN101822506, published on September 8, 2010	
	5	English machine translation of CN101657133, published on February 24, 2010	

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	Attorney Docket Number	10452-P52585US11 PART1

	6	English machine translation of CN101489461, published on July 22, 2009	
	7	English machine translation of CN101489457, published on July 22, 2009	
	8	English machine translation of CN101489455, published on July 22, 2009	
	9	English machine translation of CN101489453, published on July 22, 2009	
	10	English machine translation of CN101448447, published on June3, 2009	
	11	English machine translation of CN101288572, published on October 22, 2008	
	12	English machine translation of CN101095604, published on January 2, 2008	
	13	English machine translation of CN1969739, published on May 30, 2007	
	14	English machine translation of CN1895148, published on January 17, 2007	
	15	English machine translation of CN101061932, published on October 31, 2007	
	16	English machine translation of CN101015436, published on August 15, 2007	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART1

	17	English machine translation of CN1626025, published on October 15, 2005	
	18	English machine translation of CN202173358, published on March 28, 2012	
	19	English machine translation of CN201683850, published on December 29, 2010	
	20	English machine translation of CN85201464, published on February 26, 1986	
	21	English machine translation of CN201523596, published on July 14, 2010	
	22	English machine translation of CN203724037, published on July 23, 2014	
	23	English machine translation of CN201008534, published on July 23, 2014	

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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(Not for submission under 37 CFR 1.99)

Application Number	18376975
Filing Date	2023-10-05
First Named Inventor	CONRAD, Wayne Ernest
Art Unit	3723
Examiner Name	n/a
Attorney Docket Number	10452-P52585US11 PART3

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8707513	B2	2014-04-29	Ivarsson et al.	
	2	8444731	B2	2013-05-21	Gomiciaga-Pereda et al.	
	3	8424154	B2	2013-04-23	Beskow et al.	
	4	8387204	B2	2013-03-05	Dyson	
	5	8347455	B2	2013-01-08	Dyson et al.	
	6	8302250	B2	2012-11-06	Dyson et al.	
	7	8255456	B2	2012-08-28	Sundarrajan et al.	
	8	8236077	B2	2012-08-07	Gomiciaga-Pereda et al.	

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	9	8220109	B2	2012-07-17	Medema et al.	
	10	8156609	B2	2012-04-17	Milne et al.	
	11	8127398	B2	2012-03-06	Conrad	
	12	8117712	B2	2012-02-21	Dyson et al.	
	13	8100999	B2	2012-01-24	Ashbee et al.	
	14	7931716	B2	2011-04-26	Oakham	
	15	7887612	B2	2011-02-15	Conrad	
	16	7845046	B2	2010-12-07	Milligan et al.	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20160367094	A1	2016-12-22	Conrad	

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	2	20140237768	A1	2014-08-28	Conrad	
	3	20130091813	A1	2013-04-18	SMITH	
	4	20130091812	A1	2013-04-18	SMITH	
	5	20130091661	A1	2013-04-18	Smith	
	6	20130091660	A1	2013-04-18	SMITH	
	7	20120304417	A1	2012-12-06	Riley	
	8	20120079671	A1	2012-04-05	STICKNEY et al.	
	9	20120030896	A1	2012-02-09	Crouch et al.	
	10	20110219571	A1	2011-09-15	DYSON et al.	
	11	20110219570	A1	2011-09-15	Conrad	
	12	20110219566	A1	2011-09-15	Dyson et al.	

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	13	20100229322	A1	2010-09-16	Conrad	
	14	20100154150	A1	2010-06-24	MCLEOD	
	15	20100115726	A1	2010-05-13	Groff et al.	
	16	20100045215	A1	2010-02-25	Hawker et al.	
	17	20090313958	A1	2009-12-24	Gomiciaga-Pereda et al.	
	18	20090307864	A1	2009-12-17	Dyson	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	D6049084	JP	S	1985-04-17	Matsushita Electrical Industrial Co.,Ltd.		
	2	D726042	JP	S	1988-03-04	Matsushita Electrical Industrial Co.,Ltd.		
	3	D743318	JP	S	1988-03-04	Hitachi Ltd.		

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	4	D743619	JP	S	1988-06-19	Matsushita Electrical Industrial Co. Ltd.		
	5	D743059	JP	S	1988-09-12	Tokyo Electric Industry Co. Ltd.		
	6	D743445	JP	S	1988-09-14	Hitachi Ltd.		
	7	D743603	JP	S	1988-09-16	Sanyo Electric Co. Ltd		
	8	D743618	JP	S	1988-09-16	Matsushita Electrical Industrial Co. Ltd.		
	9	D743619	JP	S	1988-09-16	Matsushita Electrical Industrial Co. Ltd.		
	10	D745200	JP	S	1988-10-04	Matsushita Electrical Industrial Co. Ltd.		
	11	D943287	JP	S	1988-11-01	Tec Co. Ltd.		
	12	D64-15020	JP	S	1989-01-19	Hitachi Ltd.		
	13	D787941	JP	S	1990-05-15	Toshiba Corporation		
	14	D788426	JP	S	1990-05-23	Matsushita Electrical Industrial Co. Ltd.		

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	15	788427	JP	S	1990-05-23	Matsushita Electrical Industrial Co. Ltd.		
	16	2000083879	JP	A	2000-03-28	Hitachi Ltd.		
	17	D1115813	JP	A	2001-07-16	Sharp Co.		
	18	D1310024	JP	A	2007-09-10	Sharp Co.		
	19	D1370915	JP	A	2009-10-13	Sharp Co., Ltd.		
	20	1020030060539	KR	A	2003-07-16	LG Electronics In		
	21	1020060018004	KR	A	2006-02-28	SAMSUNG ELECTRONICS CO, LTD.		
	22	1020060008365	KR	A	2006-01-26	LG ELECTRONICS INC.		
	23	1020050091835	KR	A	2005-09-15	LG ELECTRONICS INC.		
	24	1020050091836	KR	A	2005-09-15	LG ELECTRONICS INC.		
	25	1020050091834	KR	A	2005-09-15	LG ELECTRONICS INC.		

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	26	1020050091833	KR	A	2005-09-15	LG ELECTRONICS INC.			
	27	1020050091829	KR	A	2005-09-15	LG ELECTRONICS INC.			
	28	1020050091824	KR	A	2005-09-15	LG ELECTRONICS INC.			
	29	1020050091821	KR	A	2005-09-15	LG ELECTRONICS INC.			
	30	1020050091826	KR	A	2005-09-15	LG ELECTRONICS INC.			
	31	1020100084127	KR	A	2010-07-23	SEB S.A.			
	32	1020080039105	KR	A	2008-05-07	LG ELECTRONICS INC.			
	33	1020080029824	KR	A	2008-04-03	VAX LIMITED			
	34	1020060125954	KR	A	2006-12-07	LG ELECTRONICS INC.			
	35	1020060125952	KR	A	2006-12-07	LG ELECTRONICS INC.			
	36	300360565	KR	A	2004-09-01	Kim Kyu-Han			

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	37	1020050104614	KR		2005-11-03	LG ELECTRONICS INC.			
	38	1020050104613	KR		2005-11-03	LG ELECTRONICS INC.			

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	English machine translation of JP2000083879, published on March 28, 2000	
	2	English machine translation of KR1020030060539, published on July 16, 2003	
	3	English machine translation of KR1020060018004, published on February 28, 2006	
	4	English machine translation of KR1020060008365, published on January 26, 2006	
	5	English machine translation of KR1020050091835, published on September 15, 2005	
	6	English machine translation of KR1020050091836, published on September 15, 2005	
	7	English machine translation of KR1020050091834, published on September 15, 2005	

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	8	English machine translation of KR1020050091833, published on September 15, 2005	
	9	English machine translation of KR1020050091829, published on September 15, 2005	
	10	English machine translation of KR1020050091824, published on September 15, 2005	
	11	English machine translation of KR1020050091821, published on September 15, 2005	
	12	English machine translation of KR1020050091826, published on September 15, 2005	
	13	English machine translation of KR1020100084127, published on July 23, 2010	
	14	English machine translation of KR1020080039105, published on May 7, 2008	
	15	English machine translation of KR1020080029824, published on April 3, 2008	
	16	English machine translation of KR1020060125954, published on December 7, 2006	
	17	English machine translation of KR1020060125952, published on December 7, 2006	
	18	English machine translation of KR300360565, published on September 1, 2004	

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	19	English machine translation of KR1020050104614, published on November 3, 2005	
	20	English machine translation of KR1020050104613, published on November 3, 2005	

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EXAMINER SIGNATURE

Examiner Signature	/ANDREW A HORTON/	Date Considered	11/08/2023

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	Attorney Docket Number	10452-P52585US11 PART3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/376,975	Conrad, Wayne Ernest
	Examiner	Art Unit
	ANDREW A HORTON	3723

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	11/08/2023								
	1	=								
	2	=								
	3	=								
	4	=								
	5	=								
	6	✓								
	7	=								
	8	✓								
	9	=								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	✓								

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
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Examiner Name	n/a
Attorney Docket Number	10452-P52585US11 PART1

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5839157	A	1998-11-24	Strauser et al.	
	2	5379483	A	1995-01-10	PINO	
	3	5367740	A	1994-11-29	McCray	
	4	5363535	A	1994-11-15	RENCH	
	5	5307538	A	1994-05-03	RENCH	
	6	5287591	A	1994-02-22	RENCH	
	7	5035024	A	1991-07-30	STEINER	
	8	4905342	A	1990-03-06	Ataka	

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	Examiner Name	n/a
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	9	4704765	A	1987-11-10	Ataka	
	10	4523936	A	1985-06-18	DISANZA	
	11	4279355	A	1981-07-21	Schwartz et al.	
	12	3543325	A	1970-12-01	HAMRICK	
	13	3320727	A	1967-05-23	FARLEY et al.	
	14	D635728	S	2011-04-05	Fjellman	
	15	D436699	S	2001-01-23	Makihara et al.	
	16	D353917	S	1994-12-27	Hoekstra et al.	
	17	D303173	S	1989-08-29	Miyamoto et al.	
	18	D298875	S	1988-12-06	Nakamura	
	19	D290894	S	1987-07-14	Miyamoto et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART1

	20	D280033	S	1985-08-06	Miyamoto et al.	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070079473	A1	2007-04-12	Min et al.	
	2	20070067943	A1	2007-03-29	Makarov	
	3	20070033765	A1	2007-02-15	Walker et al.	
	4	20060207055	A1	2006-09-21	Ivarsson et al.	
	5	20060156508	A1	2006-07-20	Khalil	
	6	20060137309	A1	2006-06-29	Jeong et al.	
	7	20060137304	A1	2006-06-29	Jeong et al.	
	8	20060137132	A1	2006-06-29	Orubor	

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	9	20060130448	A1	2006-06-22	Han et al.	
	10	20060123590	A1	2006-06-15	Fester et al.	
	11	20060090290	A1	2006-05-04	Lau	
	12	20060075598	A1	2006-04-13	Follegot et al.	
	13	20050081321	A1	2005-04-21	Milligan et al.	
	14	20040216264	A1	2004-11-04	Shaver et al.	
	15	20040163201	A1	2004-08-26	Murphy et al.	
	16	20040112022	A1	2004-06-17	Vuijk	
	17	20040020005	A1	2004-02-05	Odachi et al.	
	18	20020189048	A1	2002-12-19	Maruyama et al.	
	19	20010023517	A1	2001-09-27	Onishi et al.	

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	1	2658014	CA	A1	2010-09-11	G.B.D. CORP.		
	2	103169420	CN	A	2013-06-26	DYSON TECHNOLOGY LTD.		
	3	102256523	CN	B	2014-11-05	TECHTRONIC FLOOR CARE TECHNOLO		
	4	102188208	CN	A	2011-09-21	G.B.D. CO., LTD.		
	5	101822506	CN	A	2010-09-08	BLACK & DECKER INC		
	6	101657133	CN	A	2010-02-24	GBD CORP		
	7	101489461	CN	A	2009-07-22	Dyson Technology Ltd.		
	8	101489457	CN	A	2009-07-22	Dyson Technology Ltd.		
	9	101489455	CN	A	2009-07-22	Dyson Technology Ltd.		

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	10	101489453	CN	A	2009-07-22	Dyson Technology Ltd.		
	11	101448447	CN	A	2009-06-03	ELECTROLUX AB, SE		
	12	101288572	CN	A	2008-10-22	BLACK & DECKER INC.		
	13	101095604	CN	A	2008-01-02	KWONNIE ELECTRICAL PRODUCTS LIMITED		
	14	1969739	CN	A	2007-05-30	SUZHOU YIJIE ELECTRIC APPLIANCE CO., LTD.		
	15	1895148	CN	A	2007-01-17	BLACK & DECKER INC.		
	16	101061932	CN	A	2007-10-31	KWONNIE ELECTRICAL PRODUCTS LIMITED		
	17	101015436	CN	A	2007-08-15	TEK ELECTRICAL (SUZHOU)CO., LTD.		
	18	1626025	CN	A	2005-10-15	BOB HOME HANDELSGES		
	19	202173358	CN	U	2012-03-28	SUZHOU ITAR ELECTRICAL APPLIANCE TECHNOLOGY CO LTD		
	20	201683850	CN	U	2010-12-29	KINGCLEAN ELECTRIC		

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	21	85201464	CN	U	1986-02-26	Sharp Co.			
	22	201523596	CN	U1	2010-07-14	Tekfirst Electrical Equipment Suzhou			
	23	203724037	CN	U1	2014-07-23	KWONNIE ELECTRICAL PRODUCTS LTD			
	24	201008534	CN	Y	2008-01-23	SUZHOU KINGCLEAN FLOORCARE CO., LTD.			

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	1	English machine translation of CN103169420, published on June 26, 2013	
	2	English machine translation of CN102256523, published on November 23, 2011	
	3	English machine translation of CN102188208, published on September 21, 2011	
	4	English machine translation of CN101822506, published on September 8, 2010	
	5	English machine translation of CN101657133, published on February 24, 2010	

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	6	English machine translation of CN101489461, published on July 22, 2009	
	7	English machine translation of CN101489457, published on July 22, 2009	
	8	English machine translation of CN101489455, published on July 22, 2009	
	9	English machine translation of CN101489453, published on July 22, 2009	
	10	English machine translation of CN101448447, published on June3, 2009	
	11	English machine translation of CN101288572, published on October 22, 2008	
	12	English machine translation of CN101095604, published on January 2, 2008	
	13	English machine translation of CN1969739, published on May 30, 2007	
	14	English machine translation of CN1895148, published on January 17, 2007	
	15	English machine translation of CN101061932, published on October 31, 2007	
	16	English machine translation of CN101015436, published on August 15, 2007	

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	Attorney Docket Number	10452-P52585US11 PART1

	17	English machine translation of CN1626025, published on October 15, 2005	
	18	English machine translation of CN202173358, published on March 28, 2012	
	19	English machine translation of CN201683850, published on December 29, 2010	
	20	English machine translation of CN85201464, published on February 26, 1986	
	21	English machine translation of CN201523596, published on July 14, 2010	
	22	English machine translation of CN203724037, published on July 23, 2014	
	23	English machine translation of CN201008534, published on July 23, 2014	

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	Examiner Name	n/a
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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

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Application Number	18376975
Filing Date	2023-10-05
First Named Inventor	CONRAD, Wayne Ernest
Art Unit	n/a
Examiner Name	n/a
Attorney Docket Number	10452-P52585US11 PART4

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	1	7488362	B2	2009-02-10	Jeong et al.	
	2	10238250	B2	2019-03-26	Conrad	

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	1	20090282639	A1	2009-11-19	Dyson et al.	

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	1	1020060018004	KR	A	2006-02-28	SAMSUNG ELECTRONICS CO, LTD.		
	2	1020060008365	KR	A	2006-01-26	LG ELECTRONICS INC.		

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	3	1020050104614	KR	A	2005-11-03	LG ELECTRONICS INC.			
	4	1020050104613	KR	A	2005-11-03	LG ELECTRONICS INC.			
	5	1020050103343	KR	A	2005-10-31	LG ELECTRONICS INC.			
	6	1020050091838	KR	A	2005-09-15	LG ELECTRONICS INC.			
	7	1020050091837	KR	A	2005-09-15	LG ELECTRONICS INC.			
	8	1020050091830	KR	A	2005-09-15	LG ELECTRONICS INC.			
	9	2007104138	WO	A1	2007-09-20	G.B.D. Corp.			
	10	2007104238	WO	A1	2007-09-20	Positec Power Tools (Suzhou) Co., Ltd.			
	11	2008009887	WO	A1	2008-01-24	Dyson Technology Limited			
	12	2008009890	WO	A1	2008-01-24	Dyson Technology Limited			
	13	2010102396	WO	A1	2010-09-16	G.B.D. CORP.			

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	Examiner Name	n/a
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	14	2008135708	WO	A1	2008-11-13	Dyson Technology LImited		
	15	2012042240	WO	A1	2012-04-05	Dyson Technology LImited		
	16	2010102394	WO	A1	2010-09-16	G.B.D. Corp.		
	17	2008035032	WO	A2	2008-03-27	Dyson Technology Limited		
	18	2004069021	WO	A	2004-08-19	AKTIEBOLAGET ELECTROLUX		
	19	2008009888	WO	A1	2008-01-24	Dyson Technology Limited		
	20	2008009883	WO	A1	2008-01-24	Dyson Technology Limited		

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	1	English machine translation of KR1020060018004, published on February 28, 2006	
	2	English machine translation of KR1020060008365, published on January 26, 2006	

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	3	English machine translation of KR1020050104614, published on November 3, 2005	
	4	English machine translation of KR1020050104613, published on November 3, 2005	
	5	English machine translation of KR1020050103343, published on October 31, 2005	
	6	English machine translation of KR1020050091838, published on September 15, 2005	
	7	English machine translation of KR1020050091837, published on September 15, 2005	
	8	English machine translation of KR1020050091830, published on September 15, 2005	
	9	What's the Best Vacuum.com Forum discussion "Dyson DC16 Root 6 Hand Held Vacuum Cleaner; http://www.abbysguide.com/vacuum/legacy/cgi-bin/yabb/2618-YaBB.html; dated October 21, 2006	
	10	"Instruction Manual for Cordless Cleaner", Makita, PP. 1-32	
	11	International Search Report received on the corresponding International Application No. PCT/CA2010/000340, dated June 25, 2010	

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See attached certification statement.

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☒ A certification statement is not submitted herewith.

SIGNATURE

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Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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(Not for submission under 37 CFR 1.99)

Application Number	18376975
Filing Date	2023-10-05
First Named Inventor	CONRAD, Wayne Ernest
Art Unit	n/a
Examiner Name	n/a
Attorney Docket Number	10452-P52585US11 PART2

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7544224	B2	2009-06-09	Tanner et al.	
	2	7526833	B2	2009-05-05	Cochran et al.	
	3	7485164	B2	2009-02-03	Jeong et al.	
	4	7445655	B2	2008-11-04	Bck et al.	
	5	7370387	B2	2008-05-13	Walker et al.	
	6	7028369	B2	2006-04-18	Park et al.	
	7	6991666	B2	2006-01-31	Organ	
	8	6974488	B2	2005-12-13	Dyson	

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	9	6883202	B2	2005-04-26	Steffen et al.	
	10	6840972	B1	2005-01-11	Kim	
	11	6766558	B1	2004-07-27	Matsumoto et al.	
	12	6740144	B2	2004-05-25	Conrad et al.	
	13	6613129	B2	2003-09-02	Gen	
	14	6546592	B1	2003-04-15	Cockburn et al.	
	15	6434785	B1	2002-08-20	Vandenbelt et al.	
	16	6406505	B1	2002-06-18	Oh et al.	
	17	6375696	B2	2002-04-23	Wegelin et al.	
	18	6228260	B1	2001-05-08	Conrad et al.	
	19	D591466	S	2009-04-28	Crawley	

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	20	D498027	S	2004-11-02	Alsruh et al.	

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	1	20090265877	A1	2009-10-29	Dyson et al.	
	2	20090229070	A1	2009-09-17	Medema et al.	
	3	20090165242	A1	2009-07-02	Lee et al.	
	4	20090165239	A1	2009-07-02	Frantzen et al.	
	5	20090113663	A1	2009-05-07	FOLLOWS et al.	
	6	20090056290	A1	2009-03-05	Oh et al.	
	7	20080256744	A1	2008-10-23	Rowntreer et al.	
	8	20080250601	A1	2008-10-16	Coburn	

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	9	20080190080	A1	2008-08-14	Oh et al.	
	10	20080178416	A1	2008-07-31	Conrad	
	11	20080134460	A1	2008-06-12	Conrad	
	12	20080109972	A1	2008-05-15	Mah et al.	
	13	20080047091	A1	2008-02-28	Nguyen	
	14	20080040883	A1	2008-02-21	BESKOW et al.	
	15	20070289266	A1	2007-12-20	Oh	
	16	20070271724	A1	2007-11-29	Hakan et al.	
	17	20070246579	A1	2007-10-25	Blateri	
	18	20070209338	A1	2007-09-13	Conrad	
	19	20070143953	A1	2007-06-28	Hwang et al.	

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	1	202005020767	DE	A1	2006-08-10	SEB S.A.		
	2	102007011457	DE	A1	2007-10-25	ROYAL APPLIANCE MFG		
	3	10110581	DE	C2	2003-11-13	SAMSUNG KWANGJU ELECTRONICS CO		
	4	60201666	DE	T2	2006-06-01	DYSON TECHNOLOGY LTD.		
	5	112010001135	DE	T5	2012-08-02	G.B.D. Corp.		
	6	112007003052	DE	T5	2010-01-14	G.B.D. Corp.		
	7	112007003039	DE	T5	2009-10-29	G.B.D. Corp.		
	8	112006003479	DE	T5	2008-12-18	ROYAL APPLIANCE MFG		
	9	202011003563	DE	U1	2011-05-19	SEB S.A.		

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	10	0489468	EP	A1	1992-06-10	Philips NV			
	11	1356755	EP	B1	2012-05-09	Panasonic Corporation			
	12	1938736	EP	A2	2008-07-02	Samsung Gwangju Electronics Co., Ltd.			
	13	2251178	GB	A	1992-07-01	Azuma Industrial Co. Ltd			
	14	2268875	GB	A	1994-01-26	Bissell Inc.			
	15	2377880	GB	A	2003-01-29	Black & Decker Inc.			
	16	2466290	GB	A	2010-06-23	Dyson Technology Limited			
	17	2478599	GB	B	2014-07-16	Dyson Technology Ltd			
	18	2035787	GB	B1	1982-10-13	L&H Designs Limited			
	19	2409404	GB	B1	2005-11-16	Samsung Gwangju Electronics Co., Ltd.			
	20	2441962	GB	B1	2011-03-02	Dyson TechnolOgy Ltd			

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	21	2478614	GB	B1	2012-02-29	Dyson Technology Limited		
	22	2484146	GB	B1	2013-02-13	Dyson Technology Limited		
	23	60220027	JP	A	1985-11-02	Matsushita Denki Sankyo KK		
	24	63246116	JP	A	1988-10-13	Matsushita Electric Ind Co Ltd		
	25	8289861	JP	A	1996-11-05	Hitachi Ltd.		
	26	2004351234	JP	A	2004-12-16	Sekijima Takayuki		
	27	2010227287	JP	A	2010-10-14	HITACHI APPLIANCES INC.		
	28	2010081968	JP	A	2010-04-15	Sharp KK		
	29	2009261501	JP	A	2009-11-12	YAMADA ELECTRIC IND		
	30	2004121722	JP	A	2004-04-22	SANYO ELECTRIC CO		
	31	D609203	JP	S	1983-09-22	Matsushita Electric Industrial Co.,Ltd.		

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	32	D745201	JP	S	1983-10-05	Matsushita Electric Industrial Co.,Ltd.			
	33	D649078	JP	S	1985-04-17	Matsushita Electric Industrial Co.,Ltd.			
	34	D679295	JP	S	1986-05-21	Matsushita Electric Industrial Co.,Ltd.			
	35	D679390	JP	S	1986-05-22	Matsushita Electric Industrial Co.,Ltd.			
	36	D679426	JP	S	1986-05-22	Matsushita Electric Industrial Co.,Ltd.			
	37	D679806	JP	S	1986-05-26	Toshiba Corporation			
	38	61131720	JP		1986-06-19	Tokyo Denki Kabushiki Gaisha			
	39	D706192	JP	S	1987-05-28	Matsushita Electric Industrial Co.,Ltd.			
	40	D706193	JP	S	1987-05-28	Matsushita Electric Industrial Co.,Ltd.			
	41	D725983	JP	S	1988-02-29	Matsushita Electric Industrial Co.,Ltd.			

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	English machine translation of DE202005020767, published on August 10, 2008	
	2	English machine translation of DE102007011457, published on October 25, 2007	
	3	English machine translation of DE10110581, published on November 13, 2003	
	4	English machine translation of DE60201666, published on June 1, 2006	
	5	English machine translation of DE112010001135, published on August 2, 2012	
	6	English machine translation of DE112007003052, published on January 14, 2010	
	7	English machine translation of DE112007003039, published on October 29, 2009	
	8	English machine translation of DE112006003479, published on December 18, 2008	
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	11	English machine translation of JP63246116, published on October 13, 1988	
	12	English machine translation of JP8289861, published on November 5, 1996	
	13	English machine translation of JP2004351234, published on December 16, 2004	
	14	English machine translation of JP2010227287, published on October 14, 2010	
	15	English machine translation of JP2010081968, published on April 15, 2010	
	16	English machine translation of JP2009261501, published on November 12, 2009	
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CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

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Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L14	2266	a47l5/24.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/06 05:11 PM
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		"|"20120030896"|"2012 0079671"|"2012030441 7"|"20130091660"|"201 30091661"|"201300918 12"|"20130091813"|"20 140237768"|"20160367 094"|"7845046"|"78876 12"|"7931716"|"810099 9"|"8117712"|"8127398" |"8156609"|"8220109"|" 8236077"|"8255456"|"8 302250"|"8347455"|"83 87204"|"8424154"|"844 4731"|"8707513").PN.				
L17	676	a47l5/24.cpc. AND door	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 09:58 AM
L18	1789	a47l9/1608.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 09:59 AM
L19	662	a47l9/1608.cpc. AND door	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 09:59 AM
L20	1346	(wayne near2 conrad).in.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 10:02 AM
L21	768	(wayne near2 conrad).in. AND door	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 10:02 AM
L22	249	(wayne near2 conrad).in. AND door	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/11/08 10:02 AM
L23	193	a47l7/0019.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 10:03 AM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/376,975	10/05/2023	Wayne Ernest Conrad	10452-P52585US11	4138

1059 7590 11/15/2023

BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40TH FLOOR
TORONTO, ONTARIO M5H 3Y2
CANADA

EXAMINER	
HORTON, ANDREW ALAN	

ART UNIT	PAPER NUMBER
3723	

NOTIFICATION DATE	DELIVERY MODE
11/15/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipprocessingcentre@bereskinparr.com

Office Action Summary	**Application No.** 18/376,975	**Applicant(s)** Conrad, Wayne Ernest	
	Examiner ANDREW A HORTON	**Art Unit** 3723	**AIA (FITF) Status** Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 10/5/23.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-18 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☑ Claim(s) 1-5,7 and 9 is/are allowed.

7) ☑ Claim(s) 6,8 and 10-18 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 10/5/23 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Claim Rejections - 35 USC § 112

> The following is a quotation of 35 U.S.C. 112(b):
> (b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

> The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 8 and 10-18 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

2. Claim 6 (line 2) recites “the pistol grip handle” and there is no antecedent basis for it.

Claim 8 (line 3) recites “the latch” and there is no antecedent basis for it.

Claim 10, part d, line 1 recites “a pistol grip handle” and part b, line 2 recites “a handle”. These are the same element and need to be given the same name.

Claim 11 (line 2) recites “an upper end of the pistol grip handle” and claim 10, part e, lines 2-3 recites “an upper end of the handle”. Correction: Claim 11 (line 2): Replace “an” with -- the --.

Claim 16 (line 3) recites “the latch” and there is no antecedent basis for it.

The remaining claims are rejected for depending from claim 10.

Allowable Subject Matter

3. Claims 1-5, 7 and 9 are allowed.

Claims 6, 8 and 10-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW A HORTON whose telephone number is (571)270-5039. The examiner can normally be reached Monday - Friday 8:30 AM - 5:00 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Rosen can be reached on 571-270-7855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANDREW A HORTON/
Primary Examiner, Art Unit 3723

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/376,975	Conrad, Wayne Ernest
	Examiner	Art Unit
	ANDREW A HORTON	3723

CPC - Searched*		
Symbol	Date	Examiner
A47L 7/0019, 9/1608, 5/24	11/08/2023	AH

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Inventor search	11/08/2023	AH

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

Dyson Ex1004
Page 293

Bereskin & Parr

Appl. No	:	17/199,027
Inventor	:	Wayne Ernest Conrad
Applicant	:	Omachron Intellectual Property Inc.
Filed	:	March 11, 2021
Title	:	SURFACE CLEANING APPARATUS
TC./A.U.	:	3723
Conf. No.	:	5953
Examiner	:	MULLER, BRYAN R
Docket No.	:	10452-P57427US03
Customer No.	:	01059

December 20, 2023

Mail Stop Amendment
Honorable Commissioner for Patents
P. O. Box 1450
Alexandria, Virginia 22313–1450

Sir:

AMENDMENT AFTER FINAL & REQUEST FOR CONSIDERATION UNDER AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0

In response to the Final Office Action of October 20, 2023, please amend the above-identified application as follows:

Amendments to the Claims begin on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

REMARKS/ARGUMENTS

This is a response to the Final Office Action of October 20, 2023. Accordingly, this response is timely filed.

It is believed that the amended pages submitted herewith and the following comments represent a complete response to the Examiner's rejections and place the present application in condition for allowance. Reconsideration of the application is respectfully requested.

This response is being submitted herewith along with a Request for Consideration under the After Final Consideration Pilot Program 2.0.

Status of the Claims:

Claims 1-18 and 21-22 were examined in the Office Action of October 20, 2023, of which claims 10 and 18 were previously withdrawn from consideration.

By this response, claim 1 has been amended to recite that, “the dirty air inlet is positioned at the upper end of the hand vacuum cleaner”. Claim 1 has been further amended to recite a cyclone axis of rotation, “wherein, when the cyclone axis of rotation is oriented generally horizontally, the suction motor and an energy storage member are positioned at an elevation above an upper end of the handle, and wherein, when the hand vacuum cleaner is oriented with the dirty air inlet at the front end of the hand vacuum cleaner, a forward end of the energy storage member is positioned forward of the suction motor.”

Claim 11 has been amended to recite that, “the dirty air inlet is positioned at the upper end of the hand vacuum cleaner”. Claim 11 has been further amended to recite, *inter alia*, an inlet passage axis “wherein, when the inlet passage axis is oriented generally horizontally, the suction motor and an energy storage member are positioned at an elevation above an upper end of the handle, and wherein, when the hand vacuum

cleaner is oriented with the dirty air inlet at the front end of the hand vacuum cleaner, a forward end of the energy storage member is positioned forward of the suction motor."

Claims 2, 4, 14, and 15 have been cancelled without prejudice.

New claims 23 and 24 have been added.

Claims 10 and 18 remain withdrawn.

Various additional amendments have been made throughout the claim for clarity, consistency of language, and/or to ensure proper antecedence.

Applicant submits that no new matter has been added by these amendments. Applicant also submits that the claim amendments have been made without prejudice and without acquiescing to any of the Examiner's rejections but in an effort to advance prosecution.

Accordingly, the application will proceed with claims 1, 3, 5-13, 16-18, and 21-24, of which claims 1 and 11 are independent claims.

Claim Objections

The Examiner objected to claims 9 and 12 for the following informalities:

- the first occurrence of the word "the" should be deleted from line 4 (Claim 9); and
- the first occurrence of the word "the" should be deleted from line 6 (Claim 12).

By this response, the identified occurrence of the word "the" in claims 9 and 12 has been deleted.

Accordingly, the Applicant respectfully submits that the appropriate corrections have been made.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 3-9, 11-13, 15-17, 21, and 22 are rejected under 35 U.S.C. 103 as being unpatentable over Conrad (US 2018/0177352, "Conrad '352") in view of Conrad et al. (US 2017/0215663, "Conrad '663") and Conrad (US 9,888,817, "Conrad '817").

Claims 1-4, 6-9, 11, 13-15, 17, 21 and 22 are rejected under 35 U.S.C. 103 as being unpatentable over Conrad (US 2017/0290480, "Conrad '480") in view of Conrad '663 and Conrad '817.

Applicant respectfully traverse these rejections.

Discussion of the Patentability of Independent Claim 1

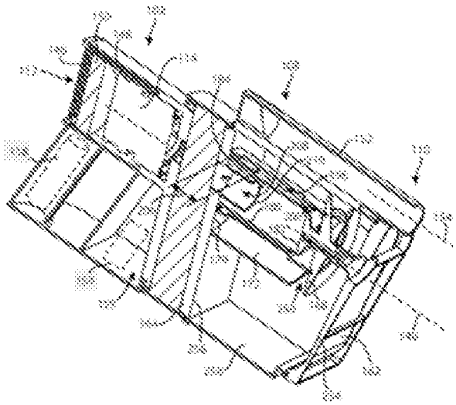
- *Conrad '352 as the Primary Reference*

By this response, claim 1 has been amended to recite:

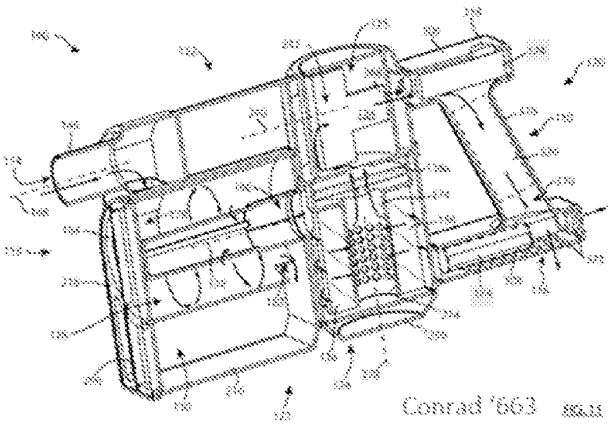
> wherein, when the hand vacuum cleaner is oriented with the dirty air inlet at the front end of the hand vacuum cleaner, a forward end of the energy storage member is positioned forward of the suction motor.

Applicant submits that the cited references, taken alone or in combination, fail to teach or suggest the above-noted limitation.

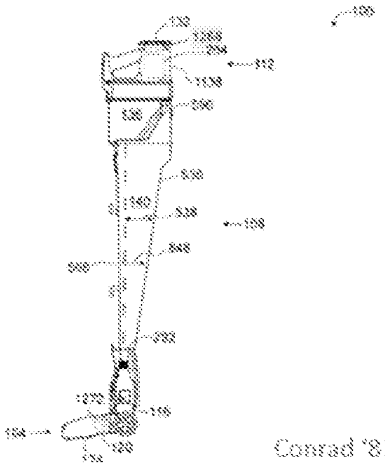
Referring to annotated FIG. 5 below, Conrad '352 shows a battery pack 158 provided in the handle 106 and in a compartment 159 positioned on a front side of the handle 106. Further, referring to annotated FIG. 11 of Conrad '663 and FIG. 3 of Conrad '817 below, on page 3 of the Office Action, the Examiner notes that Conrad '663 "teaches that a battery (174; Fig. 11) may be positioned immediately rearward of the motor" [Emphasis Added], and that "Conrad '817 also discloses a nearly identical location for a battery (1268; Fig. 3)".



Conrad '352 FIG. 1



Conrad '663 FIG. 11



Conrad '817 FIG. 3

Accordingly, Applicant submits that none of Conrad '352, Conrad '663, or Conrad '817 teach or suggest "when the hand vacuum cleaner is oriented with the dirty air inlet at the front end of the hand vacuum cleaner, a forward end of the energy storage member is positioned forward of the suction motor." Applicant further submits that Conrad '480 similarly does not teach or suggest the above-noted limitation (see energy storage member 580 in annotated FIG. 6 below), and therefore fails to remedy the deficiencies of Conrad '352, Conrad '663, and Conrad '817.

Since the cited references fail to teach or suggest all the elements recited in amended independent claim 1, it is respectfully submitted that combining the cited references cannot yield the claimed subject matter, regardless of the extent of any teaching, suggestion, or motivation.

- *Conrad '480 as the Primary Reference*

Claim 1 has been further amended by this response to recite:

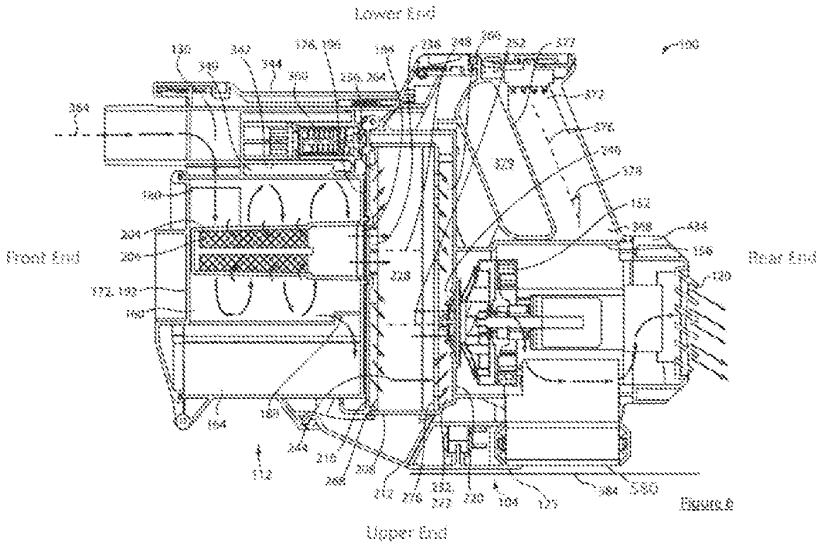
> an air flow path extending from a dirty air inlet to a clean air outlet, the dirty air inlet is positioned at the upper end of the hand vacuum cleaner;
>
> a cyclone assembly comprising a cyclone, the cyclone comprising a cyclone chamber, a cyclone air inlet, a cyclone air outlet, a cyclone axis of rotation, the cyclone chamber having front and rear axially opposed ends, wherein when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner the cyclone axis of rotation is oriented generally horizontal; ...
>
> wherein, when the cyclone axis of rotation is oriented generally horizontally, the suction motor and an energy storage member are positioned at an elevation above an upper end of the handle... [Emphasis Added].

Applicant submits that the cited references, taken alone or in combination, fail to teach or suggest the above-noted limitations.

On page 5 of the Office Action, the Examiner asserts that:

> Conrad '480 discloses a hand vacuum cleaner having a front end (bottom as seen in Fig. 6), a rear end (top as seen in Fig. 6), an upper end (right as seen in Fig. 6) and a lower end (left as seen in Fig. 6) ...

As interpreted by the Examiner and as shown annotated FIG. 6 below that was provided in the Office Action, the dirty air inlet 116 is therefore at the lower end of the surface cleaning apparatus 100 and opposite the suction motor 152 and energy storage member 580. As such, Conrad '480 does not, and cannot, teach or suggest both the dirty air inlet positioned at the upper end *and* the suction motor and energy storage member positioned at an elevation above an upper end of the handle when the cyclone axis of rotation is oriented generally horizontally as required by amended claim 1.



Accordingly, Applicant submits that Conrad '480 does not teach or suggest the above-noted limitations. Applicant further submits that Conrad '352, Conrad '663, and Conrad '817 similarly do not teach or suggest the above-noted limitations as required by amended claim 1, and therefore fail to remedy the deficiencies of Conrad '480.

Since the cited references fail to teach or suggest all the elements recited in amended independent claim 1, it is respectfully submitted that combining the cited references cannot yield the claimed subject matter, regardless of the extent of any teaching, suggestion, or motivation.

In view of the foregoing, the Applicant respectfully submits that amended independent claim 1, and the claims that depend directly or indirectly therefrom, is novel and non-obvious over the cited art and is therefore allowable.

Withdrawal of the rejection under 35 U.S.C. § 103 is respectfully requested.

Discussion of the Patentability of Independent Claim 11

- *Conrad '352 as the Primary Reference*

By this response, claim 11 has been amended analogously to claim 1 to recite:

> wherein, when the hand vacuum cleaner is oriented with the dirty air inlet at the front end of the hand vacuum cleaner, a forward end of the energy storage member is positioned forward of the suction motor.

Accordingly, at least for reasons analogous to those presented above with respect to amended claim 1, Applicant submits that the cited references, taken alone or in combination, fail to teach or suggest the above-noted limitation and further that, since the cited references fail to teach or suggest all the elements recited in amended independent claim 11, combining the cited references cannot yield the claimed subject matter, regardless of the extent of any teaching, suggestion, or motivation.

- *Conrad '480 as the Primary Reference*

Claim 11 has been further amended by this response to recite:

> an air flow path extending from a dirty air inlet to a clean air outlet, the dirty air inlet is positioned at the upper end of the hand vacuum cleaner; ...
>
> wherein an inlet passage extends from the dirty air inlet to the air outlet located at an air inlet of the air treatment member, the inlet passage has an inlet passage axis extending centrally through the inlet passage from the dirty air inlet to the air outlet of the inlet passage and, when the upper end of the hand vacuum cleaner is positioned above the lower end of the

> hand vacuum cleaner the inlet passage axis is oriented generally horizontal and the air treatment member has an upper end and a lower end; ...
>
> wherein, when the inlet passage axis is oriented generally horizontally, the suction motor and an energy storage member are positioned at an elevation above an upper end of the handle... [Emphasis Added].

Accordingly, at least for reasons analogous to those presented above with respect to amended claim 1, Applicant submits that the cited references, taken alone or in combination, fail to teach or suggest the above-noted limitation and further that, since the cited references fail to teach or suggest all the elements recited in amended independent claim 11, combining the cited references cannot yield the claimed subject matter, regardless of the extent of any teaching, suggestion, or motivation.

In view of the foregoing, the Applicant respectfully submits that amended independent claim 11, and the claims that depend directly or indirectly therefrom, is novel and non-obvious over the cited art and is therefore allowable.

Withdrawal of the rejection under 35 U.S.C. § 103 is respectfully requested.

Discussion of the Patentability of the Dependent Claims

The rest of the rejected claims depend from claim 1 or claim 11 respectfully and further define additional technical features of the present invention. In view of the patentability of claims 1 and 11, and in further view of the additional technical features, Applicant respectfully submits that the dependent claims are patentable over the prior art.

Although Applicant has not addressed all the issues of the dependent claims, Applicant respectfully submits that Applicant does not necessarily agree with the characterization and assessments of the dependent claims made by the Examiner, and Applicant believes that each claim is patentable on its own merits. Applicant respectfully submits that the dependent claims incorporate by reference all the limitations of the claim to

which they refer and include their own patentable features, and are therefore in condition for allowance. Therefore Applicant respectfully requests the withdrawal of all claim rejections and prompts allowance of the claims.

Conclusion

In light of Applicant's amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to peruse at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present specification.

Applicant believes that no fees are due with the submission of the present response. However, if Applicant is mistaken, the Commissioner is hereby authorized to charge any deficiency in fees required to keep the present application in good standing (including any extension of time fees, excess claim fees, and request for continued examination fees) or credit any overpayment to our Deposit Account No. 02-2095.

Should the Examiner deem it beneficial to discuss the application in greater detail, the Examiner is kindly requested to contact Philip C. Mendes da Costa by telephone at 416-957-1695 at the Examiner's convenience.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.

By /Philip C. Mendes da Costa/
Philip C. Mendes da Costa
Reg. No. 33106
Tel: 416.957.1695

Doc Code: A.NE.AFCP
Document Description: After Final Consideration Program Request

PTO/SB/434 (3-22)

CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0

Practitioner Docket No.:	Application No.:	Filing Date:
10452-P57427US03	17/199,027	March 11, 2021
First Named Inventor:	**Title:**	
Wayne Ernest Conrad	SURFACE CLEANING APPARATUS	

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116.

1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (*e.g.*, a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c).
2. The above-identified application contains an outstanding final rejection.
3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect.
4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection.
5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response.
6. This certification and request is being filed electronically using the USPTO's patent electronic filing system.
7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.]
8. By filing this certification and request, applicant acknowledges the following:

- Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0.
- The examiner will verify that the AFCP 2.0 submission is compliant, *i.e.*, that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions:
  - The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, by mailing an advisory action.
  - If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview.
    - The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate.
    - If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.

Signature	Date	Practitioner Registration No.
/Philip C. Mendes da Costa/	December 20, 2023	33106
Name (Print/Typed)	**Telephone Number**	
Philip C. Mendes da Costa	416.957.1695	

***Note**: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.*

☐ * Total of _____ forms are submitted.

Privacy Act Statement

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UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/376,975	**12/20/2023 05:25:10 PM Z ET**	**10452-P52585US11**

Title of Invention

HANDHELD SURFACE CLEANING APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4138	FILED BY	Snezana Lisowsky
PATENT CENTER #	63695573	FILING DATE	10/05/2023
CUSTOMER #	1059	FIRST NAMED INVENTOR	Wayne Ernest Conrad
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Philip Mendes da Costa

Documents

TOTAL DOCUMENTS: 4

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
Response_2023-12-20_P57427US03.pdf		16	-	767 KB
Response_2023-12-20_P57427US03-A.NE.pdf	(1-1)	1	Response After Final Action	131 KB
Response_2023-12-20_P57427US03-CLM.pdf	(2-6)	5	Claims	109 KB
Response_2023-12-20_P57427US03-REM.pdf	(7-16)	10	Applicant Arguments/Remarks Made in an Amendment	677 KB
AFCPP_2023-12-20-P57427US03.pdf		2	After Final Consideration Program Request	304 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
Response_2023-12-20_P57427US03.pdf	42ACC83FE4AFE88AB23B1177450A00C5100FEE03A9BCCCF6A52FF9C759FB7BCD26ACB8A092CCE5B3E82338F8AA1F675A34DA3FDAEF4504B20A8BC2F1D46457AC
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A hand vacuum cleaner having a front end, a rear end, an upper end and a lower end, the hand vacuum cleaner comprising:

   (a) an air flow path extending from a dirty air inlet to a clean air outlet, the dirty air inlet is positioned at the upper end of the hand vacuum cleaner;

   (b) a cyclone assembly comprising a cyclone, the cyclone comprising a cyclone chamber, a cyclone air inlet, a cyclone air outlet, a cyclone ~~central longitudinally extending~~ axis of rotation, the cyclone chamber having front and rear axially opposed ends, wherein when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner the cyclone ~~central longitudinally extending~~ axis of rotation is oriented generally horizontal;

   (c) a housing positioned rearward of the cyclone wherein a suction motor is positioned in the housing; and,

   (d) a pistol grip handle positioned below the housing and extending downwardly from the housing,

   wherein, when the cyclone axis of rotation is oriented generally horizontally, the suction motor and an ~~at least one~~ energy storage member are positioned at an elevation above an upper end of the handle, and

   wherein, when the hand vacuum cleaner is oriented with the dirty air inlet at the front end of the hand vacuum cleaner, a forward end of the energy storage member is positioned forward of the suction motor.

2. (Cancelled).

3. (Original) The hand vacuum cleaner of claim 1 further comprising an inlet passage extending from the dirty air inlet to the cyclone air inlet wherein the inlet passage is positioned radially outwardly of the cyclone chamber.

4. (Cancelled).

5. (Original) The hand vacuum cleaner of claim 1 further comprising an inlet passage extending from the dirty air inlet to the cyclone air inlet wherein, when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner, the inlet passage is positioned above the cyclone chamber.

6. (Previously Presented) The hand vacuum cleaner of claim 1 wherein an upper end of the pistol grip handle is located radially outwardly of the post motor filter.

7. (Currently Amended) The hand vacuum cleaner of claim 1 wherein, when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner, a longitudinal axis that is parallel to the cyclone ~~central longitudinally extending~~ axis of rotation extends through the [[the]] cyclone assembly and the pistol grip handle.

8. (Currently Amended) The hand vacuum cleaner of claim 1 further comprising a pre-motor filter wherein the pre-motor filter is positioned rearward of the cyclone assembly ~~and the dirt collection chamber~~.

9. (Currently Amended) The hand vacuum cleaner of claim 7 wherein, when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner, a longitudinal axis that is parallel to the cyclone ~~central longitudinally extending~~ axis of rotation extends through [[the]] a lower end of the pre-motor filter and the pistol grip handle.

10. (Withdrawn - Currently Amended) The hand vacuum cleaner of claim 1 wherein, when the upper end of the hand vacuum cleaner is positioned above the lower end

of the hand vacuum cleaner, the dirt outlet is provided at a lower ~~an upper~~ end of the cyclone chamber.

11. (Currently Amended) A hand vacuum cleaner having a front end, a rear end, an upper end and a lower end, the hand vacuum cleaner comprising:

(a) an air flow path extending from a dirty air inlet to a clean air outlet, the dirty air inlet is positioned at the upper end of the hand vacuum cleaner;

(b) an air treatment member comprising a chamber having an air inlet and an air outlet, a central longitudinally extending axis extending between front and rear axially opposed ends of the air treatment member, wherein an inlet passage extends from the dirty air inlet to the air outlet located at an air inlet of the air treatment member, the inlet passage has an inlet passage axis extending centrally through the inlet passage from the dirty air inlet to the air outlet of the inlet passage and, when the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner the inlet passage axis ~~central longitudinally extending axis~~ is oriented generally horizontal and the air treatment member has an upper end and a lower end;

(c) a housing positioned rearward of the air treatment member ~~wherein~~;

(d) a suction motor positioned in the air flow path rearward of the air treatment member ~~cyclone chamber~~; and,

a pistol grip handle having a hand grip portion wherein, when the inlet passage axis is oriented generally horizontally, the suction motor and an ~~at least one~~ energy storage member are positioned at an elevation above an upper end of the handle, and

wherein, when the hand vacuum cleaner is oriented with the dirty air inlet at the front end of the hand vacuum cleaner, a forward end of the energy storage member is positioned forward of the suction motor.

12. (Currently Amended) The hand vacuum cleaner of claim 11 wherein the air treatment member further comprises a dirt collection chamber external to the air treatment member ~~cyclone chamber~~ and, when the inlet passage axis is oriented generally horizontally ~~the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner~~, a longitudinal axis that is parallel to the central longitudinally extending axis extends through [[the]] the dirt collection chamber and the pistol grip handle.

13. (Currently Amended) The hand vacuum cleaner of claim 11 further comprising a pre-motor filter wherein the pre-motor filter is positioned rearward of the air treatment member and, when the inlet passage axis is oriented generally horizontally ~~the upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum cleaner~~, a longitudinal axis that is parallel to the central longitudinally extending axis extends through the pre-motor filter and the pistol grip handle.

14. (Cancelled).

15. (Cancelled).

16. (Currently Amended) The hand vacuum cleaner of claim 11 ~~further comprising an inlet passage extending from the dirty air inlet to the cyclone air inlet~~ wherein, when the inlet passage axis is oriented generally horizontally ~~upper end of the hand vacuum cleaner is positioned above the lower end of the hand vacuum~~ cleaner, the inlet passage is positioned above the air treatment member.

17. (Previously Presented) The hand vacuum cleaner of claim 11 wherein the housing also houses a post motor filter, and an upper end of the pistol grip handle is located radially outwardly of the post motor filter.

18. (Withdrawn - Currently Amended) The hand vacuum cleaner of claim 11 further comprising a dirt collection chamber external to the air treatment member and, when the inlet passage axis is oriented generally horizontally ~~the upper end of the hand~~

~~vacuum cleaner is positioned above the lower end of the hand vacuum cleaner~~, a dirt outlet of the air treatment member is provided at a lower ~~an upper~~ end of the air treatment member.

19. (Cancelled).

20. (Cancelled).

21. (Currently Amended) The hand vacuum cleaner of claim 1 wherein at least one of the suction motor and the ~~at least one~~ energy storage member overlies the handle.

22. (Previously Presented) The hand vacuum cleaner of claim 11 wherein at least one of the suction motor and the ~~at least one~~ energy storage member overlie the handle.

23. (New) The hand vacuum cleaner of claim 1 wherein, when the hand vacuum cleaner is oriented with the dirty air inlet at the front end of the hand vacuum cleaner, the energy storage member is positioned forward of the hand grip portion.

24. (New) The hand vacuum cleaner of claim 11 wherein, when the hand vacuum cleaner is oriented with the dirty air inlet at the front end of the hand vacuum cleaner, the energy storage member is positioned forward of the hand grip portion.

REMARKS/ARGUMENTS

The Applicant advises the Examiner that on December 20, 2023, an Amendment After Final was filed on this application. That Amendment After Final related to application 17/199,027 and was filled in error on this application. In view of this, the Examiner is asked to ignore that Amendment After Final.

This paper is in response to the Office Action of November 15, 2023. It is believed that the amended pages submitted herewith and the following comments represent a complete response to the Examiner's rejections and place the present application in condition for allowance. Reconsideration of the application is respectfully requested.

Allowable Subject matter:

The Applicant thanks Examiner for allowing claims 1-5, 7 and 9 and for indicating that claims 6, 8, and 10-18 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AiA), 2nd paragraph, including all the limitations of the base claim and any intervening claims.

Status of the Claims

Claims 1-18 were examined in the Office Action of November 15, 2023.

Claims 6, 8, 10, 11 and 16 have been amended to overcome the indefiniteness rejections.

Clarification amendments have been made to claims 2, 3 and 13.

Claim 2 has been amended to clarify that "the actuator is located at an elevation of an upper end of the pistol grip handle and forward of the pistol grip handle". A similar amendment is made to claim 10.

Claim 3 and 13 have been amended to clarify that "the actuator is axially located adjacent a forward end of the battery pack".

Claim Rejections – 35 U.S.C. § 112

Claims 6, 8 and 10-18 were rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

With regard to claim 6 (line 2), the Examiner stated that there is insufficient antecedent basis for the limitation "the pistol grip handle".

> In response, the Applicant has corrected the claim dependency so that claim 6 now depends from claim 2 which has the required antecedent.

With regard to claim 8 (line 3), the Examiner stated that there is insufficient antecedent basis for the limitation "the latch".

> In response, the Applicant has amended claim 8 by amending the claims to specify that "the lock further comprises a latch".

With regards to claim 10, the Examiner stated that the limitation "a pistol grip handle" (found in paragraph (d), line 1) and the limitation "handle" (found in paragraph (b), line 2), refer to the same element and therefore need to be given the same name.

> In response, the Applicant has deleted the reference to "a handle" in paragraph (b), line 2.

Similarly, with regard to claim 11, the Examiner established that the limitations "an upper end of the pistol grip handle" (found in line 2) and the expression "an upper end of the handle" (found in claim 10, paragraph (d), lines 2-3) refer to the same element and requested that a uniform expression be used.

> By this response, in claim 10, paragraph (e). line 2, the limitation "the upper end of the handle" has been amended to "the upper end of the pistol grip handle". Consistent with the revision in claim 10, claim 11 (line 3), the

limitation "an upper end of the pistol grip handle" has been revised to read "the upper end of the pistol grip handle".

With respect to claim 16, the Examiner stated that there is no antecedent basis for the limitation "the latch".

By this response, the claim has been amended to read "the lock further comprises a latch that is located at an elevation of the opposed securable end".

In view of the foregoing, withdrawal of the rejections under 35 U.S.C. § 112 is respectfully requested.

Conclusion

In light of Applicant's amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present specification.

Applicant believes that no fees are due with the submission of the present response. However, if Applicant is mistaken, the Commissioner is hereby authorized to charge any deficiency in fees required to keep the present application in good standing (including any extension of time fees, excess claim fees, and request for continued examination fees) or credit any overpayment to our Deposit Account No. 02-2095.

Should the Examiner deem it beneficial to discuss the application in greater detail, the Examiner is kindly requested to contact Philip C. Mendes da Costa by telephone at 416-957-1695 at the Examiner's convenience.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BERESKIN & PAR LLP/S.E.N.C.R.L., s.r.l.
Agent for the Applicant

/Philip C. Mendes da Costa/

By _____
Philip C. Mendes da Costa
Reg. No. 33,106
Tel: 416-957-1695

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A hand vacuum cleaner having a front end, a rear end, an upper side and a lower side, the hand vacuum cleaner comprising:

   (a) an air flow passage extending from a dirty air inlet provided at the front end to a clear air outlet provided at the rear end;

   (b) a vacuum cleaner body comprising a suction motor positioned in the air flow passage, a front end, a rear end and a handle;

   (c) a cyclone unit positioned in the air flow passage upstream from the suction motor, the cyclone unit comprising a cyclone having a front end, a rear end, a cyclone axis of rotation extending between the front and rear ends of the cyclone, the cyclone unit further comprising an axially extending cyclone unit wall which extends to a front end of the cyclone unit, the front end of the cyclone unit comprising a front door that is moveable between a closed position and an open position; and,

   (d) a lock securing the front door in the closed position, the lock comprising an actuator, wherein the actuator is spaced towards the rear end of the cyclone.

2. (Currently Amended) The hand vacuum cleaner of claim 1 further comprising a pistol grip handle wherein the actuator is located at an elevation of an upper end of the pistol grip handle and forward of the pistol grip handle.

3. (Currently Amended) The hand vacuum cleaner of claim 2 further comprising a battery pack wherein the actuator is axially located adjacent a forward end of the battery pack.

4. (Original) The hand vacuum cleaner of claim 3 further comprising an enclosed finger grip area.

5. (Original) The hand vacuum cleaner of claim 4 wherein a battery pack mount forms part of the enclosed finger grip area.

6. (Currently Amended) The hand vacuum cleaner of claim [[1]] 2 wherein a pistol grip axis extends through the pistol grip handle from a lower end of the pistol grip handle to an upper end of the pistol grip handle and the pistol grip axis intersects the suction motor.

7. (Original) The hand vacuum cleaner of claim 6 wherein the pistol grip axis and the cyclone axis of rotation intersect within the hand vacuum cleaner.

8. (Currently Amended) The hand vacuum cleaner of claim 1 wherein the front door has a door first end which is rotatably mounted to a front end of the cyclone unit wall and an opposed securable end and the lock further comprises a latch that is located at an elevation of the opposed securable end.

9. (Original) The hand vacuum cleaner of claim 1 wherein the cyclone unit wall terminates at an open end, the open end is closed by the front door, wherein all of the open end is opened when the front door is in the open position.

10. (Currently Amended) A hand vacuum cleaner having a front end, a rear end, an upper side and a lower side, the hand vacuum cleaner comprising:

    (a) an air flow passage extending from a dirty air inlet provided at the front end to a clear air outlet provided at the rear end;

    (b) a vacuum cleaner body comprising a suction motor positioned in the air flow passage, a front end[[,]] and a rear end ~~and a handle~~;

    (c) a cyclone unit positioned in the air flow passage upstream from the suction motor, the cyclone unit comprising a cyclone having a front end, a rear end, a cyclone axis of rotation extending between the front and rear ends of the cyclone, the cyclone unit further comprising an axially extending cyclone unit wall which extends to a front end of the cyclone unit, the front end of the cyclone unit comprising a front door that is moveable between a closed position and an open position;

(d) a pistol grip handle; and,

(e) a lock securing the front door in the closed position, the lock comprising an actuator, wherein the actuator is located at an elevation of an upper end of the pistol grip handle and forward of the pistol grip handle.

11. (Currently Amended) The hand vacuum cleaner of claim 10 wherein a pistol grip axis extends through the pistol grip handle from a lower end of the pistol grip handle to [[an]] the upper end of the pistol grip handle and the pistol grip axis intersects the suction motor.

12. (Original) The hand vacuum cleaner of claim 11 wherein the pistol grip axis and the cyclone axis of rotation intersect within the hand vacuum cleaner.

13. (Currently Amended) The hand vacuum cleaner of claim 10 further comprising a battery pack wherein the actuator is axially located adjacent a forward end of the battery pack.

14. (Original) The hand vacuum cleaner of claim 13 further comprising an enclosed finger grip area.

15. (Original) The hand vacuum cleaner of claim 14 wherein a battery pack mount forms part of the enclosed finger grip area.

16. (Currently Amended) The hand vacuum cleaner of claim 10 wherein the front door has a door first end which is rotatably mounted to a front end of the cyclone unit wall and an opposed securable end and the lock further comprises a latch that is located at an elevation of the opposed securable end.

17. (Original) The hand vacuum cleaner of claim 10 wherein the cyclone unit wall terminates at an open end, the open end is closed by the front door, wherein all of the open end is opened when the front door is in the open position.

18. (Original) The hand vacuum cleaner of claim 14 wherein the actuator is spaced towards the rear end of the cyclone.

Bereskin & Parr

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	:	18/376,975
Title	:	HANDHELD SURFACE CLEANING APPARATUS
Applicant	:	Omachron Intellectual Property Inc.
Filed	:	October 5, 2023
Art Unit	:	3723
Examiner	:	ANDREW ALAN HORTON
Docket No.	:	10452-P52585US11
Conf. No.	:	4138
Cust. No.	:	01059

December 21, 2023

Mail Stop Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313–1450

AMENDMENT

Sir:

In response to the Office Action of November 15, 2023, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

B&P Bereskin & Parr LLP
Scotia Plaza, 40 King Street West, 40th Floor, Toronto, ON M5H 3Y2 Canada
Tel: 416.364.7311 Fax: 416.361.1398 bereskinparr.com

UNITED STATES
PATENT AND TRADEMARK OFFICE

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/376,975	**12/21/2023 09:50:05 AM Z ET**	**10452-P52585US11**

Title of Invention

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Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4138	FILED BY	Snezana Lisowsky
PATENT CENTER #	63701412	FILING DATE	10/05/2023
CUSTOMER #	1059	FIRST NAMED INVENTOR	Wayne Ernest Conrad
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Philip Mendes da Costa

Documents

TOTAL DOCUMENTS: 3

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
Response_2023-12-21_P52585US11.pdf		8	-	187 KB
Response_2023-12-21_P52585US11-A....pdf	(1-1)	1	Amendment/Request for Reconsideration-After Non-Final Rejection	137 KB
Response_2023-12-21_P52585US11-CLM.pdf	(2-4)	3	Claims	99 KB
Response_2023-12-21_P52585US11-REM.pdf	(5-8)	4	Applicant Arguments/Remarks Made in an Amendment	105 KB

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DOCUMENT	MESSAGE DIGEST(SHA-512)
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New International Application Filed with the USPTO as a Receiving Office

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PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 18/376,975	Filing Date 10/05/2023	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

	(Column 1)	(Column 2)			
FOR	NUMBER FILED	NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $480 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	12/29/2023	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 18	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/POLIN ANG/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Bereskin&Parr

Appl. No	:	18/376,975	Confirmation No.:	4138
Applicant	:	Omachron Intellectual Property Inc.		
Filed	:	October 5, 2023		
Title	:	HANDHELD SURFACE CLEANING APPARATUS		
TC./A.U.	:	3723		
Examiner	:	HORTON, Andrew Allan		
Docket No.	:	10452-P52585US11		
Customer No.	:	01059		

Mail Stop Issue Fee
Honorable Commissioner for Patents
P. O. Box 1450
Alexandria, Virginia 22313–1450

January 19, 2024

ISSUE FEES

This correspondence is responsive to the Notice of Allowance and Issue Fee Due dated January 19, 2024, which issued in the above-identified patent application. As required, we enclose herewith the Issue Fee transmittal form.

The government fee of $1200 is included. Please charge any deficiency or credit any overpayment to our deposit account no. 02-2095.

Respectfully submitted,

BERESKIN & PARR LLP/ S.E.N.C.R.L., s.r.l.

/Philip C. Mendes da Costa/

Name: Philip C. Mendes da Costa
Registration No. 33,106
416. 957.1695

Bereskin & Parr LLP
Scotia Plaza, 40 King Street West, 40th Floor, Toronto, ON M5H 3Y2 Canada
Tel: 416.364.7311 Fax: 416.361.1398 bereskinparr.com

9101145

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/376,975	01/19/2024 04:45:05 PM Z ET	10452-P52585US11

Title of Invention

HANDHELD SURFACE CLEANING APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4138	FILED BY	Snezana Lisowsky
PATENT CENTER #	64021445	AUTHORIZED BY	Philip Mendes da Costa
CUSTOMER #	1059	FILING DATE	10/05/2023
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Wayne Ernest Conrad

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 8979	E202411G46128247	Snezana Lisowsky

PRE-AUTHORIZED ACCOUNT

022095

PRE-AUTHORIZED CATEGORY

37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1501	UTILITY ISSUE FEE	1200.00	1	1200.00
			TOTAL AMOUNT:	$1,200.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement

Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

1059 7590 01/19/2024
BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40TH FLOOR
TORONTO, ONTARIO M5H 3Y2
CANADA

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/376,975	10/05/2023	Wayne Ernest Conrad	10452-P52585US11	4138

TITLE OF INVENTION: HANDHELD SURFACE CLEANING APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	04/19/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
HORTON, ANDREW ALAN	3723	015-344000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Philip C. Mendes da Costa
2 BERESKIN & PARR LLP/ S.E.N.C.R.L., s.r.l.
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Omachron Intellectual Property Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Hampton, Ontario, Canada

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☒ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☒ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 022095

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

☐ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

☐ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Philip C. Mendes da Costa/ Date January 19, 2024

Typed or printed name Philip C. Mendes da Costa Registration No. 33106

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/376,975	**01/19/2024 04:45:05 PM Z ET**	**10452-P52585US11**

Title of Invention

HANDHELD SURFACE CLEANING APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4138	FILED BY	Snezana Lisowsky
PATENT CENTER #	64021445	FILING DATE	10/05/2023
CUSTOMER #	1059	FIRST NAMED INVENTOR	Wayne Ernest Conrad
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Philip Mendes da Costa

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
Deposit_Authorization_2024-01-19_P52585US11.pdf	1	Transmittal Letter	98 KB
Issue_Fee_Transmittal_2024-01-19_P52585US11.pdf	1	Issue Fee Payment (PTO-85B)	829 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
Deposit_Authorization_2024-01-19_P52585US11.pdf	D920CE4B10C6143601693976DA3E3920EEE37D7307857627B9F2189D2AFDAB62BFA41F2877EB4A427210E3B710ED3E169A4

Dyson Ex1004
Page 330

	EB3D7E62A3406C036225487CEFBD3
Issue_Fee_Transmittal_2024-01-19_P52585US11.pdf	9BAC6AB8175ED6CB2FE6287D9C742BF944E796D57C916387362D14B124F8D0CEF3E0F0BDFE66CEF52BFD45F773E4C7C99C811B522B92F4B607994D66793D7E07

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New International Application Filed with the USPTO as a Receiving Office

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/376,975	Conrad, Wayne Ernest
	Examiner	Art Unit
	ANDREW A HORTON	3723

CPC - Searched*		
Symbol	**Date**	**Examiner**
A47L 7/0019, 9/1608, 5/24	11/08/2023	AH
Search update	01/09/2024	AH

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
Inventor search	11/08/2023	AH

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
ALL	ALL	01/09/2024	AH

Dyson Ex1004
Page 331

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	18376975
Filing Date	2023-10-05
First Named Inventor	CONRAD, Wayne Ernest
Art Unit	3723
Examiner Name	n/a
Attorney Docket Number	10452-P52585US11 PART3

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8707513	B2	2014-04-29	Ivarsson et al.	
	2	8444731	B2	2013-05-21	Gomiciaga-Pereda et al.	
	3	8424154	B2	2013-04-23	Beskow et al.	
	4	8387204	B2	2013-03-05	Dyson	
	5	8347455	B2	2013-01-08	Dyson et al.	
	6	8302250	B2	2012-11-06	Dyson et al.	
	7	8255456	B2	2012-08-28	Sundarrajan et al.	
	8	8236077	B2	2012-08-07	Gomiciaga-Pereda et al.	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.A.H/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

	9	8220109	B2	2012-07-17	Medema et al.	
	10	8156609	B2	2012-04-17	Milne et al.	
	11	8127398	B2	2012-03-06	Conrad	
	12	8117712	B2	2012-02-21	Dyson et al.	
	13	8100999	B2	2012-01-24	Ashbee et al.	
	14	7931716	B2	2011-04-26	Oakham	
	15	7887612	B2	2011-02-15	Conrad	
	16	7845046	B2	2010-12-07	Milligan et al.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20160367094	A1	2016-12-22	Conrad	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.A.H/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

	2	20140237768	A1	2014-08-28	Conrad	
	3	20130091813	A1	2013-04-18	SMITH	
	4	20130091812	A1	2013-04-18	SMITH	
	5	20130091661	A1	2013-04-18	Smith	
	6	20130091660	A1	2013-04-18	SMITH	
	7	20120304417	A1	2012-12-06	Riley	
	8	20120079671	A1	2012-04-05	STICKNEY et al.	
	9	20120030896	A1	2012-02-09	Crouch et al.	
	10	20110219571	A1	2011-09-15	DYSON et al.	
	11	20110219570	A1	2011-09-15	Conrad	
	12	20110219566	A1	2011-09-15	Dyson et al.	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.A.H/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
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	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

	13	20100229322	A1	2010-09-16	Conrad	
	14	20100154150	A1	2010-06-24	MCLEOD	
	15	20100115726	A1	2010-05-13	Groff et al.	
	16	20100045215	A1	2010-02-25	Hawker et al.	
	17	20090313958	A1	2009-12-24	Gomiciaga-Pereda et al.	
	18	20090307864	A1	2009-12-17	Dyson	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	D6049084	JP	S	1985-04-17	Matsushita Electrical Industrial Co.,Ltd.		
	2	D726042	JP	S	1988-03-04	Matsushita Electrical Industrial Co.,Ltd.		
	3	D743318	JP	S	1988-03-04	Hitachi Ltd.		

EFS Web 2.1.18

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.A.H/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

	4	D743619	JP	S	1988-06-19	Matsushita Electrical Industrial Co. Ltd.		
	5	D743059	JP	S	1988-09-12	Tokyo Electric Industry Co. Ltd.		
	6	D743445	JP	S	1988-09-14	Hitachi Ltd.		
	7	D743603	JP	S	1988-09-16	Sanyo Electric Co. Ltd		
	8	D743618	JP	S	1988-09-16	Matsushita Electrical Industrial Co. Ltd.		
	9	D743619	JP	S	1988-09-16	Matsushita Electrical Industrial Co. Ltd.		
	10	D745200	JP	S	1988-10-04	Matsushita Electrical Industrial Co. Ltd.		
	11	D943287	JP	S	1988-11-01	Tec Co. Ltd.		
	12	D64-15020	JP	S	1989-01-19	Hitachi Ltd.		
	13	D787941	JP	S	1990-05-15	Toshiba Corporation		
	14	D788426	JP	S	1990-05-23	Matsushita Electrical Industrial Co. Ltd.		

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.A.H/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

	15	788427	JP	S	1990-05-23	Matsushita Electrical Industrial Co. Ltd.		
	16	2000083879	JP	A	2000-03-28	Hitachi Ltd.		
	17	D1115813	JP	A	2001-07-16	Sharp Co.		
	18	D1310024	JP	A	2007-09-10	Sharp Co.		
	19	D1370915	JP	A	2009-10-13	Sharp Co., Ltd.		
	20	1020030060539	KR	A	2003-07-16	LG Electronics In		
	21	1020060018004	KR	A	2006-02-28	SAMSUNG ELECTRONICS CO, LTD.		
	22	1020060008365	KR	A	2006-01-26	LG ELECTRONICS INC.		
	23	1020050091835	KR	A	2005-09-15	LG ELECTRONICS INC.		
	24	1020050091836	KR	A	2005-09-15	LG ELECTRONICS INC.		
	25	1020050091834	KR	A	2005-09-15	LG ELECTRONICS INC.		

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.A.H/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

	26	1020050091833	KR	A	2005-09-15	LG ELECTRONICS INC.			
	27	1020050091829	KR	A	2005-09-15	LG ELECTRONICS INC.			
	28	1020050091824	KR	A	2005-09-15	LG ELECTRONICS INC.			
	29	1020050091821	KR	A	2005-09-15	LG ELECTRONICS INC.			
	30	1020050091826	KR	A	2005-09-15	LG ELECTRONICS INC.			
	31	1020100084127	KR	A	2010-07-23	SEB S.A.			
	32	1020080039105	KR	A	2008-05-07	LG ELECTRONICS INC.			
	33	1020080029824	KR	A	2008-04-03	VAX LIMITED			
	34	1020060125954	KR	A	2006-12-07	LG ELECTRONICS INC.			
	35	1020060125952	KR	A	2006-12-07	LG ELECTRONICS INC.			
	36	300360565	KR	A	2004-09-01	Kim Kyu-Han			

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.A.H/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

	37	1020050104614	KR		2005-11-03	LG ELECTRONICS INC.			
	38	1020050104613	KR		2005-11-03	LG ELECTRONICS INC.			

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	English machine translation of JP2000083879, published on March 28, 2000	
	2	English machine translation of KR1020030060539, published on July 16, 2003	
	3	English machine translation of KR1020060018004, published on February 28, 2006	
	4	English machine translation of KR1020060008365, published on January 26, 2006	
	5	English machine translation of KR1020050091835, published on September 15, 2005	
	6	English machine translation of KR1020050091836, published on September 15, 2005	
	7	English machine translation of KR1020050091834, published on September 15, 2005	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

	8	English machine translation of KR1020050091833, published on September 15, 2005	
	9	English machine translation of KR1020050091829, published on September 15, 2005	
	10	English machine translation of KR1020050091824, published on September 15, 2005	
	11	English machine translation of KR1020050091821, published on September 15, 2005	
	12	English machine translation of KR1020050091826, published on September 15, 2005	
	13	English machine translation of KR1020100084127, published on July 23, 2010	
	14	English machine translation of KR1020080039105, published on May 7, 2008	
	15	English machine translation of KR1020080029824, published on April 3, 2008	
	16	English machine translation of KR1020060125954, published on December 7, 2006	
	17	English machine translation of KR1020060125952, published on December 7, 2006	
	18	English machine translation of KR300360565, published on September 1, 2004	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

	19	English machine translation of KR1020050104614, published on November 3, 2005	
	20	English machine translation of KR1020050104613, published on November 3, 2005	

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EXAMINER SIGNATURE

Examiner Signature	/ANDREW A HORTON/	Date Considered	11/08/2023

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	3723
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Bereskin & Parr

Appl. No	:	17/199,027
Inventor	:	Wayne Ernest Conrad
Applicant	:	Omachron Intellectual Property Inc.
Filed	:	March 11, 2021
Title	:	SURFACE CLEANING APPARATUS
TC./A.U.	:	3723
Conf. No.	:	5953
Examiner	:	MULLER, BRYAN R
Docket No.	:	10452-P57427US03
Customer No.	:	01059

December 20, 2023

Mail Stop Amendment
Honorable Commissioner for Patents
P. O. Box 1450
Alexandria, Virginia 22313–1450

Sir:

AMENDMENT AFTER FINAL & REQUEST FOR CONSIDERATION UNDER AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0

In response to the Final Office Action of October 20, 2023, please amend the above-identified application as follows:

Amendments to the Claims begin on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

OK TO ENTER: /A.A.H/

01/09/2024

Bereskin & Parr LLP
Scotia Plaza, 40 King Street West, 40th Floor, Toronto, ON M5H 3Y2 Canada
Tel: 416.364.7311 Fax: 416.361.1398 bereskinparr.com

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L14	2266	a47l5/24.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/06 05:11 PM
L17	676	a47l5/24.cpc. AND door	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 09:58 AM
L18	1789	a47l9/1608.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 09:59 AM
L19	662	a47l9/1608.cpc. AND door	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 09:59 AM
L20	1346	(wayne near2 conrad).in.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 10:02 AM
L21	768	(wayne near2 conrad).in. AND door	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 10:02 AM
L22	249	(wayne near2 conrad).in. AND door	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/11/08 10:02 AM
L23	193	a47l7/0019.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/11/08 10:03 AM
L25	41	L14 AND @PD>"20231106"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/09 03:22 PM
L26	19	L18 AND @PD>"20231108"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/09 03:23 PM
L27	5	L23 AND @PD>"20231108"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/01/09 03:24 PM
L28	980	a47l5/24.cpc. AND door	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2024/01/09 03:25 PM

			IBM_TDB)				
L29	634	a47l9/1608.cpc. AND door	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/01/09 03:25 PM
L30	1183	a47l7/0019.cpc.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/01/09 03:25 PM
L31	66	a47l7/0019.cpc. AND door	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/01/09 03:25 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	0	("lock securing the front door").clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/09 03:26 PM
N3	0	("vacuum cleaner body comprising a suction").clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/09 03:28 PM

Bibliographic Data

Application No: 18/376,975

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /ANDREW A HORTON/ Examiner's Signature | Initials

Title: HANDHELD SURFACE CLEANING APPARATUS

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/05/2023	015	3723	10452-P52585US11
RULE			

APPLICANTS

Omachron Intellectual Property Inc.,

INVENTORS

Wayne Ernest Conrad, Hampton, CANADA

CONTINUING DATA

This application is a CON of 18346834 07/04/2023

18346834 is a CON of 17342299 06/08/2021 PAT 11737621

17342299 is a CON of 16900465 06/12/2020 PAT 11445875

16900465 is a CON of 15642781 07/06/2017 PAT 10722086

FOREIGN APPLICATIONS

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TORONTO, ON M5H 3Y2
CANADA

FILING FEE RECEIVED

$6,160

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	18376975
Filing Date	2023-10-05
First Named Inventor	CONRAD, Wayne Ernest
Art Unit	n/a
Examiner Name	n/a
Attorney Docket Number	10452-P52585US11 PART2

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7544224	B2	2009-06-09	Tanner et al.	
	2	7526833	B2	2009-05-05	Cochran et al.	
	3	7485164	B2	2009-02-03	Jeong et al.	
	4	7445655	B2	2008-11-04	Bck et al.	
	5	7370387	B2	2008-05-13	Walker et al.	
	6	7028369	B2	2006-04-18	Park et al.	
	7	6991666	B2	2006-01-31	Organ	
	8	6974488	B2	2005-12-13	Dyson	

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	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

	9	6883202	B2	2005-04-26	Steffen et al.	
	10	6840972	B1	2005-01-11	Kim	
	11	6766558	B1	2004-07-27	Matsumoto et al.	
	12	6740144	B2	2004-05-25	Conrad et al.	
	13	6613129	B2	2003-09-02	Gen	
	14	6546592	B1	2003-04-15	Cockburn et al.	
	15	6434785	B1	2002-08-20	Vandenbelt et al.	
	16	6406505	B1	2002-06-18	Oh et al.	
	17	6375696	B2	2002-04-23	Wegelin et al.	
	18	6228260	B1	2001-05-08	Conrad et al.	
	19	D591466	S	2009-04-28	Crawley	

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	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

	20	D498027	S	2004-11-02	Alsruh et al.	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090265877	A1	2009-10-29	Dyson et al.	
	2	20090229070	A1	2009-09-17	Medema et al.	
	3	20090165242	A1	2009-07-02	Lee et al.	
	4	20090165239	A1	2009-07-02	Frantzen et al.	
	5	20090113663	A1	2009-05-07	FOLLOWS et al.	
	6	20090056290	A1	2009-03-05	Oh et al.	
	7	20080256744	A1	2008-10-23	Rowntreer et al.	
	8	20080250601	A1	2008-10-16	Coburn	

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	First Named Inventor	CONRAD, Wayne Ernest
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	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

	9	20080190080	A1	2008-08-14	Oh et al.	
	10	20080178416	A1	2008-07-31	Conrad	
	11	20080134460	A1	2008-06-12	Conrad	
	12	20080109972	A1	2008-05-15	Mah et al.	
	13	20080047091	A1	2008-02-28	Nguyen	
	14	20080040883	A1	2008-02-21	BESKOW et al.	
	15	20070289266	A1	2007-12-20	Oh	
	16	20070271724	A1	2007-11-29	Hakan et al.	
	17	20070246579	A1	2007-10-25	Blateri	
	18	20070209338	A1	2007-09-13	Conrad	
	19	20070143953	A1	2007-06-28	Hwang et al.	

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	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	202005020767	DE	A1	2006-08-10	SEB S.A.		
	2	102007011457	DE	A1	2007-10-25	ROYAL APPLIANCE MFG		
	3	10110581	DE	C2	2003-11-13	SAMSUNG KWANGJU ELECTRONICS CO		
	4	60201666	DE	T2	2006-06-01	DYSON TECHNOLOGY LTD.		
	5	112010001135	DE	T5	2012-08-02	G.B.D. Corp.		
	6	112007003052	DE	T5	2010-01-14	G.B.D. Corp.		
	7	112007003039	DE	T5	2009-10-29	G.B.D. Corp.		
	8	112006003479	DE	T5	2008-12-18	ROYAL APPLIANCE MFG		
	9	202011003563	DE	U1	2011-05-19	SEB S.A.		

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	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

	10	0489468	EP	A1	1992-06-10	Philips NV		
	11	1356755	EP	B1	2012-05-09	Panasonic Corporation		
	12	1938736	EP	A2	2008-07-02	Samsung Gwangju Electronics Co., Ltd.		
	13	2251178	GB	A	1992-07-01	Azuma Industrial Co. Ltd		
	14	2268875	GB	A	1994-01-26	Bissell Inc.		
	15	2377880	GB	A	2003-01-29	Black & Decker Inc.		
	16	2466290	GB	A	2010-06-23	Dyson Technology Limited		
	17	2478599	GB	B	2014-07-16	Dyson Technology Ltd		
	18	2035787	GB	B1	1982-10-13	L&H Designs Limited		
	19	2409404	GB	B1	2005-11-16	Samsung Gwangju Electronics Co., Ltd.		
	20	2441962	GB	B1	2011-03-02	Dyson TechnolOgy Ltd		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	18376975
	Filing Date	2023-10-05
	First Named Inventor	CONRAD, Wayne Ernest
	Art Unit	n/a
	Examiner Name	n/a
	Attorney Docket Number	10452-P52585US11 PART2

	21	2478614	GB	B1	2012-02-29	Dyson Technology Limited		
	22	2484146	GB	B1	2013-02-13	Dyson Technology Limited		
	23	60220027	JP	A	1985-11-02	Matsushita Denki Sankyo KK		
	24	63246116	JP	A	1988-10-13	Matsushita Electric Ind Co Ltd		
	25	8289861	JP	A	1996-11-05	Hitachi Ltd.		
	26	2004351234	JP	A	2004-12-16	Sekijima Takayuki		
	27	2010227287	JP	A	2010-10-14	HITACHI APPLIANCES INC.		
	28	2010081968	JP	A	2010-04-15	Sharp KK		
	29	2009261501	JP	A	2009-11-12	YAMADA ELECTRIC IND		
	30	2004121722	JP	A	2004-04-22	SANYO ELECTRIC CO		
	31	D609203	JP	S	1983-09-22	Matsushita Electric Industrial Co.,Ltd.		

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	32	D745201	JP	S	1983-10-05	Matsushita Electric Industrial Co.,Ltd.			
	33	D649078	JP	S	1985-04-17	Matsushita Electric Industrial Co.,Ltd.			
	34	D679295	JP	S	1986-05-21	Matsushita Electric Industrial Co.,Ltd.			
	35	D679390	JP	S	1986-05-22	Matsushita Electric Industrial Co.,Ltd.			
	36	D679426	JP	S	1986-05-22	Matsushita Electric Industrial Co.,Ltd.			
	37	D679806	JP	S	1986-05-26	Toshiba Corporation			
	38	61131720	JP		1986-06-19	Tokyo Denki Kabushiki Gaisha			
	39	D706192	JP	S	1987-05-28	Matsushita Electric Industrial Co.,Ltd.			
	40	D706193	JP	S	1987-05-28	Matsushita Electric Industrial Co.,Ltd.			
	41	D725983	JP	S	1988-02-29	Matsushita Electric Industrial Co.,Ltd.			

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	English machine translation of DE202005020767, published on August 10, 2008	
	2	English machine translation of DE102007011457, published on October 25, 2007	
	3	English machine translation of DE10110581, published on November 13, 2003	
	4	English machine translation of DE60201666, published on June 1, 2006	
	5	English machine translation of DE112010001135, published on August 2, 2012	
	6	English machine translation of DE112007003052, published on January 14, 2010	
	7	English machine translation of DE112007003039, published on October 29, 2009	
	8	English machine translation of DE112006003479, published on December 18, 2008	
	9	English machine translation of DE202011003563, published on May 19, 2011	
	10	English machine translation of JP60220027, published on November 2, 1985	

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	11	English machine translation of JP63246116, published on October 13, 1988	
	12	English machine translation of JP8289861, published on November 5, 1996	
	13	English machine translation of JP2004351234, published on December 16, 2004	
	14	English machine translation of JP2010227287, published on October 14, 2010	
	15	English machine translation of JP2010081968, published on April 15, 2010	
	16	English machine translation of JP2009261501, published on November 12, 2009	
	17	English machine translation of JP2004121722, published on April 22, 2004	
	18	English machine translation of JP61-131720, published on June 19, 1986	

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Examiner Signature	/ANDREW A HORTON/	Date Considered	11/08/2023

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CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/376,975	Conrad, Wayne Ernest
	Examiner	**Art Unit**
	ANDREW A HORTON	3723

CPC						
Symbol					**Type**	**Version**
A47L	/	5	/	24	F	2013-01-01
A47L	/	9	/	2857	I	2013-01-01
A47L	/	9	/	2842	I	2013-01-01
A47L	/	9	/	246	I	2013-01-01
A47L	/	9	/	122	I	2013-01-01
A47L	/	9	/	2889	I	2013-01-01
A47L	/	9	/	1641	I	2013-01-01
A47L	/	9	/	322	I	2013-01-01
A47L	/	9	/	1625	I	2013-01-01
A47L	/	9	/	127	I	2013-01-01
A47L	/	9	/	2878	I	2013-01-01
A47L	/	9	/	106	I	2013-01-01
A47L	/	9	/	1683	I	2013-01-01
A47L	/	9	/	1608	I	2013-01-01
A47L	/	9	/	1666	I	2013-01-01
A47L	/	9	/	2884	I	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	18	
/ANDREW A HORTON/ Primary Examiner, Art Unit 3723	09 January 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
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	Examiner	**Art Unit**
	ANDREW A HORTON	3723

INTERNATIONAL CLASSIFICATION				
CLAIMED				
A47L5/24	/	5	/	24
A47L9/28	/	9	/	28
A47L9/24	/	9	/	24
A47L9/12	/	9	/	12
A47L9/16	/	9	/	16
A47L9/32	/	9	/	32
A47L9/10	/	9	/	10

NON-CLAIMED				
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US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	18	
/ANDREW A HORTON/ Primary Examiner, Art Unit 3723	09 January 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

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	18/376,975	Conrad, Wayne Ernest
	Examiner	**Art Unit**
	ANDREW A HORTON	3723

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	10	10												
2	2	11	11												
3	3	12	12												
4	4	13	13												
5	5	14	14												
6	6	15	15												
7	7	17	16												
8	8	18	17												
9	9	16	18												

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/ANDREW A HORTON/ Primary Examiner, Art Unit 3723	09 January 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Doc code: IDS
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Application Number	18376975
Filing Date	2023-10-05
First Named Inventor	CONRAD, Wayne Ernest
Art Unit	n/a
Examiner Name	n/a
Attorney Docket Number	10452-P52585US11 PART4

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7488362	B2	2009-02-10	Jeong et al.	
	2	10238250	B2	2019-03-26	Conrad	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090282639	A1	2009-11-19	Dyson et al.	

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	1	1020060018004	KR	A	2006-02-28	SAMSUNG ELECTRONICS CO, LTD.		
	2	1020060008365	KR	A	2006-01-26	LG ELECTRONICS INC.		

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	3	1020050104614	KR	A	2005-11-03	LG ELECTRONICS INC.			
	4	1020050104613	KR	A	2005-11-03	LG ELECTRONICS INC.			
	5	1020050103343	KR	A	2005-10-31	LG ELECTRONICS INC.			
	6	1020050091838	KR	A	2005-09-15	LG ELECTRONICS INC.			
	7	1020050091837	KR	A	2005-09-15	LG ELECTRONICS INC.			
	8	1020050091830	KR	A	2005-09-15	LG ELECTRONICS INC.			
	9	2007104138	WO	A1	2007-09-20	G.B.D. Corp.			
	10	2007104238	WO	A1	2007-09-20	Positec Power Tools (Suzhou) Co., Ltd.			
	11	2008009887	WO	A1	2008-01-24	Dyson Technology Limited			
	12	2008009890	WO	A1	2008-01-24	Dyson Technology Limited			
	13	2010102396	WO	A1	2010-09-16	G.B.D. CORP.			

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	14	2008135708	WO	A1	2008-11-13	Dyson Technology LImited		
	15	2012042240	WO	A1	2012-04-05	Dyson Technology LImited		
	16	2010102394	WO	A1	2010-09-16	G.B.D. Corp.		
	17	2008035032	WO	A2	2008-03-27	Dyson Technology Limited		
	18	2004069021	WO	A	2004-08-19	AKTIEBOLAGET ELECTROLUX		
	19	2008009888	WO	A1	2008-01-24	Dyson Technology Limited		
	20	2008009883	WO	A1	2008-01-24	Dyson Technology Limited		

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	1	English machine translation of KR1020060018004, published on February 28, 2006	
	2	English machine translation of KR1020060008365, published on January 26, 2006	

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	3	English machine translation of KR1020050104614, published on November 3, 2005	
	4	English machine translation of KR1020050104613, published on November 3, 2005	
	5	English machine translation of KR1020050103343, published on October 31, 2005	
	6	English machine translation of KR1020050091838, published on September 15, 2005	
	7	English machine translation of KR1020050091837, published on September 15, 2005	
	8	English machine translation of KR1020050091830, published on September 15, 2005	
	9	What's the Best Vacuum.com Forum discussion "Dyson DC16 Root 6 Hand Held Vacuum Cleaner; http://www.abbysguide.com/vacuum/legacy/cgi-bin/yabb/2618-YaBB.html; dated October 21, 2006	
	10	"Instruction Manual for Cordless Cleaner", Makita, PP. 1-32	
	11	International Search Report received on the corresponding International Application No. PCT/CA2010/000340, dated June 25, 2010	

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Signature	/Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2023-11-06
Name/Print	Philip C. Mendes da Costa	Registration Number	33106

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.A.H/

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United States Patent and Trademark Office
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NOTICE OF ALLOWANCE AND FEE(S) DUE

1059 7590 01/19/2024

BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40TH FLOOR
TORONTO, ONTARIO M5H 3Y2
CANADA

EXAMINER
HORTON, ANDREW ALAN

ART UNIT	PAPER NUMBER
3723	

DATE MAILED: 01/19/2024

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/376,975	10/05/2023	Wayne Ernest Conrad	10452-P52585US11	4138

TITLE OF INVENTION: HANDHELD SURFACE CLEANING APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	04/19/2024

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

1059 7590 01/19/2024
BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40TH FLOOR
TORONTO, ONTARIO M5H 3Y2
CANADA

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/376,975	10/05/2023	Wayne Ernest Conrad	10452-P52585US11	4138

TITLE OF INVENTION: HANDHELD SURFACE CLEANING APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	04/19/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
HORTON, ANDREW ALAN	3723	015-344000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑Issue Fee ❑Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via the USPTO patent electronic filing system ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

Dyson Ex1004
Page 371

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/376,975	10/05/2023	Wayne Ernest Conrad	10452-P52585US11	4138

1059 7590 01/19/2024

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CANADA

EXAMINER	
HORTON, ANDREW ALAN	
ART UNIT	PAPER NUMBER
3723	

DATE MAILED: 01/19/2024

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 11/23)

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).
https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf

Routine uses of the information in this record may include disclosure to:

1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
2) a federal, state, local, or international agency, in response to its request;
3) a contractor of the USPTO having need for the information in order to perform a contract;
4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
9) the Office of Personnel Management (OPM) for personnel research purposes; and
10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 18/376,975	Applicant(s) Conrad, Wayne Ernest	
	Examiner ANDREW A HORTON	Art Unit 3723	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 12/21/23.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1-18 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/ANDREW A HORTON/
Primary Examiner, Art Unit 3723

Reasons for Allowance

1. The following is an examiner's statement of reasons for allowance:

The closest prior art, Thomas (US 2006/0162117), fails to have the lock feature (Fig. 2B), as seen in claim 1, part d, and claim 10, part e.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW A HORTON whose telephone number is (571)270-5039. The examiner can normally be reached Monday - Friday 8:30 AM - 5:00 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Rosen can be reached on 571-270-7855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like

assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or

571-272-1000.

/ANDREW A HORTON/
Primary Examiner, Art Unit 3723

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United States Patent and Trademark Office
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/376,975	10/05/2023	Wayne Ernest Conrad	10452-P52585US11

CONFIRMATION NO. 4138

1059
BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40TH FLOOR
TORONTO, ON M5H 3Y2
CANADA

PUBLICATION NOTICE

OC000000067440333

Date Mailed: 01/25/2024

Title:HANDHELD SURFACE CLEANING APPARATUS

Publication No.US-2024-0023769-A1
Publication Date:01/25/2024

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/376,975	02/27/2024	11910984	10452-P52585US11	4138

1059 7590 02/07/2024

BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40TH FLOOR
TORONTO, ONTARIO M5H 3Y2
CANADA

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at https://patentcenter.uspto.gov/. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at https://certifiedcopycenter.uspto.gov/index.html. The Certified Copy Center may be reached at (800)972-6382.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (https://patentcenter.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional inventors):

Wayne Ernest Conrad, Hampton, CANADA;

APPLICANT(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional applicants):

Omachron Intellectual Property Inc., Hampton, CANADA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/376,975	10/05/2023	Wayne Ernest Conrad	10452-P52585US11	4138

1059 7590 02/27/2024

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CANADA

EXAMINER	
HORTON, ANDREW ALAN	

ART UNIT	PAPER NUMBER
3723	

NOTIFICATION DATE	DELIVERY MODE
02/27/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipprocessingcentre@bereskinparr.com

APPLICATION NO.	ISSUE DATE	PATENT NO.
18/376,975	27-Feb-2024	11910984

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