

**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:	HAND CARRIABLE 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 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 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 February 23, 2016
Name (Print/Typed) Philip C. Mendes da Costa	Practitioner Registration Number 33,106
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. 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.

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/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	N/A
Filing Date	February 23, 2016
First Named Inventor	Wayne Ernest Conrad
Title	HAND CARRIABLE SURFACE CLEANING APPARATUS
Art Unit	N/A
Examiner Name	N/A
Attorney Docket Number	10452-P38886US04

SIGNATURE of Applicant or Patent Practitioner

Signature	/Philip C. Mendes da Costa/	Date (Optional)	
Name	Philip C. Mendes da Costa	Registration Number	33106
Title (if Applicant is a juristic entity)	Agent for the Applicant		
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.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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.

Doc Code: PA..

Document Description: Power of Attorney

PTO/AIA/82B (07-13)

Approved for use through 11/30/2014. OMB 0651-0051
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 displays a valid OMB control number

POWER OF ATTORNEY BY APPLICANTI 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:

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

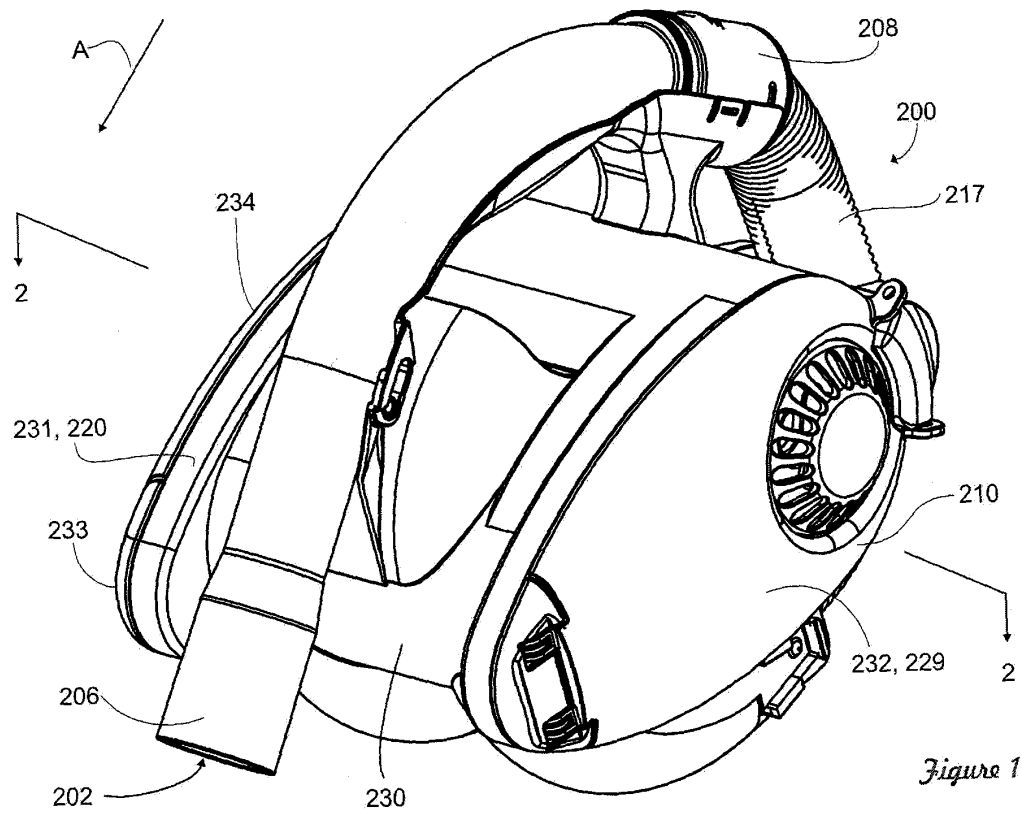
The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	July 28, 2015
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.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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.



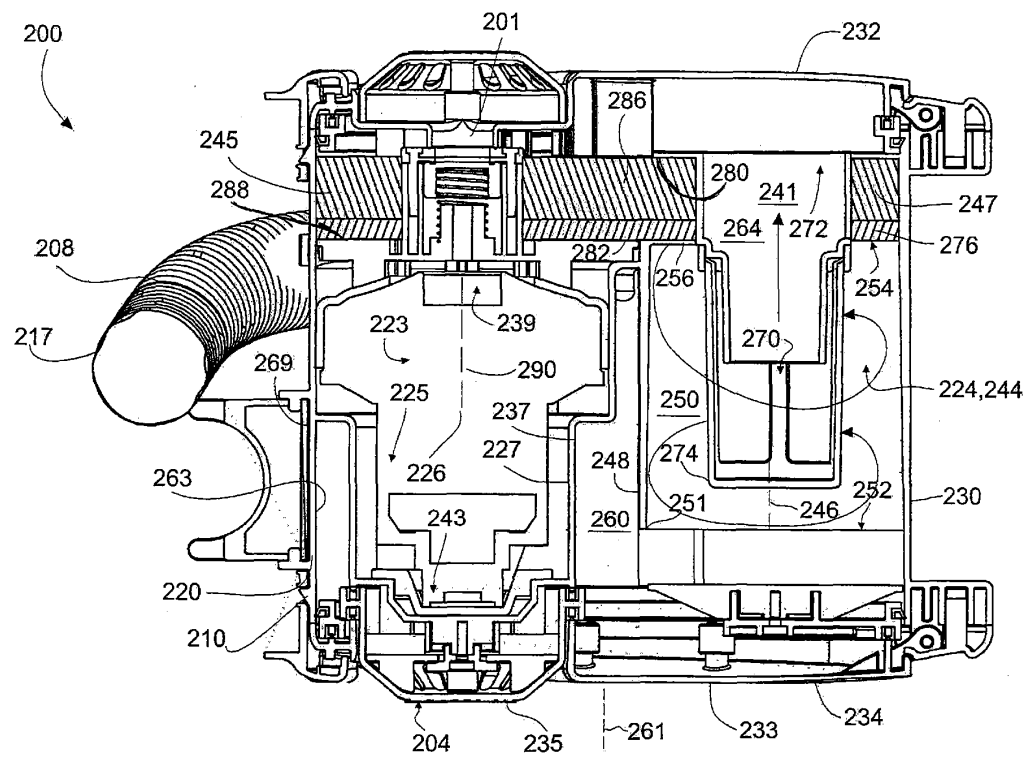


Figure 2

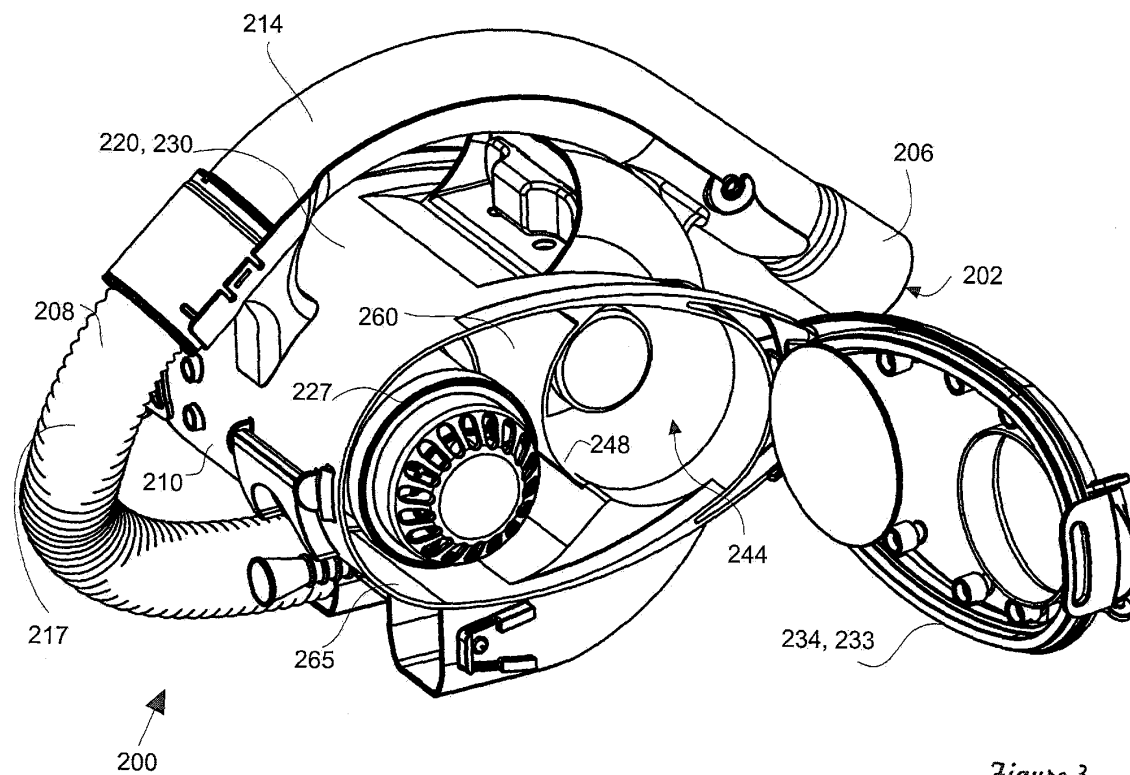


Figure 3

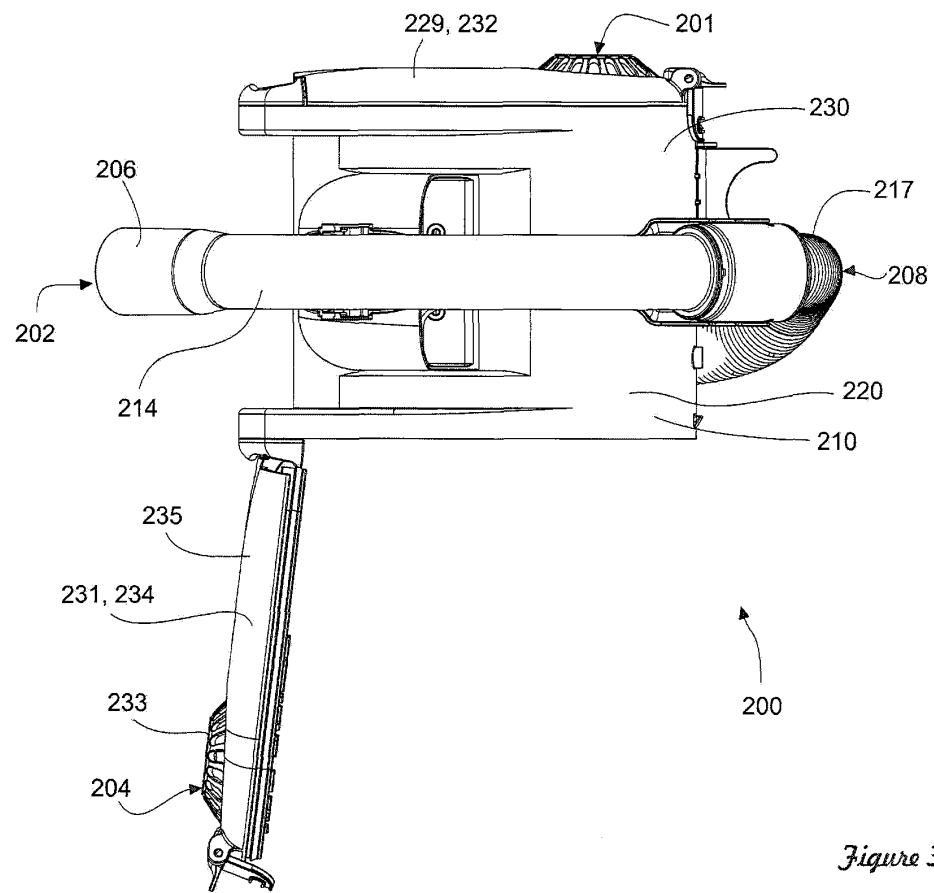


Figure 3A

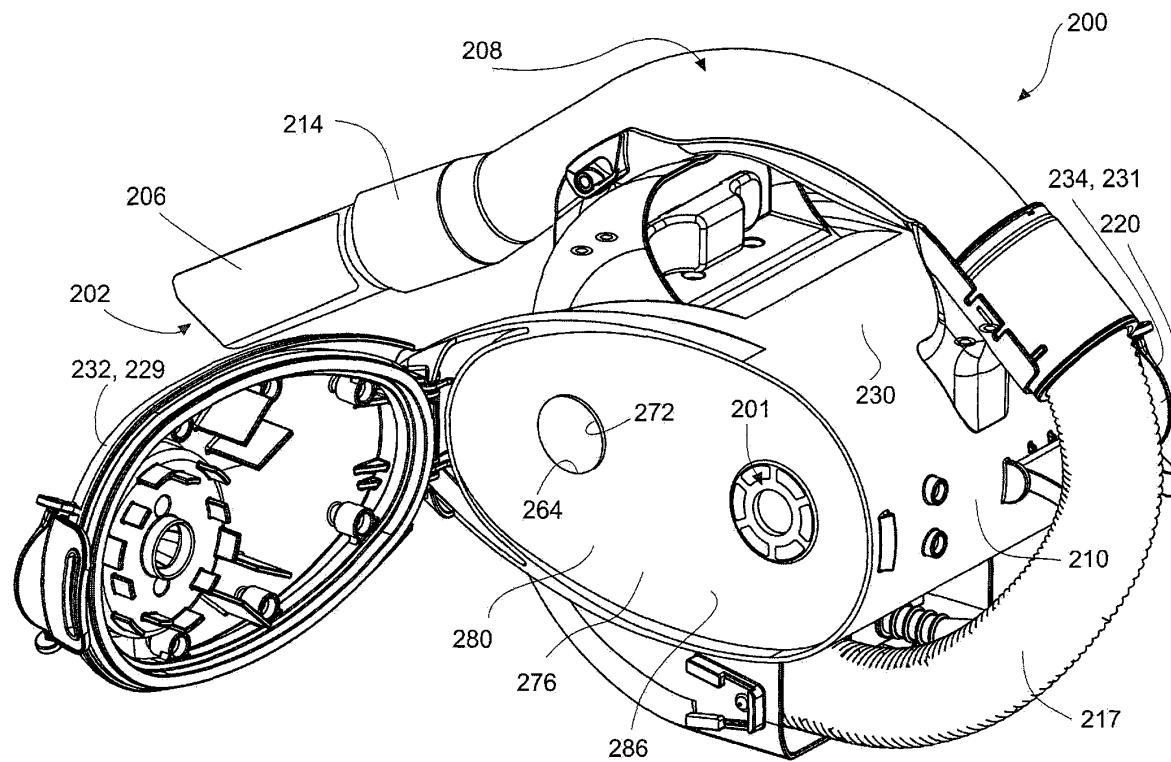
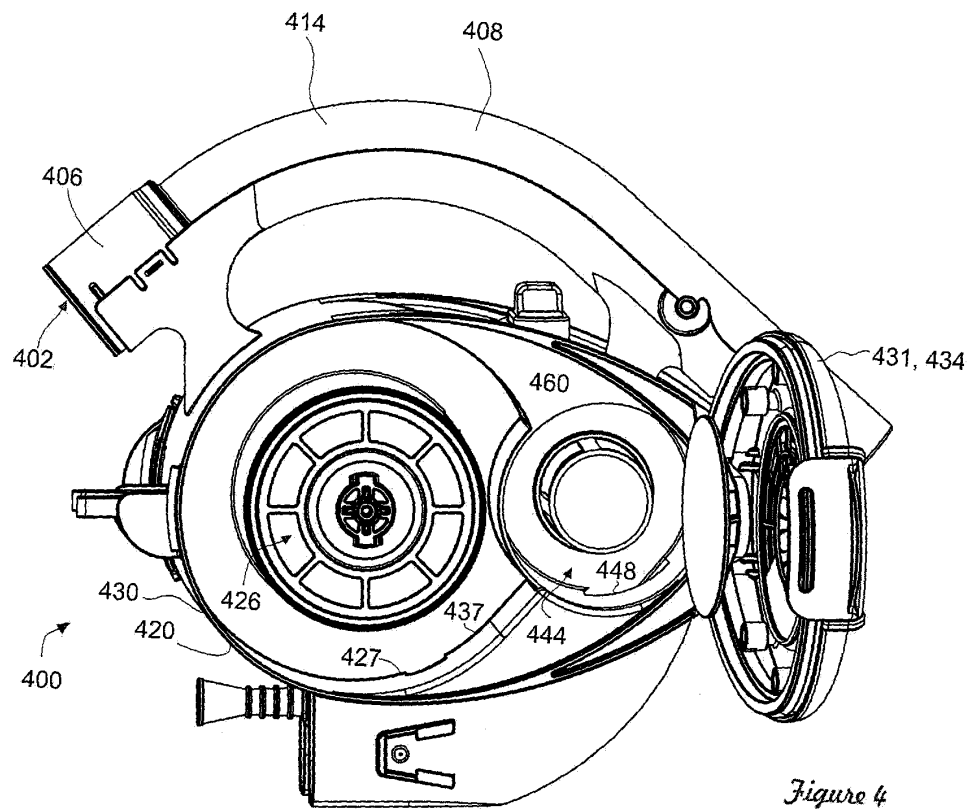


Figure 3B



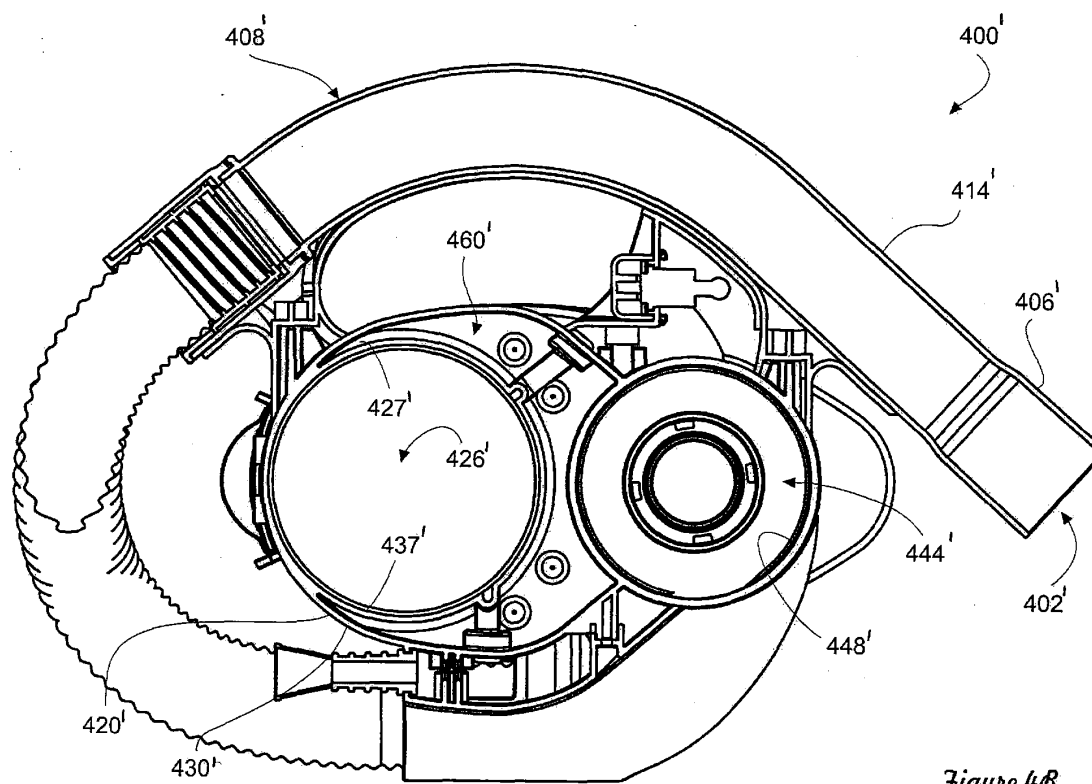


Figure 4B

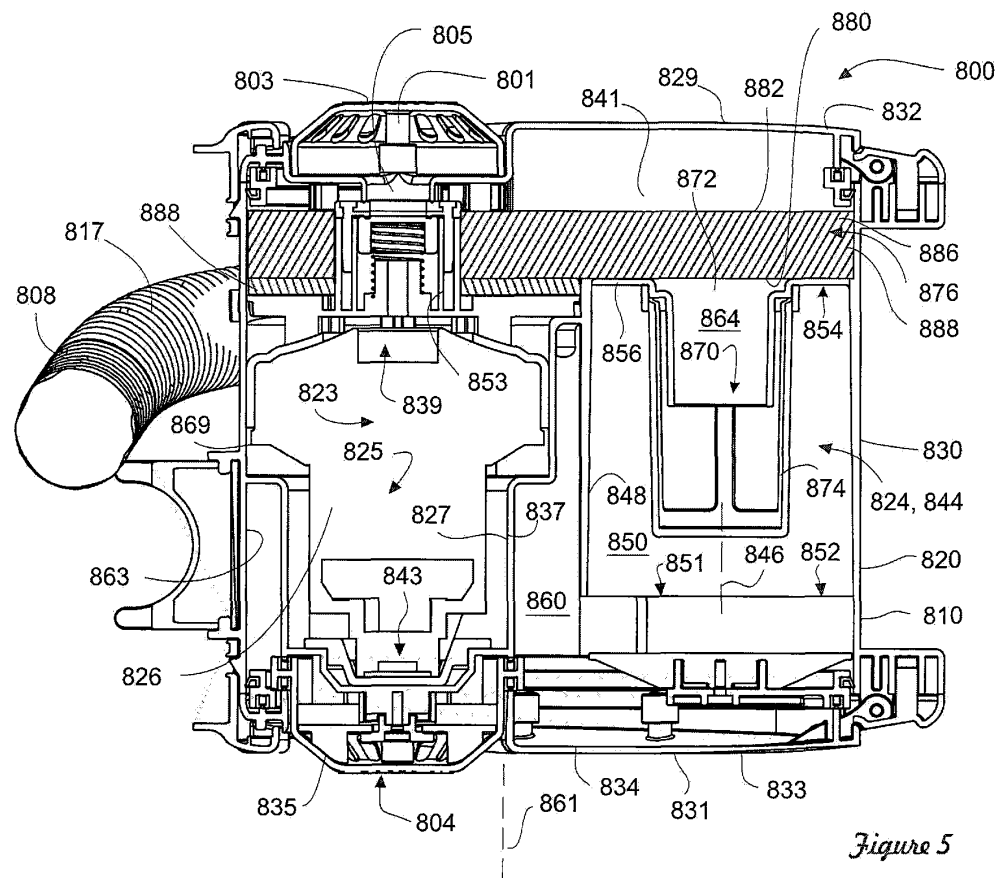


Figure 5

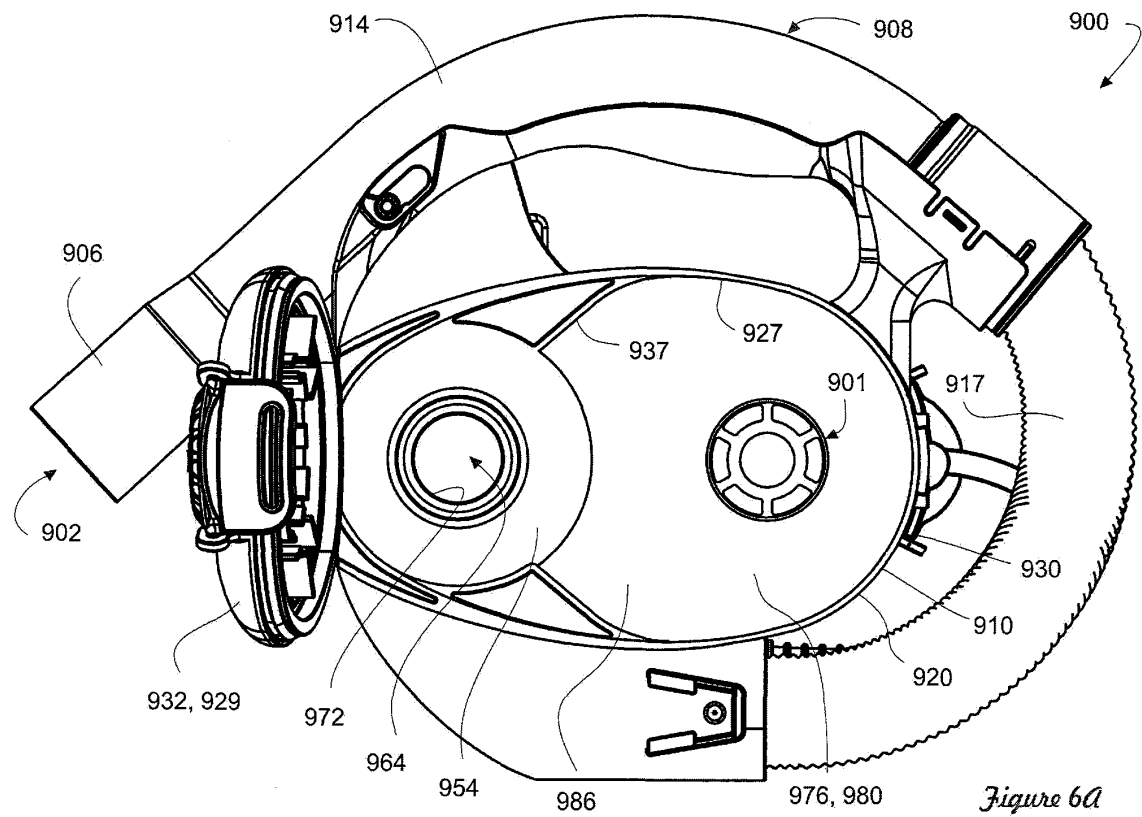


Figure 6a

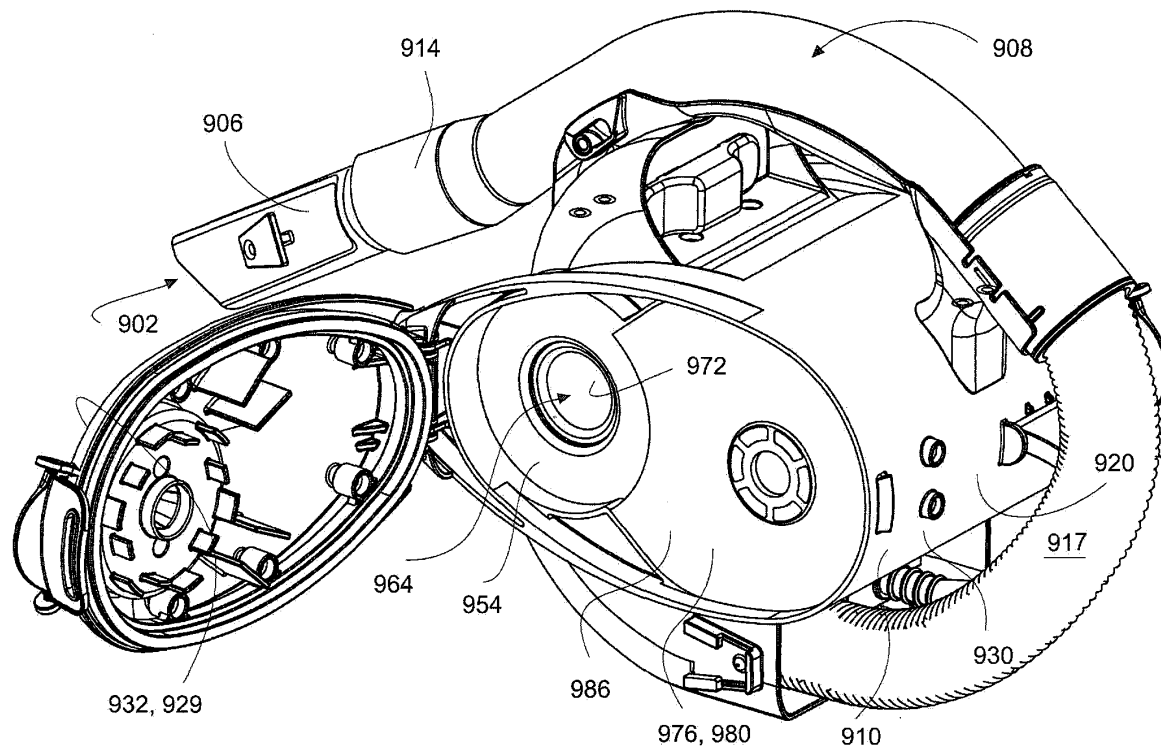


Figure 6B

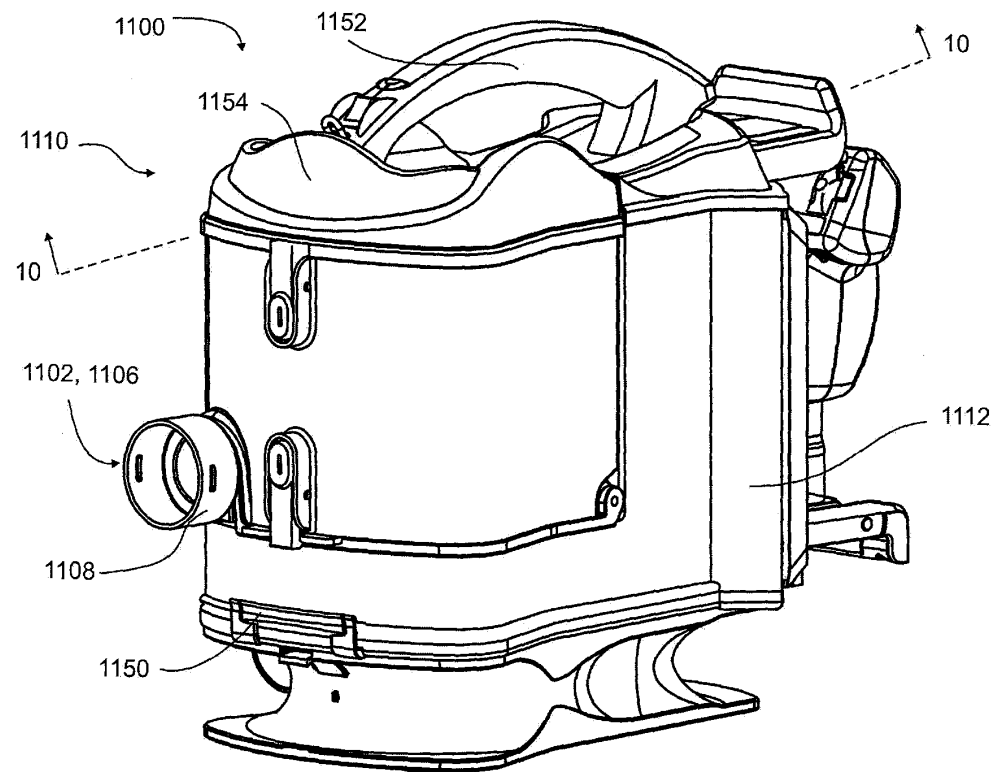
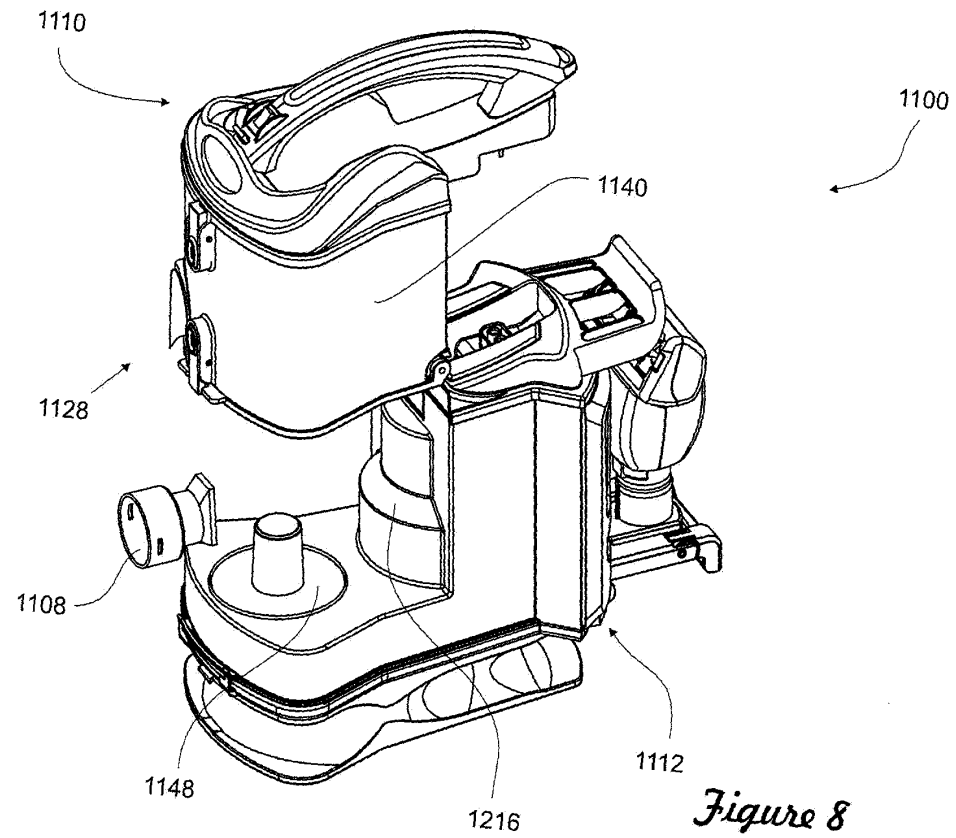


Figure 7



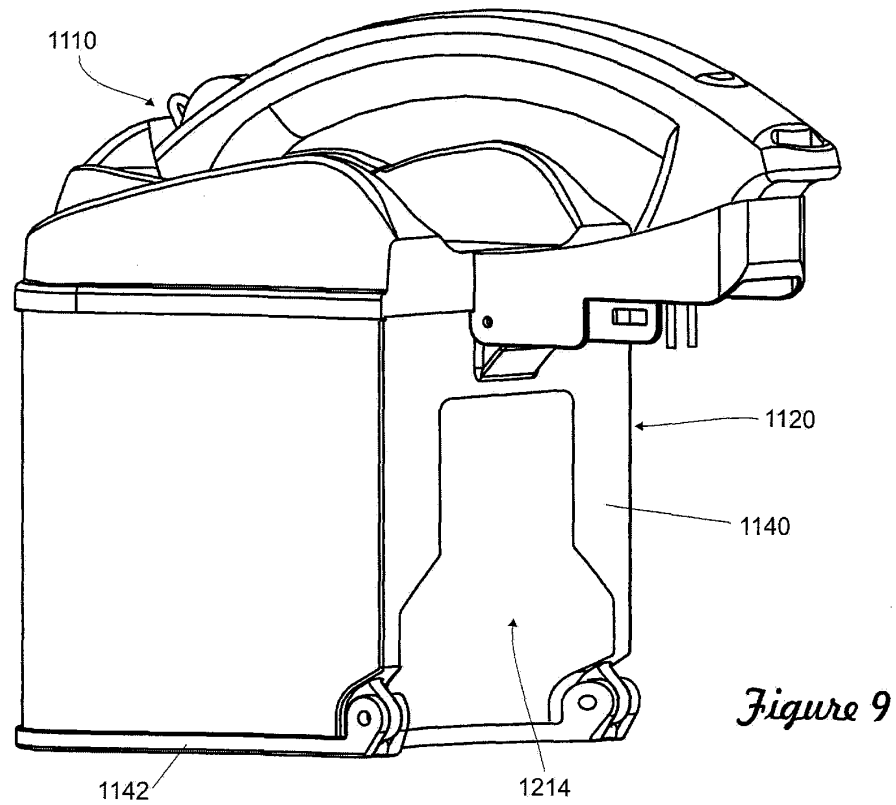


Figure 9

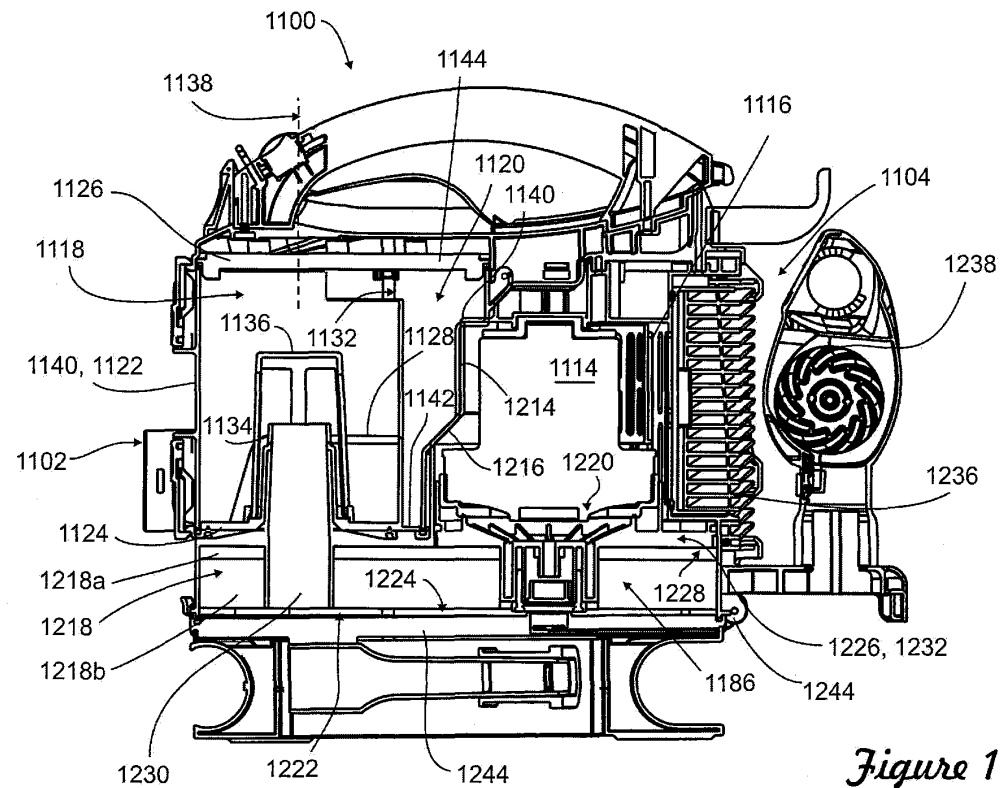
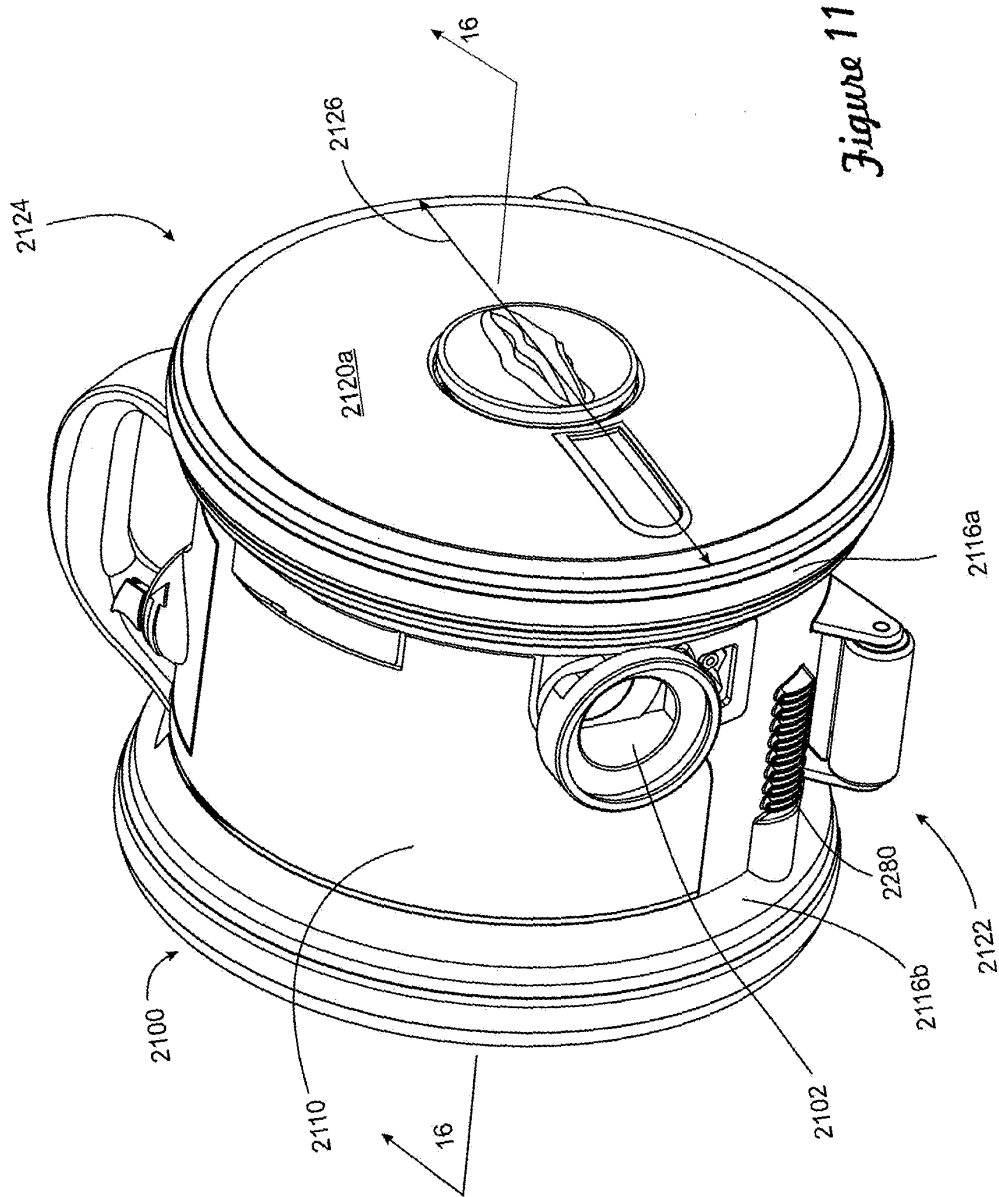


Figure 10



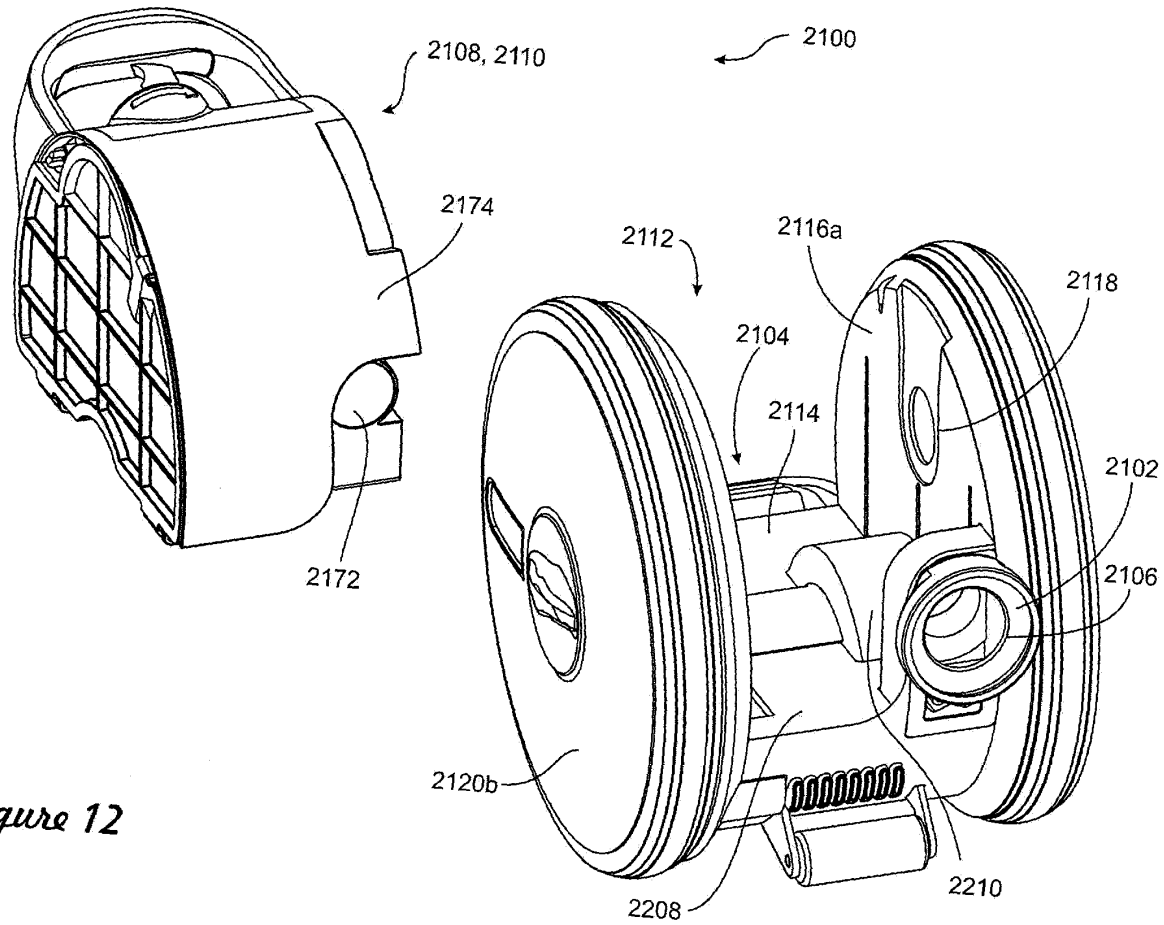


Figure 12

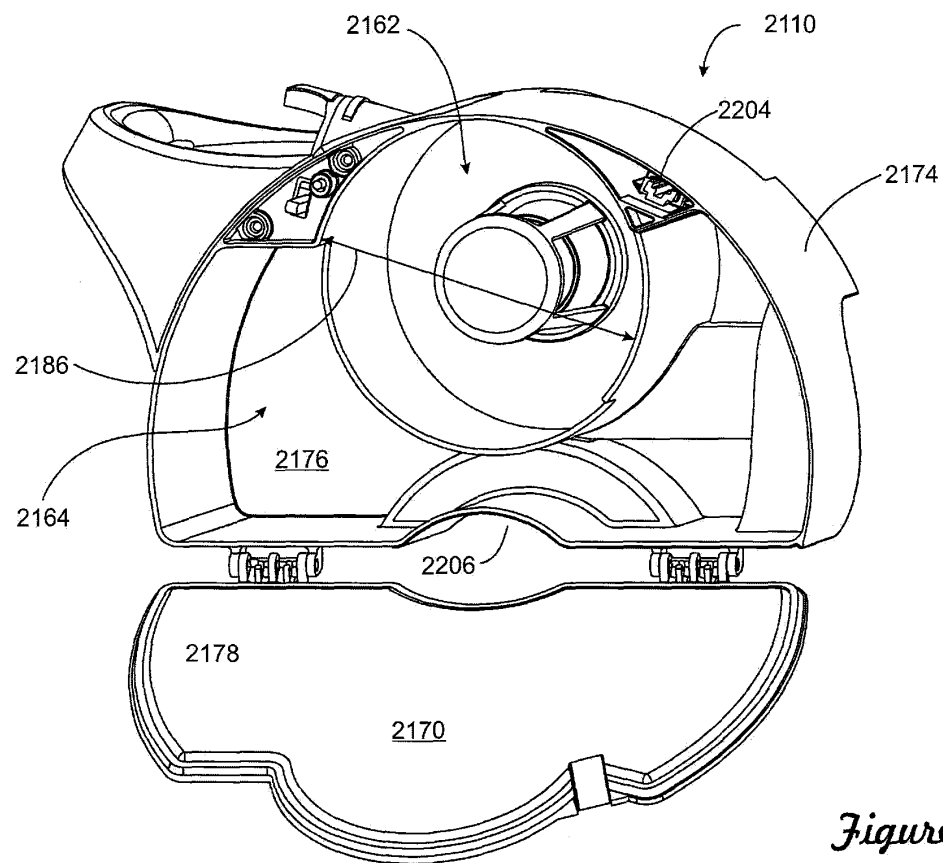


Figure 13

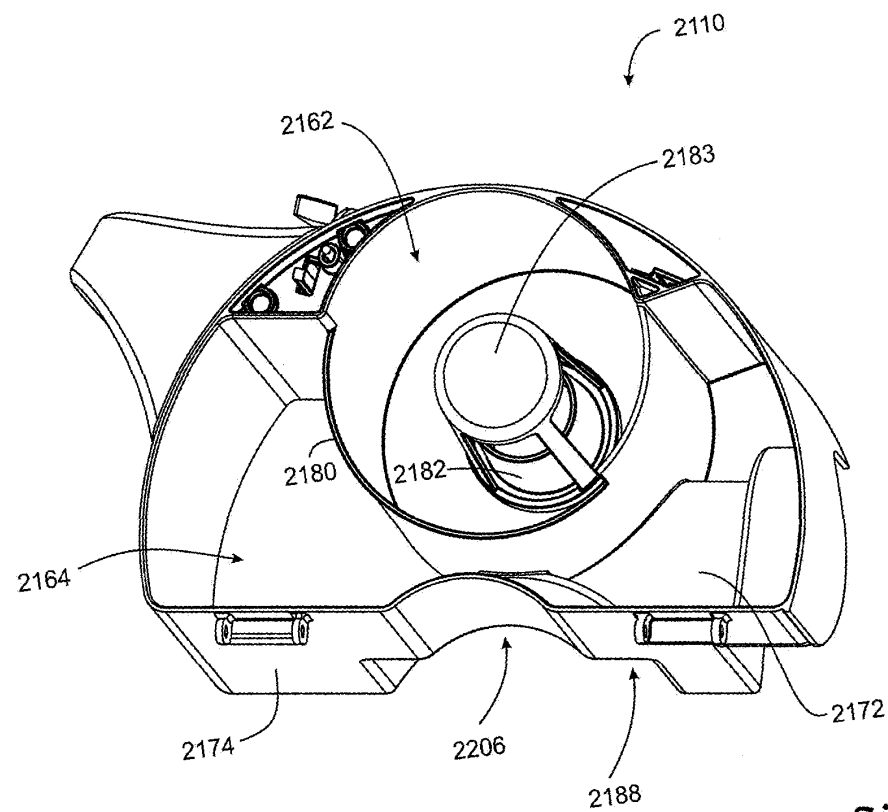


Figure 14

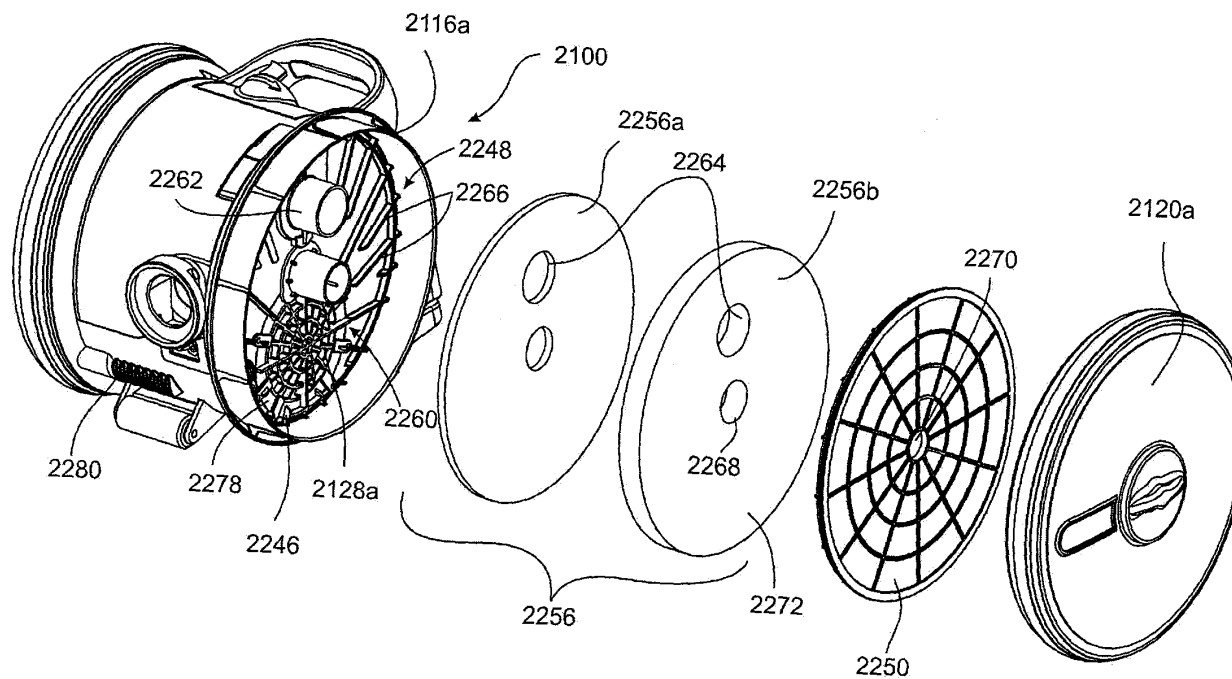


Figure 15

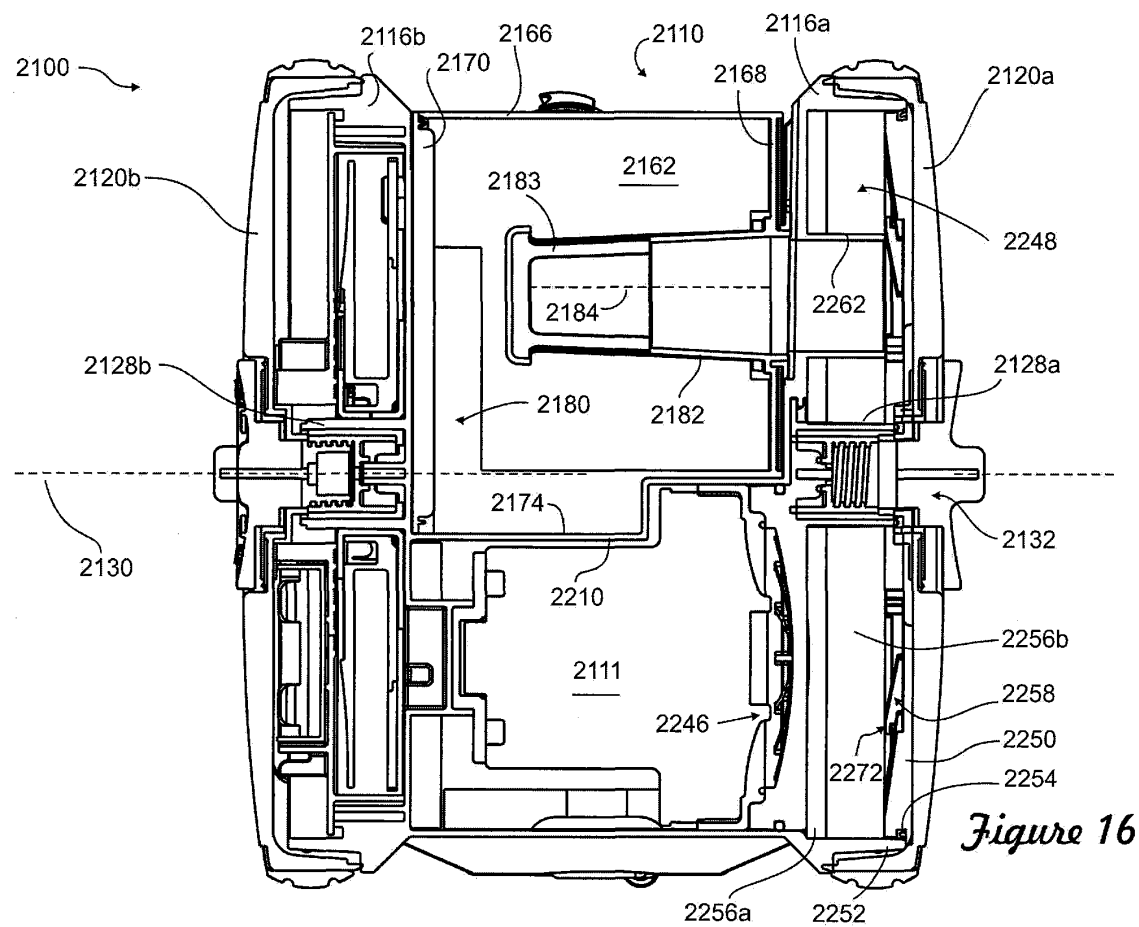
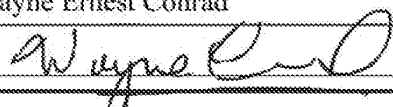


Figure 16

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

Title of Invention	HAND CARRIABLE 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. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.	
LEGAL NAME OF INVENTOR Inventor: <u>Wayne Ernest Conrad</u> Date (Optional): _____ Signature: <u></u>	
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.	

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1.11 and 1.14. This collection is estimated to take 1 minute 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.

TITLE: HAND CARRIABLE SURFACE CLEANING APPARATUS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of United States Patent Application No. 14/994,495, filed on January 13, 2016, which is a continuation of United States Patent Application No. 13/039,376, filed on March 3, 2011, now United States Patent No. 9,265,395, and which is a continuation in part of US patent application 12/722,705, filed March 12, 2010, now United States Patent No. 8,578,555, the entirety of each of which is incorporated herein by reference.

FIELD OF INVENTION

[0002] The disclosure relates to surface cleaning apparatuses, such as vacuum cleaners.

INTRODUCTION

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

[0004] Various constructions for surface cleaning apparatus such as vacuum cleaners are known. Currently, many surface cleaning apparatus are constructed using at least one cyclonic cleaning stage. The air is drawn into the vacuum cleaner through a dirty air inlet and conveyed to a cyclone inlet. The rotation of the air in the cyclone chamber results in some of the particulate matter in the airflow stream being disentrained from the airflow stream. This material is then collected in a dirt collection chamber, which may be at the bottom of the cyclone chamber or in a dirt collection chamber exterior to the cyclone chamber (see for example WO2009/026709 and US 5,078,761). One or more additional cyclonic cleaning stages and/or filters may be positioned downstream from the cyclone chamber.

SUMMARY

[0005] The following summary is provided to introduce the reader to the more detailed discussion to follow. The summary is not intended to limit or define the claims.

[0006] According to one aspect, a hand surface cleaning apparatus is provided that may be operable for an enhanced period of time without a significant reduction in air flow into the dirty air inlet. In accordance with this aspect, a pre-motor filter with enhanced surface area transverse to the direction of air flow is provided.

[0007] Typically, a surface cleaning apparatus such as a hand vacuum cleaner has a pre-motor filter and a post motor filter. The post motor filter may be a HEPA filter. In such a case, the air discharged from the clean air outlet of the unit may be comparable to that discharged from a full size vacuum cleaner. As the HEPA filter is used, the air flow through the unit will decrease and the suction provided by the unit will decrease. This can impact upon the cleaning performance achieved by the vacuum cleaner. To counter this, a larger suction motor may be provided. However, that would increase the hand weight of the unit. A pre-motor filter reduces the level of entrained dirt that will reach the HEPA filter. However, the filter will become clogged with use. Increasing the surface area of the upstream side of the pre-motor filter extends the lifetime of the pre-motor filter and may therefore enhance the life of a post motor filter.

[0008] The pre-motor filter may have an enhanced surface area of its upstream side by configuring the pre-motor filter to have a larger upstream surface area than that of the suction motor inlet end. A pre-motor filter may be positioned in the suction motor casing and may therefore have a diameter that is about the same as the diameter of the fan of the suction motor. By configuring the pre-motor filter to overlie part of one or more additional components of the unit, the surface area of the upstream side is increased.

[0009] For example, a suction motor may be positioned beside a cyclone chamber and extend in the same direction of the cyclone chamber. Accordingly, one end of a cyclone chamber may be adjacent the inlet end of the suction motor (e.g., positioned in about the same plane). The pre-motor filter (preferably a foam filter and more preferably a foam filter with a felt filter downstream thereof) may be configured to overlie part or all of the cyclone chamber as well as part or all of the suction motor. Alternately, or in addition, the pre-motor filter may overlie part of the open volume between the suction motor and the cyclone chamber. If the dirt collection chamber is

exterior to the cyclone chamber, e.g., it is positioned to occupy some of the open volume, then the pre-motor filter may alternately or in addition overlie part or all of the dirt collection chamber. Accordingly, a pre-motor filter with an enhanced surface area of the upstream side may be provided without substantially increasing the size of the unit. A filter with an enhanced size may be provided by providing a filter that overlies part or all of two or more of the suction motor, the dirt collection chamber and the cyclone chamber.

[0010] According to this aspect, a surface cleaning apparatus is provided. The hand surface cleaning apparatus comprises an air flow passage extending from a dirty air inlet to a clean air outlet. A suction motor is positioned in the air flow path and has an inlet end and an outlet end. At least one cyclone chamber is positioned in the air flow path and has an associated dirt collection chamber, a cyclone air inlet and a cyclone air outlet. A pre-motor filter is positioned downstream of the cyclone chamber and upstream of the suction motor. The pre-motor filter has an upstream side and a downstream side. The pre-motor filter overlies at least a portion of the suction motor and the cyclone chamber.

[0011] The cyclone chamber and the suction motor may be positioned side by side and may have generally parallel longitudinal axes.

[0012] The pre-motor filter may overlie at least half of the suction motor and the cyclone chamber. The pre-motor filter may overlie at least 75% of the suction motor and the cyclone chamber.

[0013] The pre-motor filter may have a portion that is centered over the suction motor and a portion that overlies at least half of the cyclone chamber.

[0014] The upstream side of the pre-motor filter may face the cyclone air outlet and an inlet duct of the suction motor may extend through the pre-motor filter to the downstream side of the pre-motor filter.

[0015] The cyclone air outlet may extend through the pre-motor filter to the upstream side of the pre-motor filter, and the inlet end of the suction motor may face the downstream side of the pre-motor filter.

[0016] The hand surface cleaning apparatus may further comprising an openable door positioned at a side of the hand vacuum cleaner having the cyclone air outlet and the inlet end of the suction motor. The upstream side of the pre-motor filter may be visible when the door is opened.

[0017] The pre-motor filter may be mounted to at least one of the cyclone chamber and the suction motor and the pre-motor filter may remain in position when the door is opened.

[0018] The pre-motor filter may be spaced from the door and a chamber may be provided between the pre-motor filter and the door.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] Reference is made in the detailed description to the accompanying drawings, in which:

[0020] Figure 1 is a perspective illustration of an embodiment of a surface cleaning apparatus;

[0021] Figure 2 is a cross section taken along line 2-2 in Figure 1;

[0022] Figure 3 is a perspective illustration of the surface cleaning apparatus of Figure 1, showing a second openable door in an open configuration;

[0023] Figure 3A is a side plan view of the surface cleaning apparatus of Figure 1, showing a second openable door in an open configuration;

[0024] Figure 3B is a perspective illustration of the surface cleaning apparatus of Figure 1 showing a first openable door in an open configuration;

[0025] Figure 4 is a plan view of an alternate embodiment of a surface cleaning apparatus, showing a second openable door in an open configuration;

[0026] Figure 4B is a plan view of another alternate embodiment of a surface cleaning apparatus, showing a second openable door in an open configuration;

[0027] Figure 5 is a cross section taken along the same line 2-2 through an alternate embodiment of a surface cleaning apparatus;

[0028] Figure 6A is a plan view of an alternate embodiment of a surface cleaning apparatus, showing a first openable door in an open configuration;

[0029] Figure 6B is a perspective illustration of the surface cleaning apparatus of Figure 6A;

[0030] Figure 7 is a perspective illustration of an alternate embodiment of a surface cleaning apparatus;

[0031] Figure 8 is a perspective illustration of the surface cleaning apparatus of Figure 7, with its cyclone bin assembly removed;

[0032] Figure 9 is a perspective illustration of the cyclone bin assembly of Figure 8;

[0033] Figure 10 is a section view taken along line 10-10 in Figure 7;

[0034] Figure 11 is a perspective illustration of an alternate embodiment of a surface cleaning apparatus;

[0035] Figure 12 is a perspective illustration of the surface cleaning apparatus of Figure 11, with its cyclone bin assembly removed;

[0036] Figure 13 is a perspective illustration of the cyclone bin assembly of Figure 12, with one end wall in an open configuration;

[0037] Figure 14 is a perspective illustration of the cyclone bin assembly of Figure 13, with the one end wall removed;

[0038] Figure 15 is a partially exploded view of the surface cleaning apparatus of Figure 11; and

[0039] Figure 16 is a section view taken along line 16-16 in Figure 11.

DETAILED DESCRIPTION

[0040] Referring to Figure 1, an embodiment of a surface cleaning apparatus 200 is shown. In this embodiment the surface cleaning apparatus 200 is a hand operable surface cleaning apparatus. The surface cleaning apparatus 200 is usable in a forward direction of motion, indicated by arrow A in Figure 1.

[0041] Referring to Figure 2, the surface cleaning apparatus 200 has a dirty air inlet 202, a clean air outlet 204 (shown in Figure 2), and an air flow passage extending therebetween. In the embodiment shown, the dirty air inlet 202 is provided in a nozzle 206. From the dirty air inlet 202, the airflow passage extends through the nozzle 206, and through an air conduit 208, to a suction and filtration unit 210. The clean air outlet 204 is provided in the suction and filtration unit 210. In the embodiment shown, the air conduit 208 includes a wand 214, and a hose 217.

[0042] Referring now to Figures 1 and 2, the suction and filtration unit 210 includes a main housing 220. A filtration member 224 is provided in the main housing 220, and the filtration member 224 is positioned in the airflow passage downstream of the dirty air inlet 202, for removing particulate matter from air flowing through the airflow passage.

[0043] A suction motor 226 is also provided in the main housing 220, downstream of the filtration member 224, for drawing air through the airflow passage. The suction motor 226 may be any suitable type of suction motor. In the embodiment shown, the suction motor 226 includes a fan 223, and a motor 225.

[0044] In the embodiment shown, the filtration member 224 and suction motor 226 are positioned side-by-side. Further, the filtration member 224 extends along an axis 246, and the suction motor extends along an axis 290, and the axes 246, 290 are generally parallel. Further, the filtration member 224 and suction motor 226 are each positioned transverse to the forward direction of motion (indicated by arrow A in Figure 1) of the hand surface cleaning apparatus 100.

[0045] Referring to Figure 1, in the embodiment shown, the main housing 220 includes a central wall 230, a first side wall 232, and a second side wall 234. The first side wall 232 is pivotally mounted to the central wall 230, and serves as a first openable door 229. The second sidewall 234 has a first portion 233 adjacent the filtration member 224, and a second portion 235 adjacent the suction motor 226. The second sidewall 234 is pivotally mounted to the central wall 230, and serves as a second

openable door 231. Further, the second portion 235 is removable from the first portion 233.

[0046] Referring to Figure 2, an interior wall 237 extends within the main housing 220 to separate the suction motor 226 from the filtration member 224, so that fluid communication between the filtration member 224 and the suction motor 226 may generally only occur between a filtration member air outlet 264, and a suction motor air inlet end 239, as will be described in further detail hereinbelow. The interior wall 237 generally surrounds the suction motor 226 to form a motor housing 227, and is integral with the central wall 230, so that a portion 269 of the motor housing 227 forms part of the housing 220.

[0047] Referring to Figure 2, in the embodiment shown, the filtration member 224 is a cyclone 244. In alternate embodiments, the filtration member 224 may be, for example, a filter, such as a filter bag or a foam filter. In further alternate embodiments, the filtration member 224 may include a plurality of cyclone chambers, or a plurality of cyclonic stages.

[0048] The cyclone 244 may be of any suitable configuration. The cyclone 244 includes a cyclone wall 248 (also referred to as an outer wall 248), which is integral with the central wall 230, and together with the central wall 230 defines a cyclone chamber 250. That is, a portion of the cyclone wall 248 forms part of the housing 220. A first end 251 of the cyclone wall 248, which is positioned towards the second sidewall 234, defines an opening 252, and an opposed second end 254 of the cyclone wall includes a second end wall 256. The cyclone wall 248 is positioned in the main housing 220 such that it is spaced from the second sidewall 234.

[0049] The open first end 252 of the cyclone serves as a dirt outlet for the cyclone 244. Material that is separated from air in the cyclone travels from the dirt outlet to an associated dirt collection chamber 260.

[0050] Referring to Figures 2 and 3, at least a portion of the dirt chamber 260 is preferably positioned in an open volume within the main housing 220. In the embodiment shown, the entire dirt chamber 260 is within an open volume within the

main housing 220. The dirt collection chamber 260 is preferably within the main housing 220, exterior to the cyclone 244 and the suction motor 226. The dirt collection chamber extends along a longitudinal axis 261. The longitudinal axis 261 is preferably parallel to the suction motor axis 290.

[0051] Referring to Figures 2 and 3, at least a portion of the dirt collection chamber 260 is preferably positioned between the cyclone 244 and the suction motor 226. More preferably, at least a portion of the dirt collection chamber 260 surrounds at least a portion of the suction motor 226 and the suction motor housing 227. For example, the dirt collection chamber 260 may surround all of the suction motor 226, or only a portion of the suction motor 226, and/or all of the suction motor housing 227, or only a portion of the suction motor housing 227. As seen most clearly in Figure 3, in the embodiment shown, the dirt collection chamber 260 fully surround the motor 225 of suction motor 226 and the portion suction motor housing 227 that houses the motor 225.

[0052] The dirt collection chamber 260 further preferably surrounds at least a portion of the cyclone. For example, in the embodiment shown, dirt collection chamber 260 extends around approximately one quarter of the cyclone 244. In alternate embodiments, the dirt collection chamber 260 may fully surround the cyclone 244.

[0053] In an alternate embodiment of a surface cleaning apparatus 400 shown in Figure 4, wherein like reference numerals are used to refer to like features as in Figures 1 to 3, with the first digit incremented to 4, the dirt collection chamber 460 partially surrounds the motor 425 of suction motor 426 and the portion suction motor housing 427 that houses the motor 425. Further, the dirt collection chamber 460 partially surrounds the cyclone 444. Particularly, the dirt collection chamber 460 surrounds approximately three quarters of the cyclone 444. In another alternate embodiment of a surface cleaning apparatus 400' shown in Figure 5, wherein like reference numerals are used to refer to like features as in Figure 4, with a prime (') after the reference number, similarly to the embodiment of Figure 4, the dirt collection chamber 460' partially surrounds the motor 425' of suction motor 426' and the portion suction motor housing

427' that houses the motor 425'. Further, the dirt collection chamber 460' partially surrounds the cyclone 444'. Particularly, the dirt collection chamber 460' surrounds approximately one quarter of the cyclone 444'.

[0054] Referring to Figure 3, the dirt collection chamber 260 has an outer wall 263, and a portion 265 of the outer wall 263 preferably forms part of the main housing 220.

[0055] The cyclone 244 further includes a cyclone air inlet (not shown), and a cyclone air outlet 264. The cyclone air inlet extends from a first end that is in communication with the hose 217 through the central wall 230 of the filtration member main housing 220, to a second end that is in communication with the cyclone chamber 250. The cyclone air outlet 264 extends along the axis 246, from a first end 270 that is positioned within the cyclone chamber 250, through the lower wall 156, and to a second end 272 (also referred to herein as an outlet 272 of the cyclone air outlet 264) that is in communication with a chamber 241 adjacent the first sidewall 232 of the suction and filtration unit 210. A screen 274 is preferably mounted over the first end 270 of the cyclone air outlet.

[0056] In use, air flows from the hose 217 into the cyclone chamber 250 through the cyclone air inlet. In the cyclone chamber 250, the air flows within the cyclone wall 248 in a cyclonic pattern, and particulate matter is separated from the air. The particulate matter exits the cyclone chamber 250 through the open first end 252, and settles in the dirt collection chamber 260. The air exits the cyclone chamber 250 through the cyclone air outlet 264, and enters the chamber 241

[0057] The dirt collection chamber 260 may be emptied in any suitable manner. Referring to Figure 3A, in the embodiment shown, the second side wall 234 is pivotally openable, so that the dirt collection chamber 260 may be opened.

[0058] Referring still to Figure 2, the surface cleaning apparatus includes a pre-motor filter 276 positioned downstream of the cyclone 244 and upstream of the suction motor 226. The pre-motor filter 276 is preferably housed in the chamber 241, is snugly received within the central wall 230, overlies the suction motor 226 and the cyclone 244,

and spaced from the first openable door 229. In the embodiment shown, the pre-motor filter 276 overlies the all of the suction motor 226 and the cyclone 244. In alternate embodiments, the pre-motor filter may overlie only a portion of the suction motor 226 and the cyclone 244. Preferably, the pre-motor filter 276 overlies at least half of the suction motor 226 and the cyclone chamber 250, and more preferably, at least 75% of the suction motor 226 and the cyclone chamber 250. More preferably, the pre-motor filter 276 overlies at least half of the suction motor 226 and the cyclone 244, and more preferably, at least 75% of the suction motor 226 and the cyclone 244. Most preferably, as shown, the pre-motor filter has a portion 245 that is centered over the suction motor 226 and a portion 247 that overlies at least half of the cyclone 244. In the embodiment shown, the portion 247 overlies all of the cyclone 244.

[0059] The pre-motor filter has an upstream side 280 that faces the first sidewall 232 of the main housing 220, and an opposed downstream side 282 that faces the second sidewall 234 of the main housing 220. The pre-motor filter 276 may be any suitable type of filter. Preferably, the pre-motor filter includes a foam layer 286 and a felt layer 288.

[0060] Referring still to Figure 2, the cyclone air outlet 264 extends through the pre-motor filter 276, so that air exiting the pre-motor filter 276 is in contact with the upstream side 280 of the pre-motor filter 286.

[0061] The air then passes through the pre-motor filter 276, towards a suction motor inlet end 239 that faces the downstream side 282 of the pre-motor filter 276. From the suction motor inlet 239, the air passes towards a suction motor outlet end 243, and out of the clean air outlet 204.

[0062] Preferably, as shown in Figure 3B, when the first openable door 229 is open, the upstream side 280 of the pre-motor 276 is visible. By opening the openable door 229, the pre-motor filter may optionally be removed, replaced, or cleaned. Further, the pre-motor filter 276 is preferably mounted to at least one of the cyclone 244 and the suction motor 226, and the pre-motor filter 276 remains in position when the first

openable door 229 is opened. For example, as shown, the pre-motor filter 276 is frictionally mounted to the cyclone air outlet 264.

[0063] Referring still to Figure 2, the surface cleaning apparatus further includes a bleed valve 201. The bleed valve 201 allows air to flow from the suction motor inlet 239 to the clean air outlet 204 so that the suction motor 226 does not burn out if a clog occurs.

[0064] Referring to Figures 4 and 5, a further alternate surface cleaning apparatus 400 is shown. The surface cleaning apparatus is similar to the surface cleaning apparatus 200, and like numerals in the surface cleaning apparatus 800 will be used to describe like features as in the surface cleaning apparatus 200, with the first digit incremented to 8.

[0065] In the surface cleaning apparatus 800, the cyclone air outlet 864 does not extend through the pre-motor filter 876. The upstream side 880 of the pre-motor filter 876 faces towards the second sidewall 834 of the housing 820 and faces the cyclone air outlet 864, and the downstream side 882 of the pre-motor filter 876 faces the first sidewall 834. Air passes out of the second end 872 of the cyclone air outlet 864, through the pre-motor filter, and into the chamber 841.

[0066] The suction motor 826 has a suction motor inlet duct 853 that extends through the pre-motor filter 876 to the downstream side 882 of the pre-motor filter 876.

[0067] In this embodiment, the bleed valve 801 is provided in the openable door, and has an air outlet 805 that is within the chamber 841, so that it is in communication with the suction motor air inlet end 839.

[0068] When the openable door is open, the suction motor inlet 839 is visible, and the downstream side 882 of the pre-motor filter 876 is visible.

[0069] Referring to Figures 6A and 6B, a further alternate surface cleaning apparatus 900 is shown. The surface cleaning apparatus is similar to the surface cleaning apparatus 200, and like numerals in the surface cleaning apparatus 900 will be

used to describe like features as in the surface cleaning apparatus 200, with the first digit incremented to 9.

[0070] In the surface cleaning apparatus 900, the post motor filter 976 overlies only the motor (not shown) and the motor housing 927, and does not overlie the cyclone 944. The cyclone outlet 964 is in communication with the upstream side 980 of the post motor filter 976, which faces towards the first side 232 of the housing 220. The downstream side of the post motor filter 976 faces the motor inlet end (not shown) and the second side 234 of the housing 920. A bleed valve 901 extends through the post motor filter 976.

[0071] Referring to Figures 7-10, a further alternate surface cleaning apparatus 1100 is shown. In the embodiment illustrated, the surface cleaning apparatus 1100 is a hand operable surface cleaning apparatus. In alternate embodiments, the surface cleaning apparatus may be another suitable type of surface cleaning apparatus, including, for example, an upright vacuum cleaner, a canister vacuum cleaner, a stick vacuum cleaner, a wet-dry vacuum cleaner and a carpet extractor.

[0072] Referring to Figure 10, the surface cleaning apparatus 1100 has a dirty air inlet 1102, a clean air outlet 1104 and an airflow passage extending therebetween. In the embodiment shown, the dirty air inlet 1102 is the air inlet 1106 of a suction hose connector 1108 that can be connected to the downstream end of, e.g., a flexible suction hose or other type of cleaning accessory tool, including, for example, a wand and a nozzle. From the dirty air inlet 1102, the airflow passage extends through an air treatment member that can treat the air in a desired manner, including for example removing dirt particles and debris from the air. In the illustrated example, the air treatment member comprises a cyclone bin assembly 1110. The cyclone bin assembly 1110 is mounted on a body 1112. Alternatively, or in addition, the air treatment member can comprise a bag, a filter or other air treating means. A suction motor 1114 that is mounted within the body 1112 and is in fluid communication with the cyclone bin assembly 1110.

[0073] The clean air outlet 1104, which is in fluid communication with an outlet of the suction motor 1114, is provided in the body 1112. In the illustrated example, the dirty air inlet 1102 is located toward the front of the surface cleaning apparatus 1100, and the clear air outlet 1104 is located toward the rear.

[0074] In the illustrated example, cyclone bin assembly 1110 includes a cyclone chamber 1118 and a dirt collection chamber 1120. The cyclone chamber 1118 is bounded by a sidewall 1122, a first end wall 1124 and a second end wall 1126 that are configured to provide an inverted cyclone configuration. A tangential air inlet 1128 is provided in the sidewall of the cyclone chamber 1118 and is in fluid communication with the air outlet of the hose connector 1108. Air flowing into the cyclone chamber 1118 via the tangential air inlet 1128 can circulate around the interior of the cyclone chamber 1118 and dirt particles and other debris can become disentrained from the circulating air.

[0075] A slot 1132 formed between the sidewall 1122 and the second end wall 1126 serves as a cyclone dirt outlet 1132. Debris separated from the air flow in the cyclone chamber 1118 can travel from the cyclone chamber 1118, through the dirt outlet 1132 to the dirt collection chamber 1120.

[0076] Air can exit the cyclone chamber 1118 via an air outlet. In the illustrated example, the cyclone air outlet includes a vortex finder 1134. Optionally, a removable screen 1136 can be positioned over the vortex finder 1134. The cyclone chamber 1118 extends along a longitudinal cyclone axis 1138. In the example illustrated, the longitudinal cyclone axis 1138 is aligned with the orientation of the vortex finder 1134.

[0077] The dirt collection chamber 1120 comprises a sidewall 1140, a first end wall 1142 and an opposing second end wall 1144. In the illustrated example, at least a portion of the dirt collection chamber sidewall 1140 is integral with a portion of the cyclone chamber sidewall 1122, and at least a portion of the first cyclone end wall 1124 is integral with a portion of the first dirt collection chamber end wall 1142.

[0078] Referring to Figure 8, the cyclone bin assembly 1110 is optionally detachably connected to the body 1112. In the example illustrated, the cyclone bin

assembly 1110 is detachably mounted on a platform 1148. A releasable latch 1150 can be used to secure a front edge of the cyclone bin assembly 1110 to the body 1112.

[0079] Referring to Figure 7, a handle 1152 is provided on the top of the cyclone bin assembly 1110. The handle 1152 is configured to be grasped by a user. When the cyclone bin assembly 1110 is mounted on the body 1112, the handle 1152 can be used to manipulate the surface cleaning apparatus 1100. When the cyclone bin assembly 1110 is removed from the body 1112, the handle 1152 can be used to carry the cyclone bin assembly 1110, for example to position the cyclone bin assembly 1110 above a waste receptacle for emptying. In the illustrated example, the handle 1152 is integral with a lid 1154 of the cyclone bin assembly 1110.

[0080] Referring to Figures 9 and 10, the dirt collection chamber sidewall 1140 comprises a recess 1214 that is shaped to receive a corresponding portion of the body 1112. In the illustrated example, the recess 1214 is shaped to receive a portion of the motor housing 1216 surrounding the suction motor 1114. In this example, at least a portion of the dirt collection chamber 1120 is positioned between the cyclone chamber 1118 and the suction motor 1114. Preferably, at least a portion of the dirt collection chamber 1120 surrounds at least a portion of the suction motor 1114 and, if a suction motor housing is provided, the suction motor housing 1216. In the illustrated example, the dirt collection chamber 1120 surrounds only a portion of the motor housing 1216. The shape of the recess 1214 is preferably selected to correspond to the shape of the suction motor housing 1216 so as to maximize the size of the dirt collection chamber for the foot print of the vacuum cleaner. Configuring the dirt collection chamber 1120 to at least partially surround the suction motor housing 1216 may help reduce the overall length of the surface cleaning apparatus 1100, and/or may help increase the capacity of the dirt collection chamber 1120.

[0081] Referring to Figure 10, the dirt collection chamber 1120 also surrounds at least a portion of the cyclone chamber 1118. Optionally, the dirt collection chamber 1120 can be configured to completely surround the cyclone chamber 1118.

[0082] Air exiting the cyclone chamber 1118 flows to a suction motor 1114 inlet via an filter chamber 1186. The filter chamber 1186 is provided downstream from the cyclone air outlet. In the illustrated example, the filter chamber 1186 extends over substantially the entire lower portion of the body 1112 and overlies substantially all of the cyclone chamber 1118, dirt collection chamber 1120 and suction motor 1114.

[0083] A pre-motor filter 1218 is provided in the filter chamber 1186 to filter the air before it enters the suction motor inlet 1220. The pre-motor filter 1218 is sized to cover the entire area of the filter chamber 1186, and overlies substantially all of the cyclone chamber 1118, dirt collection chamber 1120 and suction motor 1114. Preferably, the cross sectional area (in the direction of air flow) of the pre-motor filter 1218 is greater than the cross sectional area of the cyclone chamber 1118 and the suction motor 1114. In the illustrated example, the pre-motor filter 1218 comprises first and second pre-motor filters 1218a, 1218b. The filter chamber 1186 comprises an air inlet chamber 1222 on the upstream side 1224 of the pre-motor filter 1218, and an air outlet chamber 1226 on the downstream side 1228 of the pre-motor filter 1218. Air can travel from the air inlet chamber 1222 to the air outlet chamber 1226 by flowing through the air-permeable pre-motor filter 1218. It will be appreciated that the larger the cross sectional area of the upstream face of the filter, the greater the capacity of the filter to filter particulates without the filter becoming clogged. Accordingly, it is preferred to make pre-motor filter 1218 as large as possible. Accordingly, it is preferred that filter chamber 1186 is as large as possible (i.e. it overlies all of an end face of the cyclone chamber, dirt collection chamber and suction motor) and that the pre-motor filter 1218 extends over the full transverse extent of filter chamber 1186. It will be appreciated that the filter chamber 1186 may overlie only a portion of the end face of the cyclone chamber, dirt collection chamber and suction motor but may still provide a larger upstream surface area than is the filter only overlies the cyclone chamber.

[0084] The lower side of the air filtration chamber comprises a filtration chamber end wall 1244. Optionally, the first end wall 1244 of the filter chamber 1186 can be openable to allow a user to access the pre-motor filter 1218. In the illustrated example, the filter chamber end wall 1244 is pivotally connected to the body 1112 by a hinge

1246 and can pivot to an open position. The releasable latch 1150 can be used to secure in a closed position. The latch 1150 can connect the filter chamber end wall 1244 to the cyclone bin assembly 1110. As exemplified and discussed hereafter, the upstream side of pre-motor filter 1218 is visible when filter chamber end wall 1244 is in the open position and accordingly, a user may readily detect if the pre-motor filter 1218 requires cleaning or changing.

[0085] The air inlet chamber 1222 is fluidly connected to the cyclone chamber air outlet by an inlet conduit 1230 that extends through the pre-motor filter 1218. In the illustrated example the inlet conduit 1230 comprises an extension of a vortex finder insert. The air outlet chamber 1226 is in fluid communication with the inlet 1220 of the suction motor 1114. The pre-motor filter 1218 may be supported by a plurality of support ribs 1232 extending through the air outlet chamber 1226. Gaps or cutouts can be provided in the ribs 1232 to allow air to circulate within the air outlet chamber 1226 and flow toward the suction motor inlet 1220. From the suction motor inlet 1220, the air is drawn through the suction motor 1114 and ejected via a suction motor outlet 1116. Optionally, a post-motor filter 1236 (for example a HEPA filter) can be provided downstream from the suction motor outlet 1116, between the suction motor outlet 1116 and the clean air outlet 1104. A detachable grill 1238 can be used to retain the post-motor filter 1236 in position, and allow a user to access the post-motor filter 1236 for inspection or replacement.

[0086] Referring to Figures 11 to 16, another embodiment of a surface cleaning apparatus 2100 is shown. In the embodiment illustrated, the surface cleaning apparatus 2100 is a canister vacuum cleaner. The surface cleaning apparatus 2100 has a dirty air inlet 2102, a clean air outlet 2104 and an airflow passage extending therebetween. In the embodiment shown, the dirty air inlet 2102 is the air inlet of a suction hose connector 2106 that can be connected to the downstream end of a flexible suction hose or other type of cleaning accessory tool, including, for example, a surface cleaning head, a wand and a nozzle. From the dirty air inlet 2102, the airflow passage extends through an air treatment member 2108 that can treat the air in a desired manner, including for example removing dirt particles and debris from the air. In the

illustrated example, the air treatment member 2108 comprises a cyclone bin assembly 2110. Alternatively, or in addition, the air treatment member 2108 can comprise a bag, a filter or other air treating means. A suction motor 2111 (Figure 16) is mounted within a body 2112 of the surface cleaning apparatus 2100 and is in fluid communication with the cyclone bin assembly 2110. In the illustrated example, the body 2112 of the surface cleaning apparatus 2100 is a rollable, canister-type body that comprises a platform 2114 and two opposing sidewalls 2116a, 2116b that cooperate to define a central cavity 2118. The surface cleaning apparatus 2100 also comprises two main side wheels 2120a, 2120b, rotatably coupled to the sidewalls 2116a and 2116b, respectively.

[0087] The clean air outlet 2104, which is in fluid communication with an outlet of the suction motor 2111, is provided in the body 2112. In the illustrated example, the dirty air inlet 2102 is located toward the front 2122 of the surface cleaning apparatus 2100, and the clear air outlet is located toward the rear 2124.

[0088] In the illustrated example, the body sidewalls 2116a, b are generally circular and cover substantially the entire side faces of the surface cleaning apparatus 2100. One main side wheel 2120a, 2120b is coupled to the outer face of each body sidewall 2116a and 2116b, respectively. Optionally, the side wheels 2120a, 2120b may have a larger diameter 2126 than the body sidewalls 2116a, b and can completely cover the outer faces of the sidewalls 2116a, b. Referring to Figure 16, each side wheel 2120a, b is rotatably supported by a corresponding axel 2128a, 2128b, which extends from the body sidewalls 2116a and 2116b, respectively. The main side wheels 2120a and 2120b are rotatable about a primary axis of rotation 2130. In the illustrated example, the primary axis of rotation 2130 passes through the cyclone bin assembly 2110.

[0089] Optionally, at least one of the side wheels 120a, b can be detachable from the body 112. Referring to Figure 15, in the illustrated example side wheel 2120a is detachably coupled to its corresponding axels 2128a by a threaded hub assembly 2132a, and can be removed from the body 2112. Removing the side wheel 2120a from the body 112, or otherwise positioning them in an open configuration, may allow a user

to access a variety of components located in compartments between the side wheels 120a and 120b and the corresponding sidewalls 116a and 116b, as explained in greater detail below.

[0090] Figures 12, 13, 14 and 16 illustrated an example of a cyclone bin assembly 2110 includes a cyclone chamber 2162 and a dirt collection chamber 2164 in accordance with one embodiment. The cyclone bin assembly 2110 is detachably mounted in the cavity 2118, laterally between the sidewalls 2116a, 2116b and side wheels 2120a, 2120b. Positioning the cyclone bin assembly 2110 in the cavity 2118, between the body sidewalls 2116a, 2116b may help protect the cyclone bin assembly 2110 from side impacts, for example if the surface cleaning apparatus 2100 contacts a piece of furniture or other obstacle. Preferably, the body sidewalls 2116a, 2116b have a larger cross-sectional area than the cyclone bin assembly 2110. More preferably, the transverse faces of the cyclone bin assembly 2110 are entirely covered by the body sidewalls 2116a, 2116b.

[0091] In the illustrated example, the cyclone chamber 2162 is bounded by a sidewall 2166, a first end wall 2168 and a second end wall 2170. A tangential air inlet 2172 is provided in the sidewall of the cyclone chamber 2162 and is in fluid communication with the dirty air inlet 2102. Air flowing into the cyclone chamber 2162 via the air inlet can circulate around the interior of the cyclone chamber 2162 and dirt particles and other debris can become disentrained from the circulating air.

[0092] A slot 2180 formed between the sidewall 2166 and the second end wall 2170 serves as a cyclone dirt outlet 2180. Debris separated from the air flow in the cyclone chamber 2162 can travel from the cyclone chamber 2162, through the dirt outlet 2180 to the dirt collection chamber 2164.

[0093] Air can exit the cyclone chamber 2162 via an air outlet. In the illustrated example, the cyclone air outlet includes a vortex finder 2182. Optionally, a removable screen 2183 can be positioned over the vortex finder 2182. The cyclone chamber 2162 extends along a longitudinal cyclone axis 2184. In the example illustrated, the longitudinal cyclone axis is aligned with the orientation of the vortex finder 2182 and is

generally transverse to the direction of movement of the surface cleaning apparatus 2100. The cyclone chamber 2162 has a generally circular cross sectional shape (taken in a plane perpendicular to the cyclone axis) and has a cyclone diameter 2186.

[0094] The dirt collection chamber 2164 comprises a sidewall 2174, a first end wall 2176 and an opposing second end wall 2178. In the illustrated example, at least a portion of the dirt collection chamber sidewall 2174 is integral with a portion of the cyclone chamber sidewall 2166, and at least a portion of the first cyclone end wall 2168 is integral with a portion of the first dirt collection chamber end wall 2176.

[0095] Referring to Figures 12 and 14, a lower surface 2188 of the cyclone bin assembly 2110 is configured to rest on the platform 2114, and the first and second end walls 2168, 2170 of the cyclone bin assembly 2110 are shaped to engage the inner surfaces of the body sidewalls 2116a, 2116b, respectively. The upper portion of the cyclone bin (as viewed when installed in the cavity 2118) can have a radius of curvature that generally corresponds to the radius of curvature of the body sidewalls 2116a, 2116b and the side wheels 2120a, 2120b. Matching the curvature of the cyclone bin assembly 2110 with the curvature of the side wheels 120a, 120b may help facilitate mounting of the cyclone bin assembly 2110 within the body 2112, so that the walls of the cyclone bin assembly 2110 do not extend radially beyond the body sidewalls 2116a, 2116b or main side wheels 2120a, 2120b.

[0096] Referring to Figure 13, the second dirt collection chamber end wall 2178 is preferably pivotally connected to the dirt collection chamber sidewall 2174. The second dirt collection chamber end wall 2178 can be opened to empty dirt and debris from the interior of the dirt collection chamber 2164. Optionally, the second cyclone end wall 2170 is integral with and is openable with the second dirt collection chamber end wall 2178. Opening the second cyclone end wall 2170 can allow dirt and debris to be emptied from the cyclone chamber 2162. The second dirt collection chamber sidewall 2178 can be retained in the closed position by a releasable latch 2204. Optionally, the screen 2183 and/or the vortex finder 2182 can be removable from the cyclone chamber

2162 and can be removed when the second dirt collection chamber end wall 2178 is open.

[0097] Referring to Figures 13 and 14, the dirt collection chamber sidewall 2174 comprises a recess 2206 that is shaped to receive a corresponding portion of the body 2112. Referring to Figure 12, in the illustrated example, the platform 2114 comprises a generally planar bearing surface 2208 for supporting the cyclone bin assembly 2110. The platform 2114 also comprises at least a portion of the suction motor housing 2210 surrounding the suction motor 2111. In this example, the recess 2206 in the dirt collection chamber sidewall 2174 is shaped to receive the portion of the motor housing 2210 projecting above the planar bearing surface 2208.

[0098] Preferably, at least a portion of the dirt collection chamber 2164 surrounds at least a portion of the suction motor 2111 and the suction motor housing 2210. In this example, at least a portion of the dirt collection chamber 2164 is positioned between the cyclone chamber 2162 and the suction motor housing 2210 (and the suction motor 2111 therein). Configuring the dirt collection chamber 2164 to at least partially surround the suction motor housing 2210 may help reduce the overall size of the surface cleaning apparatus 2100, and/or may help increase the capacity of the dirt collection chamber 2164. The dirt collection chamber 2164 also surrounds at least a portion of the cyclone chamber 2162.

[0099] Referring to Figures 15 and 16, air exiting the cyclone chamber 2162 flows to a suction motor inlet 2246 via a filter chamber 2248. The filter chamber 2248 is provided downstream from the cyclone air outlet. In the illustrated example, the filter chamber 2248 comprises a recessed chamber in the body sidewall 2116a that is enclosed by an openable seal plate 2250. A sealing gasket 2254 is provided at the interface between an annular rim 2252 of the sidewall 2116a and the seal plate 2250 to help provide an air-tight filter chamber 2248. In the illustrated example, the filter chamber 2248 extends over substantially the entire sidewall 2116a and overlies substantially all of the transverse cross sectional area of cyclone chamber 2162, dirt collection chamber 2164 and suction motor 2111.

[00100] A pre-motor filter 2256 is provided in the filter chamber 2248 to filter the air before it enters the suction motor inlet. The pre-motor filter 2256 is sized to cover substantially the entire area of the filter chamber 2248, and overlies substantially all of the transverse cross sectional area of the cyclone chamber 2162, dirt collection chamber 2164 and suction motor 2111. In the illustrated example, the pre-motor filter 2256 comprises first and second pre-motor filters 2256a, 2256b. The filter chamber 2248 comprises an air inlet chamber 2258 on the upstream side of the pre-motor filter 2256, and an air outlet chamber 2260 on the downstream side of the pre-motor filter 2256. Air can travel from the air inlet chamber 2258 to the air outlet chamber 2260 by flowing through the pre-motor filter 2256.

[00101] The air inlet chamber 2258 is fluidly connected to the vortex finder 2182 by an inlet conduit 2262 that extends through a first aperture 2264 in the pre-motor filter 2256. The air outlet chamber 2260 is in fluid communication with the inlet 2246 of the suction motor 2111. The pre-motor filter 2256 can be supported by a plurality of support ribs 2266 extending from the sidewall 2116a into the air outlet chamber 2260. Cutouts can be provided in the ribs to allow air to circulate within the air outlet chamber 2260 and flow toward the suction motor inlet 2246.

[00102] In the illustrated example, the axle 2128a for supporting the side wheel extends through the air filter chamber 2248, a second aperture 2268 in the pre-motor filter 2256 and through an axel aperture 2270 in the seal plate 2250. The axle aperture 2270 in the seal plate 2250 is configured to provide an air-tight seal against the axel 2128a. Optionally, a sealing gasket can be provided at the interface between the seal plate 2250 and the axel 2128a. In this configuration the pre-motor filter 2256 surrounds the axel 2128a.

[00103] In the illustrated example, the seal plate 2250 is removable, when the side wheel 2120a is detached, to allow a user to access the pre-motor filter 2256. Alternatively, instead of being removable, the seal plate 2250 can be movably attached to the body 2112, for example pivotally connected to the sidewall 2116a, such that the seal plate 2250 can be opened without being completely detached from the body 2112.

[00104] Preferably, the seal plate 2250 is transparent, or at least partially transparent. Providing a transparent seal plate 2250 may help facilitate visual inspection of the upstream side 2272 of the pre-motor filter 2256 while the seal plate 2250 is in place. When the seal plate 2250 is removed, the pre-motor filter 2256 may be removed, for example for cleaning or replacement.

[00105] A bleed valve is provided to supply clean air to the suction motor inlet. In the illustrated example a bleed valve air outlet 2278 is in fluid communication with the air outlet chamber 2260 and can introduce clean air into the air outlet chamber 2260 downstream from the pre-motor filter 2256. Air introduced by the bleed valve can flow through the cutouts in the supporting ribs 2266, as described above. The bleed valve may be a pressure sensitive valve that is opened when there is a blockage in the air flow path upstream from the suction motor 2111. In the illustrated example, the bleed valve is parallel with the suction motor 2111. A bleed valve inlet 2280 (see also Figure 11) is provided toward the front of the body 2112.

[00106] It will be appreciated that, in one embodiment, the enhanced dirt collection chamber construction may be used by itself without the enhanced filter chamber design. Alternately, both the enhanced dirt collection chamber construction and the enhanced filter chamber design may be used concurrently as exemplified herein. It will also be appreciated that the cyclone chamber may be of any design and configuration. When either of the enhanced dirt collection chamber construction and/or the enhanced filter chamber design are used, the vacuum cleaner may be of any design and the dirt collection chamber may or may not be removably mounted from the vacuum cleaner.

[00107] Various apparatuses or methods are described above to provide an example of each claimed invention. No example described above limits any claimed invention and any claimed invention may cover processes or apparatuses that are not described above. The claimed inventions are not limited to apparatuses or processes having all of the features of any one apparatus or process described above or to features common to multiple or all of the apparatuses described above.

CLAIMS:

1. A hand carriable surface cleaning apparatus having a front end, a rear end and comprising:
 - (a) a dirty fluid inlet;
 - (b) a cyclone bin assembly comprising a cyclone chamber downstream of the dirty fluid inlet, the cyclone chamber comprising a first end, an second end, a cyclone axis, a cyclone air inlet and a cyclone air outlet that is located at the second end;
 - (c) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the cyclone axis extends through the pre-motor filter housing;
 - (d) a suction motor positioned downstream of the pre-motor filter and rearward of the cyclone bin assembly;
 - (e) an air flow path extending from the pre-motor filter to the suction motor; and,
 - (f) a clean air outlet downstream of the suction motor.
2. The hand carriable surface cleaning apparatus of claim 1 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the cyclone inlet.
3. The hand carriable surface cleaning apparatus of claim 1 wherein the suction motor comprises a fan and a motor, the cyclone inlet has a cyclone inlet axis and a projection of the cyclone inlet axis intersects the fan.
4. The hand carriable surface cleaning apparatus of claim 1 wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber.
5. The hand carriable surface cleaning apparatus of claim 1 wherein the cyclone air inlet is provided at the second end and a dirt outlet is provided at the first end and a dirt collection chamber is positioned below the cyclone chamber.

6. The hand carriable surface cleaning apparatus of claim 1 wherein the downstream side of the pre-motor filter is spaced further from the cyclone chamber than the upstream side of the pre-motor filter.
7. The hand carriable surface cleaning apparatus of claim 6 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.
8. The hand carriable surface cleaning apparatus of claim 1 wherein the upstream side of the pre-motor filter is spaced further from the cyclone chamber than the downstream side of the pre-motor filter.
9. The hand carriable surface cleaning apparatus of claim 8 further comprising a conduit that is in flow communication with the air outlet of the cyclone chamber and extends through the pre-motor filter.
10. The hand carriable surface cleaning apparatus of claim 8 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.
11. The hand carriable surface cleaning apparatus of claim 1 further comprising a handle and the pre-motor filter housing is openable without moving the handle.
12. The hand carriable surface cleaning apparatus of claim 1 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter.
13. The hand carriable surface cleaning apparatus of claim 1 wherein the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and

downstream of the cyclone chamber, the pre-motor filter overlies at least a portion of the second end of the cyclone chamber.

14. A hand carriable surface cleaning apparatus having a front end, a rear end and comprising:

- (a) a dirty fluid inlet;
- (b) an air treatment member downstream of the dirty fluid inlet, the air treatment member comprising a first end, an second end, an air treatment member air inlet and an air treatment member air outlet that is located at the second end and has an air treatment member air outlet axis;
- (c) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the air treatment member air outlet axis extends through the pre-motor filter housing;
- (d) a suction motor positioned downstream of the pre-motor filter and rearward of the air treatment member;
- (e) an air flow path extending from the pre-motor filter to the suction motor; and,
- (f) a clean air outlet downstream of the suction motor.

15. The hand carriable surface cleaning apparatus of claim 14 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the air treatment member air inlet.

16. The hand carriable surface cleaning apparatus of claim 14 wherein the suction motor comprises a fan and a motor, the air treatment member air inlet has an inlet axis and a projection of the inlet axis intersects the fan.

17. The hand carriable surface cleaning apparatus of claim 14 wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the air treatment member.

18. The hand carriable surface cleaning apparatus of claim 14 wherein the air treatment member air inlet is provided at the second end and a dirt outlet is provided at the first end and a dirt collection chamber is positioned below the air treatment member.
19. The hand carriable surface cleaning apparatus of claim 14 wherein the downstream side of the pre-motor filter is spaced further from the air treatment member than the upstream side of the pre-motor filter.
20. The hand carriable surface cleaning apparatus of claim 19 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.
21. The hand carriable surface cleaning apparatus of claim 14 wherein the upstream side of the pre-motor filter is spaced further from the air treatment member than the downstream side of the pre-motor filter.
22. The hand carriable surface cleaning apparatus of claim 21 further comprising a conduit that is in flow communication with the air outlet of the air treatment member and extends through the pre-motor filter.
23. The hand carriable surface cleaning apparatus of claim 21 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.
24. The hand carriable surface cleaning apparatus of claim 14 further comprising a handle and the pre-motor filter housing is openable without moving the handle.
25. The hand carriable surface cleaning apparatus of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the air treatment member and downstream of the air treatment member, the air treatment member air outlet is positioned at a location spaced from the front end of the pre-motor filter.

26. The hand carriable surface cleaning apparatus of claim 14 wherein the pre-motor filter is positioned axially outwardly from the second end of the air treatment member and downstream of the air treatment member, the pre-motor filter overlies at least a portion of the second end of the air treatment member.

ABSTRACT

A hand vacuum cleaner comprises an air flow passage extending from a dirty air inlet to a clean air outlet. A suction motor is positioned in the air flow path. At least one air treatment member, which is optionally a cyclone chamber, is positioned in the air flow path. A pre-motor filter is positioned in a pre-motor filter housing having an openable cover and the air treatment member air outlet axis extends through the pre-motor filter housing.



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.
15/051,272	02/23/2016	Wayne Ernest Conrad	10452-P38886US04	1035
1059 7590 06/16/2016 BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l. 40 KING STREET WEST 40th Floor TORONTO, ON M5H 3Y2 CANADA			EXAMINER CRANDALL, JOEL DILLON	
			ART UNIT 3723	PAPER NUMBER
			MAIL DATE 06/16/2016	DELIVERY MODE PAPER

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.

Office Action Summary	Application No. 15/051,272	Applicant(s) CONRAD, WAYNE ERNEST	
	Examiner JOEL CRANDALL	Art Unit 3723	AIA (First Inventor to File) Status No

-- 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 03/29/2016.
☐ 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) 1-26 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-26 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 02/23/2016 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 02/23/2016; 02/23/2016
- 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 4) ☐ Other: ____.

- 1) The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. **The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-3, 5, 6, 11, 13-16, 19, 24, and 25 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Han et al. (US-2009/0056060).**

Regarding claim 1, Han discloses a hand carryable surface cleaning apparatus having a front end, a rear end and comprising: (a) a dirty fluid inlet (71); (b) a cyclone bin assembly (43) comprising a cyclone chamber (43) downstream of the dirty fluid inlet (71) (Fig. 2), the cyclone chamber (43) comprising a first end, an second end, a cyclone axis, a cyclone air inlet (44) and a cyclone air outlet (45) that is located at the second end (Fig. 2); c) a pre-motor filter (65) comprising an upstream side and a downstream side (Fig. 2), the pre-motor filter (65) is positioned in a pre-motor filter housing (Fig. 2) having an openable cover (67) (Fig. 1), the cyclone axis extends through the pre-motor filter housing (Fig. 2); (d) a suction motor (21) positioned downstream of the pre-motor filter (65) and rearward of the cyclone bin assembly (43); (e) an air flow path extending from the pre-motor filter (65) to the suction motor (21) (Fig. 2); and, (f) a clean air outlet (24) downstream of the suction motor (21) (Fig. 2).

Regarding claim 2, Han discloses the hand carryable surface cleaning apparatus of claim 1 wherein the suction motor (21) comprises a fan and a motor (Fig. 2) and an upstream side of the fan is positioned proximate the cyclone inlet (Fig. 2).

Regarding claim 3, Han discloses the hand carriable surface cleaning apparatus of claim 1 wherein the suction motor (21) comprises a fan and a motor (Fig. 2), the cyclone inlet (44) has a cyclone inlet axis and a projection of the cyclone inlet (44) axis intersects the fan (Fig. 2).

Regarding claim 5, Han discloses the hand carriable surface cleaning apparatus of claim 1 wherein the cyclone air inlet (44) is provided at the second end and a dirt outlet (49) is provided at the first end (Fig. 2) and a dirt collection chamber (59) is positioned below the cyclone chamber (43) (Fig. 2) (The term "below" is a relative term and without a frame of reference then the chamber 59 can be considered below the cyclone 43. Furthermore, the bottom portion of chamber 59 rests below a top portion of the cyclone chamber 43).

Regarding claim 6, Han discloses the hand carriable surface cleaning apparatus of claim 1, wherein the downstream side of the pre-motor filter (65) is spaced further from the cyclone chamber (43) than the upstream side of the pre-motor filter (43) (Fig. 2).

Regarding claim 11, Han discloses the hand carriable surface cleaning apparatus of claim 1 further comprising a handle (15) and the pre-motor filter housing is openable (via cover 67) without moving the handle (15) (Figs. 1 and 5).

Regarding claim 13, Han discloses the hand carriable surface cleaning apparatus of claim 1 wherein the pre-motor filter (65) is positioned axially outwardly from the second end of the cyclone chamber (43) and downstream of the cyclone chamber (43), the pre-motor filter (65) overlies at least a portion of the second end of the cyclone chamber (43) (Fig. 2).

Regarding claim 14, Han discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a dirty fluid inlet (71); (b) an air treatment member (41) downstream of the dirty fluid inlet (71), the air treatment member (41) comprising a first end, a second , an air treatment member air inlet (44) and an air treatment member air outlet (45) that is located at the second end (Fig. 2) and has an air treatment member air outlet axis (Fig. 2); (c)

Art Unit: 3723

a pre-motor filter (65) comprising an upstream side and a downstream side, the pre-motor filter (65) is positioned in a pre-motor filter housing (Fig. 2) having an openable cover (67) (Fig. 1), the air treatment member air outlet (45) axis extends through the pre-motor filter housing (41) (Fig. 2); (d) a suction motor (21) positioned downstream of the pre-motor filter (65) and rearward of the air treatment member (41) (Fig. 2); an air flow path extending from the pre-motor filter (65) to the suction motor (21) (Fig. 2), and, (f) a clean air outlet (24) downstream of the suction motor (21) (Fig. 2).

Regarding claim 15, Han discloses the hand carriable surface cleaning apparatus of claim 14, wherein the suction motor (21) comprises a fan and a motor (Fig. 2) and an upstream side of the fan is positioned proximate the air treatment member air inlet (44) (Fig. 2).

Regarding claim 16, Han discloses the hand carriable surface cleaning apparatus of claim 14, wherein the suction motor (21) comprises a fan and a motor (Fig. 2), the air treatment member (41) air inlet (44) has an inlet axis and a projection of the inlet axis intersects the fan (Fig. 2).

Regarding claim 19, Han discloses the hand carriable surface cleaning apparatus of claim 14 wherein the downstream side of the pre-motor filter (56) is spaced further from the air treatment member (41) than the upstream side of the pre-motor filter (56) (Fig. 2).

Regarding claim 24, Han discloses the hand carriable surface cleaning apparatus of claim 14 further comprising a handle (15) and the pre-motor filter housing is openable without moving the handle (15) (Figs. 1 and 5).

Regarding claim 25, Han discloses the hand carriable surface cleaning apparatus of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter (65) has a front end positioned proximate the front end and extending rearwardly (Fig. 2), the pre-motor filter (65) is positioned axially outwardly from the second end of the air treatment member (41)

Art Unit: 3723

and downstream of the air treatment member (41) (Fig. 2), the air treatment member (41) air outlet (44) is positioned at a location spaced from the front end of the pre-motor filter (65) (Fig. 2).

3. Claims 1, 4, 8, 9, 12, 14, 18, and 21-23 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Eriksson (US-3,877,902).

Regarding claim 1, Eriksson discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a dirty fluid inlet (41); (b) a cyclone bin assembly (18) comprising a cyclone chamber (18) downstream of the dirty fluid inlet (41), the cyclone chamber comprising a first end, an second end, a cyclone axis, a cyclone air inlet (44) and a cyclone air outlet (35) that is located at the second end; c) a pre-motor filter (37) comprising an upstream side and a downstream side (Fig. 2), the pre-motor filter (37) is positioned in a pre-motor filter housing having an openable cover (39) (Fig. 1), the cyclone axis extends through the pre-motor filter housing (Fig. 2); (d) a suction motor (16) positioned downstream of the pre-motor filter (37) and rearward of the cyclone bin assembly (18) (Fig. 2); (e) an air flow path extending from the pre-motor filter (37) to the suction motor (37); and, (f) a clean air outlet (19) downstream of the suction motor (16) (Figs. 1 and 2).

Regarding claim 4, Eriksson discloses the hand carriable surface cleaning apparatus of claim 1 wherein the suction motor (16) has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber (18) (Fig. 2).

Regarding claim 8, Eriksson discloses the hand carriable surface cleaning apparatus of claim 1 wherein the upstream side of the pre-motor filter (37) is spaced further from the cyclone chamber (18) than the downstream side of the pre-motor filter (37) (Fig. 2).

Regarding claim 9. Eriksson discloses the hand carriable surface cleaning apparatus of claim 8 further comprising a conduit (35) that is in flow communication with the air outlet of the cyclone chamber (18) and extends through the pre-motor filter (37) (Fig. 2).

Regarding claim 12. Eriksson discloses the hand carriable surface cleaning apparatus of claim 1 wherein each of the upstream and downstream sides of the pre-motor filter (37) has a front end positioned proximate the front end and extending rearwardly (Fig. 2), the pre-motor filter (37) is positioned axially outwardly from the second end of the cyclone chamber (18) and downstream of the cyclone chamber (Fig. 2), the cyclone air outlet (35) is positioned at a location spaced from the front end of the pre-motor filter (37) (Fig. 2).

Regarding claim 14. Eriksson discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a dirty fluid inlet (41); (b) an air treatment member (18) downstream of the dirty fluid inlet (41) (Fig. 2), the air treatment member (18) comprising a first end, an second end, an air treatment member air inlet (44) and an air treatment member air outlet (35) that is located at the second end and has an air treatment member air outlet axis (Fig. 2); c) a pre-motor filter (37) comprising an upstream side and a downstream side (Fig. 2), the pre-motor filter (37) is positioned in a pre-motor filter housing having an openable cover (39) (Figs. 1 and 2), the air treatment member (18) air outlet axis extends through the pre-motor filter housing (Fig. 2); (d) a suction motor (16) positioned downstream of the pre-motor filter (37) and rearward of the air treatment member (18); (e) an air flow path extending from the pre-motor filter (16) to the suction motor (37); and, (f) a clean air outlet (19) downstream of the suction motor (16).

Regarding claim 18. Eriksson discloses the hand carriable surface cleaning apparatus of claim 14 wherein the air treatment member (37) air inlet is provided at the second end (Fig. 2)

and a dirt outlet (the outlet from cyclone 18 into bin 10) is provided at the first end and a dirt collection chamber (10) is positioned below the air treatment member (37) (Fig. 2).

Regarding claim 21, Eriksson discloses the hand carriable surface cleaning apparatus of claim 14 wherein the upstream side of the pre-motor filter (37) is spaced further from the air treatment member (18) than the downstream side of the pre-motor filter (37) (Fig. 2).

Regarding claim 22, Eriksson discloses the hand carriable surface cleaning apparatus of claim 21 further comprising a conduit (35) that is in flow communication with the air outlet of the air treatment member (18) (Fig. 2) and extends through the pre-motor filter (37) (Fig. 2).

Regarding claim 23, Eriksson discloses the hand carriable surface cleaning apparatus of claim 21 further comprising an upstream header (35) on the upstream side of the pre-motor filter (37) and the upstream header (35) is opened when the openable cover (39) is opened (Fig. 2).

4. Claims 1, 8, and 10 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Eriksson (US-3,870,486).

Regarding claim 1, Eriksson discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a dirty fluid inlet (a hose, not shown) [Eriksson; col. 1, lines 64-66]; (b) a cyclone bin assembly (16) comprising a cyclone chamber downstream of the dirty fluid inlet (Figs. 2 and 3), the cyclone chamber (16) comprising a first end, an second end, a cyclone axis, a cyclone air inlet (13) and a cyclone air outlet (20) that is located at the second end (Fig. 3); (c) a pre-motor filter (23) comprising an upstream side and a downstream side (Fig. 3), the pre-motor filter (23) is positioned in a pre-motor filter housing (Fig. 3) having an openable cover (33), the cyclone axis extends through the pre-motor filter housing (Fig. 3); (d) a suction motor (15) positioned downstream of the pre-motor filter (23) and rearward of the cyclone bin assembly (16); (e) an air flow path extending from the pre-motor filter (23) to

the suction motor (15) (Fig. 3); and, (f) a clean air outlet (14) downstream of the suction motor (15) (Fig. 3).

Regarding claim 8, Eriksson discloses the hand carriable surface cleaning apparatus of claim 1, wherein the upstream side of the pre-motor filter (23) is spaced further from the cyclone chamber (16) than the downstream side of the pre-motor filter (23) (Fig. 3).

Regarding claim 10, Eriksson discloses the hand carriable surface cleaning apparatus of claim 8 further comprising an upstream header (25) on the upstream side of the pre-motor filter (23) and the upstream header (25) is opened when the openable cover (33) is opened (Fig. 3).

5. Claims 1, 6, 7, 14, 19, and 20 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Bruneau (US-2006/0016042).

Regarding claim 1, Bruneau discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a dirty fluid inlet (32); (b) a cyclone bin assembly (104) comprising a cyclone chamber (Fig. 6) downstream of the dirty fluid inlet (32) (Fig. 6), the cyclone chamber (104) comprising a first end, an second end, a cyclone axis, a cyclone air inlet (22') and a cyclone air outlet (104) (Fig. 6) that is located at the second end (Fig. 6); c) a pre-motor filter (16) comprising an upstream side and a downstream side (Fig. 6), the pre-motor filter (16) is positioned in a pre-motor filter housing (14) having an openable cover (68) (Fig. 3), the cyclone (104) axis extends through the pre-motor filter housing (14) (Fig. 6); (d) a suction motor (18) positioned downstream of the pre-motor filter (16) and rearward of the cyclone bin assembly (104); (e) an air flow path extending from the pre-motor filter (16) to the suction motor (18) (Fig. 6); and, (f) a clean air outlet (42) downstream of the suction motor (18) (Fig. 6).

Regarding claim 6. Bruneau discloses the hand carriable surface cleaning apparatus of claim 1 wherein the downstream side of the pre-motor filter (16) is spaced further from the cyclone chamber (104) than the upstream side of the pre-motor filter (16) (Fig. 6).

Regarding claim 7. Bruneau discloses the hand carriable surface cleaning apparatus of claim 6 further comprising a downstream header (44) on the downstream side of the pre-motor filter (16) and the downstream header is opened when the openable cover (68) is opened (Fig. 6).

Regarding claim 14. Bruneau discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a dirty fluid inlet (32); (b) an air treatment member (104) downstream of the dirty fluid inlet (32) (Figs. 1 and 6), the air treatment member comprising a first end, an second end, an air treatment member air inlet (22') and an air treatment member air outlet (in top portion of funnel 104) (Fig. 6) that is located at the second end and has an air treatment member air outlet axis; c) a pre-motor filter (16) comprising an upstream side and a downstream side (Fig. 6), the pre-motor filter (16) is positioned in a pre-motor filter housing (60) having an openable cover (68) (Fig. 6), the air treatment member air outlet axis extends through the pre-motor filter housing (Fig. 6); (d) a suction motor (18) positioned downstream of the pre-motor filter (16) and rearward of the air treatment member (104); (e) an air flow path extending from the pre-motor filter (16) to the suction motor (18); and, (f) a clean air outlet (42) downstream of the suction motor (18).

Regarding claim 19. Bruneau discloses the hand carriable surface cleaning apparatus of claim 14 wherein the downstream side of the pre-motor filter (16) is spaced further from the air treatment member (104) than the upstream side of the pre-motor filter (16) (Fig. 6).

Regarding claim 20. Bruneau discloses the hand carriable surface cleaning apparatus of claim 19 further comprising a downstream header (44) on the downstream side of the pre-motor

Art Unit: 3723

filter (16) and the downstream header (44) is opened when the openable cover (68) is opened (Figs. 1 and 6).

6. Claims 14 and 17 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Salo et al. (US-6,341,404).

Regarding claim 14, Salo discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a dirty fluid inlet (32); (b) an air treatment member (104) downstream of the dirty fluid inlet (32) (Figs. 1 and 6), the air treatment member (42) comprising a first end, an second end, an air treatment member air inlet (52) and an air treatment member air outlet (38) (Fig. 3) that is located at the second end and has an air treatment member air outlet axis (Fig. 3); c) a pre-motor filter (76) comprising an upstream side and a downstream side (Fig. 4), the pre-motor filter (76) is positioned in a pre-motor filter housing (60) having an openable cover (72) (Figs. 3 and 4), the air treatment member (42) air outlet axis extends through the pre-motor filter housing (Fig. 4); (d) a suction motor (E) positioned downstream of the pre-motor filter (76) and rearward of the air treatment member (42); (e) an air flow path extending from the pre-motor filter (76) to the suction motor (E); and, (f) a clean air outlet (36) downstream of the suction motor (E) (Fig. 4).

Regarding claim 17, Salo discloses the hand carriable surface cleaning apparatus of claim 14 wherein the suction motor (E) has a suction motor axis and a projection of the suction motor axis does not intersect the air treatment member (76) (Fig. 4).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOEL CRANDALL whose telephone number is (571)270-5947. The examiner can normally be reached on (Flex) Monday - Friday 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (571)272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOEL CRANDALL/
Examiner, Art Unit 3723

/Joseph J Hail/
Supervisory Patent Examiner, Art Unit 3723

Bereskin & Parr

INTELLECTUAL PROPERTY LAW

Appl. No : 15/051,272
Inventor(s) : CONRAD, Wayne Ernest
Filed : February 23, 2016
Title : HAND CARRIABLE SURFACE CLEANING APPARATUS

TC./A.U. : 3723
Examiner : CRANDALL, Joel Dillon

Docket No. : 10452-P38886US04
Customer No.: 01059

Date: September 6, 2016
Confirmation No.:1035

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT

In response to the office action of June 16, 2016, 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 7 of this paper.

Bereskin & Parr LLP
Scotia Plaza, 40 King Street West, 40th Floor, Toronto, Ontario, Canada M5H 3Y2
Tel: 416.364.7311 Fax: 416.361.1398 www.bereskinparr.com
TORONTO MISSISSAUGA WATERLOO MONTRÉAL

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A hand carryable surface cleaning apparatus having a front end, a rear end and comprising:
 - (a) a main housing;
 - (~~[[a]]~~b) a dirty fluid inlet;
 - (~~[[b]]~~c) a cyclone bin assembly comprising a cyclone chamber downstream of the dirty fluid inlet, the cyclone chamber comprising a first end, a~~[[n]]~~ second end, a cyclone axis, a cyclone air inlet and a cyclone air outlet that is located at the second end;
 - (~~[[c]]~~d) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the cyclone axis extends through the pre-motor filter housing;
 - (~~[[d]]~~e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the cyclone bin assembly;
 - (~~[[e]]~~f) an air flow path extending from the pre-motor filter to the suction motor; ~~and,~~
 - (~~[[f]]~~g) a clean air outlet downstream of the suction motor; and,
 - (h) a handle and the pre-motor filter housing is openable without moving the handle wherein the pre-motor filter housing cover is openable when the cyclone bin assembly is in fluid flow communication with the suction motor, and wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber.
2. (Original) The hand carryable surface cleaning apparatus of claim 1 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the cyclone inlet.
3. (Cancelled)

4. (Cancelled)
5. (Original) The hand carriable surface cleaning apparatus of claim 1 wherein the cyclone air inlet is provided at the second end and a dirt outlet is provided at the first end and a dirt collection chamber is positioned below the cyclone chamber.
6. (Original) The hand carriable surface cleaning apparatus of claim 1 wherein the downstream side of the pre-motor filter is spaced further from the cyclone chamber than the upstream side of the pre-motor filter.
7. (Original) The hand carriable surface cleaning apparatus of claim 6 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.
8. (Original) The hand carriable surface cleaning apparatus of claim 1 wherein the upstream side of the pre-motor filter is spaced further from the cyclone chamber than the downstream side of the pre-motor filter.
9. (Original) The hand carriable surface cleaning apparatus of claim 8 further comprising a conduit that is in flow communication with the air outlet of the cyclone chamber and extends through the pre-motor filter.
10. (Original) The hand carriable surface cleaning apparatus of claim 8 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.
11. (Cancelled)
12. (Original) The hand carriable surface cleaning apparatus of claim 1 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter.

13. (Original) The hand carriable surface cleaning apparatus of claim 1 wherein the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the pre-motor filter overlies at least a portion of the second end of the cyclone chamber.

14. (Currently Amended) A hand carriable surface cleaning apparatus having a front end, a rear end and comprising:

(a) a main housing;

([a])b) a dirty fluid inlet;

([b])c) an air treatment member downstream of the dirty fluid inlet, the air treatment member comprising a first end, a second end, an air treatment member air inlet and an air treatment member air outlet that is located at the second end and has an air treatment member air outlet axis;

([c])d) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the air treatment member air outlet axis extends through the pre-motor filter housing;

([d])e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the air treatment member;

([e])f) an air flow path extending from the pre-motor filter to the suction motor;
and,

([f])g) a clean air outlet downstream of the suction motor; and,

(h) a handle and the pre-motor filter housing is openable without moving the handle

wherein the pre-motor filter housing cover is openable when the air treatment member is in fluid flow communication with the suction motor, and

wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the air treatment member.

15. (Original) The hand carriable surface cleaning apparatus of claim 14 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the air treatment member air inlet.
16. (Cancelled)
17. (Cancelled)
- 18.(Original) The hand carriable surface cleaning apparatus of claim 14 wherein the air treatment member air inlet is provided at the second end and a dirt outlet is provided at the first end and a dirt collection chamber is positioned below the air treatment member.
19. (Original) The hand carriable surface cleaning apparatus of claim 14 wherein the downstream side of the pre-motor filter is spaced further from the air treatment member than the upstream side of the pre-motor filter.
20. (Currently Amendmed) The hand carriable surface cleaning apparatus of claim ~~49~~14 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.
21. (Original) The hand carriable surface cleaning apparatus of claim 14 wherein the upstream side of the pre-motor filter is spaced further from the air treatment member than the downstream side of the pre-motor filter.
22. (Original) The hand carriable surface cleaning apparatus of claim 21 further comprising a conduit that is in flow communication with the air outlet of the air treatment member and extends through the pre-motor filter.
23. (Original) The hand carriable surface cleaning apparatus of claim 21 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.
24. (Cancelled)

25. (Original) The hand carriable surface cleaning apparatus of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the air treatment member and downstream of the air treatment member, the air treatment member air outlet is positioned at a location spaced from the front end of the pre-motor filter.

26. (Currently Amended) ~~[[The]]~~A hand carriable surface cleaning apparatus having a front end, a rear end, and comprising: ~~of claim 14-~~

(a) a dirty fluid inlet;

(b) an air treatment member downstream of the dirty fluid inlet, the air treatment member comprising a first end, an second end, an air treatment member air inlet and an air treatment member air outlet that is located at the second end and has an air treatment member air outlet axis;

c) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the air treatment member air outlet axis extends through the pre-motor filter housing;

(d) a suction motor positioned downstream of the pre-motor filter and rearward of the air treatment member;

(e) an air flow path extending from the pre-motor filter to the suction motor; and,

(f) a clean air outlet downstream of the suction motor,

wherein the pre-motor filter is positioned axially outwardly from the second end of the air treatment member and downstream of the air treatment member, the pre-motor filter overlies at least a portion of the second end of the air treatment member.

REMARKS/ARGUMENTS

Introduction

The Applicant's representative left several voicemail messages with the Examiner to discuss issues pertaining to the Office Action. Later, the Examiner's supervisor Joseph Hail informed the Applicant's representative that the Examiner is away on extended leave and would not return until September 19th, which is three days after the response deadline of September 16th. Supervisor Joseph Hail advised the Applicant's representative to submit a response to the Office Action, identifying any errors or omissions in the Office Action, with the expectation that the next Office Action will not be made final.

In the remarks below, the Applicant has made a best effort to address the rejections made in the Office Action. However, the following issues have prevented the Applicant from providing detailed remarks in respect of several of the rejections:

-- 1. Preliminary Amendment --

The Examiner rejected the claims as filed instead of the claims filed with a preliminary amendment before the mailing date of the Office Action. For the purposes of the Listing of the Claims above, the Applicant has marked amendments to the claims based on the claims as filed on the assumption that the preliminary amendment was not entered.

-- 2. Rejection of Claim 26 --

Claim 26 is listed as rejected on the Office Action Summary page, but no reasons are provided in the Detailed Action. Therefore, it is not clear that the claim has actually been rejected.

-- 3. Section 102 Rejection in view of Han (US2009/0056060) --

The Examiner rejected several claims as being anticipated by Han. The detailed reasons consist of a recitation of the claims with parenthetical references identifying part

numbers from Han that allegedly disclose the various claim elements. However, the part numbers provided do not correspond with the part numbers of Han. All of the part numbers in the detailed action are less than 100, and all of the part numbers in Han are 100 or greater. Thus, it is unclear whether the Examiner intended to cite a different reference instead of Han.

Claim Amendments

Except for claim 26, the claims have been amended in accordance with the preliminary amendment filed June 13, 2016. Accordingly, claims 3, 11, 16, and 24 have been cancelled, without prejudice.

Independent claims 1 and 14 have been further amended based on the features of claims 4 and 17, respectfully. Accordingly, claims 4 and 17 have been cancelled, without prejudice.

Claim 26 has been rewritten in independent form.

Claims 1, 2, 5-10, 12-15, 18-23, 25, and 26 remain pending in the application, of which claims 1, 14, and 26 are independent.

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 1-3, 5, 6, 11, 13-16, 19, 24, and 25 under pre-AIA 35 U.S.C. 102(b) as being anticipated by U.S. Patent Publication No. 2009/0056060 ("Han").

The Examiner also rejected claims 1, 4, 8, 9, 12, 14, 18, and 21-23 under pre-AIA 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,877,902 ("Eriksson").

The Examiner also rejected claims 1, 8, and 10 under pre-AIA 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,870,486 ("Eriksson").

The Examiner also rejected claims 1, 6, 7, 14, 19, and 20 under pre-AIA 35 U.S.C. 102(b) as being anticipated by U.S. Patent Publication No. 2006/0016042 ("Bruneau").

The Examiner also rejected claims 14 and 17 under pre-AIA 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,341,404 ("Salo").

-- Discussion of the Patentability of Independent Claims 1 and 14 --

Independent claims 1 and 14 have been amended based on the features of previous claims 11 and 24, respectively. The only rejection raised by the Examiner against claims 11 and 24 is based on the claims being anticipated by Han. However, as noted above, the Applicant is unable to determine how the Examiner has applied Han to these claims because none of the part numbers noted in the rejection are found in Han. For this reason, it is unclear whether the Examiner intended to cite a different reference.

The Applicant submits that Han does not appear to disclose the subject matter of amended claims 1 and 14. Accordingly, the Applicant requests that the Examiner either clarify the rejection in a further non-final office action, or withdraw the rejection of claims 1 and 14 under 35 U.S.C. 102.

Claim 26

Claim 26 is listed as rejected on the Office Action Summary page, but no reasons are provided in the Detailed Action. Accordingly, it is unclear to the Applicant whether the Examiner intended to allow claim 26 or provide a basis and reasons for the rejection. In the latter case, the Applicant is unable to respond as no grounds for the rejection are provided.

The Applicant has rewritten claim 26 in independent form. The Applicant requests that the Examiner clarify the rejection in a further non-final action, or withdraw the rejection of claim 26.

Concluding Remarks

The Applicant respectfully submits that the present application is in condition for allowance and requests early and favourable disposition.

Notwithstanding any argument or claim amendment herein presented in response to any rejection or objection in the Office Action, any argument submitted herein is not to be assumed to be exhaustive. Unless clearly indicated, the Applicant does not consent to, or acquiesce in, any rejection or objection made in the Office Action. The Applicant expressly reserves the right to submit such further or other arguments or amendments as may advance the case, at such time and in such manner as the Applicant may choose in accordance with law, whether in prosecution herein, in a continuation, divisional, re-examination or re-issue proceeding, or such other proceeding as may be.

Respectfully submitted,

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

P. Mendes da Costa

By _____
Philip C. Mendes da Costa
Reg. No. 33,106
Tel: 416-957-1695



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.
15/051,272	02/23/2016	Wayne Ernest Conrad	10452-P38886US04	1035
1059 7590 01/09/2017 BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l. 40 KING STREET WEST 40th Floor TORONTO, ON M5H 3Y2 CANADA			EXAMINER CRANDALL, JOEL DILLON	
			ART UNIT 3723	PAPER NUMBER
			MAIL DATE 01/09/2017	DELIVERY MODE PAPER

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.

Office Action Summary	Application No. 15/051,272	Applicant(s) CONRAD, WAYNE ERNEST	
	Examiner JOEL CRANDALL	Art Unit 3723	AIA (First Inventor to File) Status No

-- 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 10/20/2016.
☐ 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) 1,2,5-10,12-15,18-23,25 and 26 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1, 2, 5-10, 12-15, 18-23, 25, and 26 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 ____ 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) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date <u>10/20/2016</u> | 4) ☐ Other: ____ |

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Response to Amendments

1. The Amendment filed 10/20/2016 has been entered.

Claim Rejections - 35 USC § 112

2. 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.

3. Claim 20 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 pre-AIA the applicant regards as the invention.

- a. Claim 20 – It appears that "claim 19" was meant to be replaced with "claim 14" but "14" is both underlined and crossed out. For the purpose of examination, the examiner will consider claim 20 to be dependent on claim 14.

Claim Rejections - 35 USC § 102

4. **The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claim(s) 1, 2, 6, 7, 10, 12, 13, 14, 15, 19, 20, 23, 25, and 26 is/are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Makarov et al. (US-2007/0289267).**

Regarding claim 1, Makarov discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a main housing (10); (b) a dirty fluid inlet (26); (c) a cyclone bin assembly (80) comprising a cyclone chamber (88, 90) downstream of the dirty fluid inlet (26), the cyclone chamber (88, 90) comprising a first end, a second end, a cyclone axis, a cyclone air inlet (120) and a cyclone air outlet (208) that is located at the second end (Fig. 5); (d) a pre-motor filter (288) comprising an upstream side and a downstream side (Fig. 5), the pre-motor filter (288) is positioned in a pre-motor filter (288) housing having an openable cover (282), the cyclone axis extends through the pre-motor filter (288) housing; (e) a suction motor (16) positioned in the main housing (10) and located downstream of the pre-motor filter (288) and rearward of the cyclone bin assembly (80); (f) an air flow path extending from the pre-motor filter (288) to the suction motor (16); (g) a clean air outlet ("exhaust duct (not visible)") [Makarov; paragraph 0050] downstream of the suction motor (16); and, (h) a handle and the pre-motor filter (288) housing is openable without moving the handle (22) wherein the pre-motor filter (288) housing cover (282) is openable when the cyclone bin assembly (80) is in fluid flow communication with the suction motor (16), and wherein the suction motor (16) has a suction motor (16) axis and a projection of the suction motor (16) axis does not intersect the cyclone chamber (88, 90) (Fig. 8).

Regarding claim 2, Makarov discloses the hand carriable surface cleaning apparatus of claim 1 wherein the suction motor (16) comprises a fan and a motor and an upstream side of the fan is positioned proximate the cyclone inlet.

Regarding claim 6, Makarov discloses the hand carriable surface cleaning apparatus of claim 1 wherein the downstream side of the pre-motor filter (288) is spaced further from the cyclone chamber (88, 90) than the upstream side of the pre-motor filter (288) (Fig. 5).

Regarding claim 7, Makarov discloses the hand carriable surface cleaning apparatus of claim 6 further comprising a downstream header (300) on the downstream side of the pre-motor filter (288) and the downstream header (300) is opened when the openable cover (282) is opened (Fig. 5).

Regarding claim 10, Makarov discloses the hand carriable surface cleaning apparatus of claim 8 further comprising an upstream header (280) on the upstream side of the pre-motor filter (288) and the upstream header (280) is opened when the openable cover (282) is opened (Fig. 5).

Regarding claim 12, Makarov discloses the hand carriable surface cleaning apparatus of claim 1 wherein each of the upstream and downstream sides of the pre-motor filter (288) has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter (288) is positioned axially outwardly from the second end of the cyclone chamber (88, 90) and downstream of the cyclone chamber (88, 90), the cyclone air outlet (208) is positioned at a location spaced from the front end of the pre-motor filter (288) (Fig. 5).

Regarding claim 13, Makarov discloses the hand carriable surface cleaning apparatus of claim 1 wherein the premotor filter (288) is positioned axially outwardly from the second end of the cyclone chamber (88, 90) and downstream of the cyclone chamber (88, 90), the pre-motor filter (288) overlies at least a portion of the second end of the cyclone chamber (88, 90) (Fig. 5).

Regarding claim 14, Makarov discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a main housing (10); (b) a dirty fluid inlet (26); (c) an air treatment member (88, 90) downstream of the dirty fluid inlet (26), the air treatment member (88, 90) comprising a first end, a second end, an air treatment member (88, 90) air inlet and an air treatment member (88, 90) air outlet that is located at the second end and has an air treatment member (88, 90) air outlet axis; (d) a pre-motor filter (288) comprising an upstream

side and a downstream side, the pre-motor filter (288) is positioned in a pre-motor filter (288) housing having an openable cover (282), the air treatment member (88, 90) air outlet axis extends through the pre-motor filter (288) housing; (e) a suction motor (16) positioned in the main housing (10) and located downstream of the pre-motor filter (288) and rearward of the air treatment member (88, 90); (f) an air flow path extending from the pre-motor filter (288) to the suction motor (16); (g) a clean air outlet ("exhaust duct (not visible)") [Makarov; paragraph 0050] downstream of the suction motor (16); and, (h) a handle and the pre-motor filter (288) housing is openable without moving the handle (22) (Fig. 8) [Makarov; paragraph 0050] wherein the pre-motor filter (288) housing cover is openable when the air treatment member (88, 90) is in fluid flow communication with the suction motor (16), and wherein the suction motor (16) has a suction motor (16) axis and a projection of the suction motor (16) axis does not intersect the air treatment member (88, 90) (Fig. 8).

Regarding claim 15, Makarov discloses the hand carriable surface cleaning apparatus of claim 14 wherein the suction motor (16) comprises a fan and a motor [Makarov; paragraph 0050] and an upstream side of the fan is positioned proximate the air treatment member (88, 90) air inlet (Figs. 5 and 8).

Regarding claim 19, Makarov discloses the hand carriable surface cleaning apparatus of claim 14 wherein the downstream side of the pre-motor filter (288) is spaced further from the air treatment member (88, 90) than the upstream side of the pre-motor filter (288) (Fig. 5).

Regarding claim 20, Makarov discloses the hand carriable surface cleaning apparatus of claim 14 further comprising a downstream header on the downstream side of the pre-motor filter (288) and the downstream header is opened when the openable cover (282) is opened.

Regarding claim 23, Makarov discloses the hand carriable surface cleaning apparatus of claim 21 further comprising an upstream header (280) on the upstream side of the pre-motor

filter (288) and the upstream header is opened when the openable cover (282) is opened (Fig. 5).

Regarding claim 25, Makarov discloses the hand carriable surface cleaning apparatus of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter (288) has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter (288) is positioned axially outwardly from the second end of the air treatment member (88, 90) and downstream of the air treatment member (88, 90), the air treatment member (88, 90) air outlet (208) is positioned at a location spaced from the front end of the pre-motor filter (288).

Regarding claim 26, Makarov discloses a hand carriable surface cleaning apparatus having a front end, a rear end, and comprising: (a) a dirty fluid inlet (26); (b) an air treatment member (88, 90) downstream of the dirty fluid inlet (26), the air treatment member (88, 90) comprising a first end, an second end, an air treatment member (88, 90) air inlet and an air treatment member (88, 90) air outlet (208) that is located at the second end and has an air treatment member (88, 90) air outlet axis (Fig. 5); (c) a pre-motor filter (288) comprising an upstream side and a downstream side, the pre-motor filter (288) is positioned in a pre-motor filter (288) housing having an openable cover (282), the air treatment member (88, 90) air outlet axis extends through the pre-motor filter (288) housing (Figs. 5 and 8); (d) a suction motor (16) positioned downstream of the pre-motor filter (288) and rearward of the air treatment member (88, 90) (Fig. 8); (e) an air flow path extending from the pre-motor filter (288) to the suction motor (16); and, (f) a clean air outlet ("exhaust duct (not visible)") [Makarov; paragraph 0050] downstream of the suction motor (16), wherein the pre-motor filter (288) is positioned axially outwardly from the second end of the air treatment member (88, 90) and downstream of the air treatment member (88, 90), the pre-motor filter (288) overlies at least a portion of the second end of the air treatment member (88, 90).

6. Claim(s) 1, 5, 8, 9, 14, 18, 21 and 22 is/are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Eriksson et al. (US-3,877,902).

Regarding claim 1, Eriksson discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a main housing (10); (b) a dirty fluid inlet (hose connected at 44); (c) a cyclone bin assembly comprising a cyclone chamber (18) downstream of the dirty fluid inlet (hose connected at 44), the cyclone chamber comprising a first end, a second end, a cyclone axis, a cyclone air inlet (44) and a cyclone air outlet (35) that is located at the second end (top end) (Fig. 1); (d) a pre-motor filter (37) comprising an upstream side and a downstream side (Fig. 1), the pre-motor filter (37) is positioned in a pre-motor filter housing (33) having an openable cover (39), the cyclone axis extends through the pre-motor filter housing (33) (Fig. 1); (e) a suction motor (16) positioned in the main housing and located downstream of the pre-motor filter (37) and rearward of the cyclone bin assembly (18); (f) an air flow path extending from the pre-motor filter (37) to the suction motor (16); (g) a clean air outlet (19) downstream of the suction motor (16) (Fig. 1); and, (h) a handle (46) and the pre-motor filter housing (33) is openable without moving the handle (46) (Fig. 2) wherein the pre-motor filter housing cover (39) is openable (capable of being opened) when the cyclone bin assembly (18) is in fluid flow communication with the suction motor (16), and wherein the suction motor (16) has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber (18) (Figs. 1 and 2).

Regarding claim 5, Eriksson discloses the hand carriable surface cleaning apparatus of claim 1 wherein the cyclone air inlet (44) is provided at the second end (top end) (Fig. 1) and a dirt outlet is provided at the first end (the bottom end) (Fig. 2) and a dirt collection chamber (11) is positioned below the cyclone chamber (18) (Figs. 1 and 2).

Regarding claim 8. Eriksson discloses the hand carriable surface cleaning apparatus of claim 1 wherein the upstream side of the pre-motor filter (37) is spaced further from the cyclone chamber (18) than the downstream side of the pre-motor filter (37) (Figs. 1 and 2).

Regarding claim 9. Eriksson discloses the hand carriable surface cleaning apparatus of claim 8 further comprising a conduit (35) that is in flow communication with the air outlet of the cyclone chamber (18) and extends through the pre-motor filter (37) (Figs. 1 and 2).

Regarding claim 14. Eriksson discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a main housing (10); (b) a dirty fluid inlet (hose connected at 44); (c) a cyclone bin assembly comprising a cyclone chamber (18) downstream of the dirty fluid inlet (hose connected at 44), the cyclone chamber comprising a first end, a second end, a cyclone axis, a cyclone air inlet (44) and a cyclone air outlet (35) that is located at the second end (top end) (Fig. 1); (d) a pre-motor filter (37) comprising an upstream side and a downstream side (Fig. 1), the pre-motor filter (37) is positioned in a pre-motor filter housing (33) having an openable cover (39), the cyclone axis extends through the pre-motor filter housing (33) (Fig. 1); (e) a suction motor (16) positioned in the main housing and located downstream of the pre-motor filter (37) and rearward of the cyclone bin assembly (18); (f) an air flow path extending from the pre-motor filter (37) to the suction motor (16); (g) a clean air outlet (19) downstream of the suction motor (16) (Fig. 1); and, (h) a handle (46) and the pre-motor filter housing (33) is openable without moving the handle (46) (Fig. 2) wherein the pre-motor filter housing cover (39) is openable (capable of being opened) when the cyclone bin assembly (18) is in fluid flow communication with the suction motor (16), and wherein the suction motor (16) has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber (18) (Figs. 1 and 2).

Regarding claim 18, Eriksson discloses the hand carriable surface cleaning apparatus of claim 14 wherein the cyclone air inlet (44) is provided at the second end (top end) (Fig. 1) and a dirt outlet is provided at the first end (the bottom end) (Fig. 2) and a dirt collection chamber (11) is positioned below the cyclone chamber (18) (Figs. 1 and 2).

Regarding claim 21, Eriksson discloses the hand carriable surface cleaning apparatus of claim 14 wherein the upstream side of the pre-motor filter (37) is spaced further from the cyclone chamber (18) than the downstream side of the pre-motor filter (37) (Figs. 1 and 2).

Regarding claim 22, Eriksson discloses the hand carriable surface cleaning apparatus of claim 21 further comprising a conduit (35) that is in flow communication with the air outlet of the cyclone chamber (18) and extends through the pre-motor filter (37) (Figs. 1 and 2).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US-2006/0277712, US-2007/0289267, US-2009/0056060, US-US-3,870,486, US-3,877,902, US-6,341,404, and US-7,547,336 are pertinent to the claimed invention.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOEL CRANDALL whose telephone number is (571)270-5947. The examiner can normally be reached on (Flex) Monday - Friday 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (571)272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOEL CRANDALL/
Examiner, Art Unit 3723

/Joseph J Hail/
Supervisory Patent Examiner, Art Unit 3723

Bereskin & Parr

INTELLECTUAL PROPERTY LAW

Appl. No : 15/051,272
Inventor(s) : CONRAD, Wayne Ernest
Filed : February 23, 2016
Title : HAND CARRIABLE SURFACE CLEANING APPARATUS

TC./A.U. : 3723
Examiner : CRANDALL, Joel Dillon

Docket No. : 10452-P38886US04
Customer No.: 01059

Date: March 9, 2017
Confirmation No.:1035

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT

In response to the Office Action of January 9, 2017, 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 7 of this paper.

Bereskin & Parr LLP
Scotia Plaza, 40 King Street West, 40th Floor, Toronto, Ontario, Canada M5H 3Y2
Tel: 416.364.7311 Fax: 416.361.1398 www.bereskinparr.com
TORONTO MISSISSAUGA WATERLOO MONTRÉAL

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A hand vacuum cleaner ~~carriable surface cleaning apparatus~~ having a front end, a rear end, and comprising:
 - (a) a main housing;
 - (b) a dirty fluid inlet;
 - (c) a cyclone bin assembly comprising a cyclone chamber downstream of the dirty fluid inlet, the cyclone chamber comprising a first end, a second end, a cyclone axis, a cyclone air inlet and a cyclone air outlet that is located at the second end;
 - (d) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the cyclone axis extends through the pre-motor filter housing;
 - (e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the cyclone bin assembly;
 - (f) an air flow path extending from the pre-motor filter to the suction motor;
 - (g) a clean air outlet downstream of the suction motor; and,
 - (h) a drive handle provided on the main body, the drive handle having a hand grip portion, the hand grip portion having a hand grip portion length, and the pre-motor filter housing is openable without moving the handle;wherein the pre-motor filter housing cover is openable with ~~when~~ the cyclone bin assembly ~~[[is]]~~ in fluid flow communication with the suction motor; ~~and~~
wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber;
wherein a distance between a portion of the drive handle and the suction motor is less than the hand grip portion length; and,
wherein when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle.

2. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the cyclone inlet.
3. (Cancelled)
4. (Cancelled)
5. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the cyclone air inlet is provided at the second end and a dirt outlet is provided at the first end and a dirt collection chamber is positioned below the cyclone chamber.
6. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the downstream side of the pre-motor filter is spaced further from the cyclone chamber than the upstream side of the pre-motor filter.
7. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 6 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.
8. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the upstream side of the pre-motor filter is spaced further from the cyclone chamber than the downstream side of the pre-motor filter.
9. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 8 further comprising a conduit that is in flow communication with the air outlet of the cyclone chamber and extends through the pre-motor filter.
10. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 8 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.

11. (Cancelled)

12. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter.

13. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the pre-motor filter overlies at least a portion of the second end of the cyclone chamber.

14. (Currently Amended) A hand vacuum cleaner ~~carriable surface cleaning apparatus~~ having a front end, a rear end and comprising:

- (a) a main housing;
- (b) a dirty fluid inlet;
- (c) an air treatment member downstream of the dirty fluid inlet, the air treatment member having an interior volume having an axial length, the air treatment member comprising a first end, a second end, an air treatment member air inlet and an air treatment member air outlet that is located at the second end and has an air treatment member air outlet axis;
- (d) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the air treatment member air outlet axis extends through the pre-motor filter housing;
- (e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the air treatment member;
- (f) an air flow path extending from the pre-motor filter to the suction motor;
- (g) a clean air outlet downstream of the suction motor; and,

(h) a drive handle provided on the main body, the drive handle having a hand grip portion, the hand grip portion having a hand grip portion length, and the pre-motor filter housing is openable without moving the handle;

wherein the pre-motor filter housing cover is openable with ~~when~~ the air treatment member ~~[[is]]~~ in fluid flow communication with the suction motor; ~~and~~

wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the air treatment member;

wherein a distance between the drive handle and the suction motor is less than the hand grip portion length; and,

wherein when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle.

15. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the air treatment member air inlet.

16. (Cancelled)

17. (Cancelled)

18. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein the air treatment member air inlet is provided at the second end and a dirt outlet is provided at the first end and a dirt collection chamber is positioned below the air treatment member.

19. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein the downstream side of the pre-motor filter is spaced further from the air treatment member than the upstream side of the pre-motor filter.

20. (Currently Amendmed) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.

21. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein the upstream side of the pre-motor filter is spaced further from the air treatment member than the downstream side of the pre-motor filter.
22. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 21 further comprising a conduit that is in flow communication with the air outlet of the air treatment member and extends through the pre-motor filter.
23. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 21 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.
24. (Cancelled)
25. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the air treatment member and downstream of the air treatment member, the air treatment member air outlet is positioned at a location spaced from the front end of the pre-motor filter.
26. (Cancelled)

REMARKS/ARGUMENTS

This letter is responsive to the Office Action dated January 9, 2017. Therefore, this response is timely filed. Applicant respectfully requests entry of the amendments and reconsideration of the present application in view of the amendments and remarks set forth below.

Summary of Telephonic Interview

Applicant's representatives Philip Mendes da Costa and Christopher Bury conducted a telephone interview with Examiners Crandall and Hail on February 15, 2017, and Mr. Bury and Examiner Crandall conducted a telephone interview on March 9, 2017. During the interviews, the subject matter of the present application, the teachings of the Marakov and Eriksson references, and the rejections based on 35 U.S.C. § 102 were discussed. At the conclusion of the interviews, Applicant's representatives understood that amendments to claims 1 and 14 consistent with those presented herein would be sufficient to overcome the current 35 U.S.C. § 102 rejections.

Applicant's representatives thank Examiners Crandall and Hail for their efforts to expedite prosecution of this application.

Remarks Regarding Claim Amendments

To expedite prosecution, and without prejudice, claim 1 has been amended to clarify that the hand vacuum cleaner comprises a drive handle provided on the main body, the drive handle having a hand grip portion, the hand grip portion having a hand grip portion length, and to clarify that a distance between a portion of the drive handle and the suction motor is less than the hand grip portion length, and that when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle. Similar amendments have been made to claim 14.

Claims 2, 5-10, 12, 13, 15, 18-23, and 25 have been amended for consistency with amended claims 1 and 14.

Claim 20 has been amended to correct a typographical issue.

Claim 26 has been cancelled, without prejudice.

Applicant respectfully submits that no new matter has been added.

Claims 1, 2, 5-10, 12-15, 18-23, and 25 are pending in this application. Claims 1 and 14 are independent.

Discussion of the Rejections Under 35 U.S.C. §112

Claim 20 stands rejected under 35 U.S.C. § 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite. Specifically, the Examiner noted that “14” was both crossed out and underlined in the prior response.

As noted above, claim 20 has been amended to clarify that it is dependent from claim 14.

Withdrawal of the rejections under 35 U.S.C. §112 is respectfully requested.

Discussion of the Rejections Under 35 U.S.C. §102

Claims 1, 2, 6, 7, 10, 12-15, 19, 20, 23, 25, and 26 stand rejected as being anticipated by Marakov et al. (U.S. Patent Publication No. 2007/0289267 A1). Claims 1, 5, 8, 9, 14, 18, 21, and 22 stand rejected as being anticipated by Eriksson et al. (U.S. Patent No. 3,877,902).

As the Examiner will appreciate, a single prior art reference anticipates a patent claim if it expressly or inherently describes each and every limitation set forth in the patent claim: *Trintec Indus. Inc. v. Top-U.S.A. Corp.*, 63 USPQ2d 1597, 1599 (Fed. Cir. 2002).

Discussion of the Patentability of Independent Claims 1 and 14

As noted above, claims 1 and 14 have been amended to clarify that the hand vacuum cleaner comprises a drive handle provided on the main body, the drive handle having a hand grip portion, the hand grip portion having a hand grip portion length, and to clarify that a distance between a portion of the drive handle and the suction motor is less than the hand grip portion length, and that when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle.

In view of this clarification, Applicant understands that claims 1 and 14 and claims dependent therefrom are allowable over the cited art.

Discussion of the Patentability of the Dependent Claims

The rest of the rejected claims depend from base claims 1 or 14 and further define additional technical features of the present invention. In view of the patentability of claims 1 and 14 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

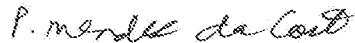
specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present specification.

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.

Respectfully submitted,

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



By _____
Philip C. Mendes da Costa
Reg. No. 33,106
Tel: 416-364-7311

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-14)

Approved for use through 07/31/2016. 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.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL **(Submitted Only via EFS-Web)**

Application Number	15051272	Filing Date	2016-02-23	Docket Number (if applicable)	10452-P38886US04	Art Unit	3723
First Named Inventor	Wayne Ernest Conrad			Examiner Name	CRANDALL, Joel Dillon		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, to any international application that does not comply with the requirements of 35 U.S.C. 371, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV.

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☒ Amendment/Reply

☐ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
 (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to
 Deposit Account No 022095

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-14)

Approved for use through 07/31/2016. 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.

Signature of Registered U.S. Patent Practitioner			
Signature	Philip C. Mendes da Costa/	Date (YYYY-MM-DD)	2017-04-07
Name	Philip C. Mendes da Costa	Registration Number	83106

This collection of information is required by 37 CFR 1.114. 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 1.11 and 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.

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

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 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 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.

Electronic Patent Application Fee Transmittal				
Application Number:		15051272		
Filing Date:		23-Feb-2016		
Title of Invention:		HAND CARRIABLE SURFACE CLEANING APPARATUS		
First Named Inventor/Applicant Name:		Wayne Ernest Conrad		
Filer:		Philip C. Mendes da Costa/Snezana Lisowsky		
Attorney Docket Number:		10452-P38886US04		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
RCE- 1st Request	1801	1	1200	1200
Total in USD (\$)				1200

Electronic Acknowledgement Receipt	
EFS ID:	28870963
Application Number:	15051272
International Application Number:	
Confirmation Number:	1035
Title of Invention:	HAND CARRIABLE 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-P38886US04
Receipt Date:	07-APR-2017
Filing Date:	23-FEB-2016
Time Stamp:	18:52:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$1200
RAM confirmation Number	041017INTEFSW00005292022095
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	Amendment Submitted/Entered with Filing of CPA/RCE	P38886US04_OAResponse_RCE_2017_04_07.pdf	189413 c5485ea26022b55baafc39804cf108388bf6c4f3	no	10

Warnings:

Information:

2	Request for Continued Examination (RCE)	P38886US04_RCE_2017_04_07.pdf	1352934 e493d08c1179ffbd973813c1b494107735ae7f30a	no	3
---	---	-------------------------------	--	----	---

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30656 d30f3ec6c5d25654162737eccce7de873323537c	no	2
---	----------------------	--------------	---	----	---

Warnings:

Information:

Total Files Size (in bytes):	1573003
-------------------------------------	---------

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.

Bereskin & Parr

INTELLECTUAL PROPERTY LAW

Appl. No : 15/051,272
Inventor(s) : CONRAD, Wayne Ernest
Filed : February 23, 2016
Title : HAND CARRIABLE SURFACE CLEANING APPARATUS

TC./A.U. : 3723
Examiner : CRANDALL, Joel Dillon

Docket No. : 10452-P38886US04
Customer No.: 01059

Date: April 7, 2017
Confirmation No.:1035

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT AFTER FINAL

&

REQUEST FOR CONTINUED EXAMINATION

In response to the Office Action of January 9, 2017 and Advisory Action of March 29, 2017, 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 7 of this paper.

Bereskin & Parr LLP
Scotia Plaza, 40 King Street West, 40th Floor, Toronto, Ontario, Canada M5H 3Y2
Tel: 416.364.7311 Fax: 416.361.1398 www.bereskinparr.com
TORONTO MISSISSAUGA WATERLOO MONTRÉAL

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A hand vacuum cleaner ~~carriable surface cleaning apparatus~~ having a front end, a rear end, and comprising:
 - (a) a main housing;
 - (b) a dirty fluid inlet;
 - (c) a cyclone bin assembly comprising a cyclone chamber downstream of the dirty fluid inlet, the cyclone chamber comprising a first end, a second end, a cyclone axis, a cyclone air inlet and a cyclone air outlet that is located at the second end;
 - (d) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the cyclone axis extends through the pre-motor filter housing;
 - (e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the cyclone bin assembly;
 - (f) an air flow path extending from the pre-motor filter to the suction motor;
 - (g) a clean air outlet downstream of the suction motor; and,
 - (h) a drive handle provided on the main body, the drive handle having a hand grip portion, the hand grip portion having a hand grip portion length, and the pre-motor filter housing is openable without moving the handle;wherein the pre-motor filter housing cover is openable with ~~when~~ the cyclone bin assembly ~~[[is]]~~ in fluid flow communication with the suction motor; ~~and~~
wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber;
wherein a distance between a portion of the drive handle and the suction motor is less than the hand grip portion length; and,
wherein when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle.

2. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the cyclone inlet.
3. (Cancelled)
4. (Cancelled)
5. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the cyclone air inlet is provided at the second end and a dirt outlet is provided at the first end and a dirt collection chamber is positioned below the cyclone chamber.
6. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the downstream side of the pre-motor filter is spaced further from the cyclone chamber than the upstream side of the pre-motor filter.
7. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 6 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.
8. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the upstream side of the pre-motor filter is spaced further from the cyclone chamber than the downstream side of the pre-motor filter.
9. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 8 further comprising a conduit that is in flow communication with the air outlet of the cyclone chamber and extends through the pre-motor filter.
10. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 8 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.

11. (Cancelled)

12. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter.

13. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 1 wherein the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the pre-motor filter overlies at least a portion of the second end of the cyclone chamber.

14. (Currently Amended) A hand vacuum cleaner ~~carriable surface cleaning apparatus~~ having a front end, a rear end and comprising:

- (a) a main housing;
- (b) a dirty fluid inlet;
- (c) an air treatment member downstream of the dirty fluid inlet, the air treatment member having an interior volume having an axial length, the air treatment member comprising a first end, a second end, an air treatment member air inlet and an air treatment member air outlet that is located at the second end and has an air treatment member air outlet axis;
- (d) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the air treatment member air outlet axis extends through the pre-motor filter housing;
- (e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the air treatment member;
- (f) an air flow path extending from the pre-motor filter to the suction motor;
- (g) a clean air outlet downstream of the suction motor; and,

(h) a drive handle provided on the main body, the drive handle having a hand grip portion, the hand grip portion having a hand grip portion length, and the pre-motor filter housing is openable without moving the handle;

wherein the pre-motor filter housing cover is openable with ~~when~~ the air treatment member ~~[[is]]~~ in fluid flow communication with the suction motor; ~~and~~

wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the air treatment member;

wherein a distance between the drive handle and the suction motor is less than the hand grip portion length; and,

wherein when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle.

15. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the air treatment member air inlet.

16. (Cancelled)

17. (Cancelled)

18. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein the air treatment member air inlet is provided at the second end and a dirt outlet is provided at the first end and a dirt collection chamber is positioned below the air treatment member.

19. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein the downstream side of the pre-motor filter is spaced further from the air treatment member than the upstream side of the pre-motor filter.

20. (Currently Amendmed) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.

21. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein the upstream side of the pre-motor filter is spaced further from the air treatment member than the downstream side of the pre-motor filter.
22. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 21 further comprising a conduit that is in flow communication with the air outlet of the air treatment member and extends through the pre-motor filter.
23. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 21 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.
24. (Cancelled)
25. (Currently Amended) The hand vacuum cleaner ~~carriable surface cleaning apparatus~~ of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the air treatment member and downstream of the air treatment member, the air treatment member air outlet is positioned at a location spaced from the front end of the pre-motor filter.
26. (Cancelled)

REMARKS/ARGUMENTS

This letter is responsive to the Office Action dated January 9, 2017 and Advisory Action of March 29, 2017. Therefore, this response is timely filed. This response is filed concurrently with a Request for Continued Examination.

Accordingly, the Applicant also encloses herewith a requisite fee under 37 CFR 1.17(e)(1). The Applicant believes that no additional fee is due in conjunction with filing of this amendment. However, in the event that additional fees may be required to allow entry of this amendment, the Commissioner is authorized to charge any such additional fees, including any claim fees and/or extension fees from our Deposit Account No. 022095.

Applicant respectfully requests entry of the amendments and reconsideration of the present application in view of the amendments and remarks set forth below.

Summary of Telephonic Interview

Applicant's representatives Philip Mendes da Costa and Christopher Bury conducted a telephone interview with Examiners Crandall and Hail on February 15, 2017, and Mr. Bury and Examiner Crandall conducted a telephone interview on March 9, 2017. During the interviews, the subject matter of the present application, the teachings of the Marakov and Eriksson references, and the rejections based on 35 U.S.C. § 102 were discussed. At the conclusion of the interviews, Applicant's representatives understood that amendments to claims 1 and 14 consistent with those presented herein would be sufficient to overcome the current 35 U.S.C. § 102 rejections.

Applicant's representatives thank Examiners Crandall and Hail for their efforts to expedite prosecution of this application.

Remarks Regarding Claim Amendments

To expedite prosecution, and without prejudice, claim 1 has been amended to clarify that the hand vacuum cleaner comprises a drive handle provided on the main body, the drive handle having a hand grip portion, the hand grip portion having a hand grip portion

length, and to clarify that a distance between a portion of the drive handle and the suction motor is less than the hand grip portion length, and that when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle. Similar amendments have been made to claim 14.

Claims 2, 5-10, 12, 13, 15, 18-23, and 25 have been amended for consistency with amended claims 1 and 14.

Claim 20 has been amended to correct a typographical issue.

Claim 26 has been cancelled, without prejudice.

Applicant respectfully submits that no new matter has been added.

Claims 1, 2, 5-10, 12-15, 18-23, and 25 are pending in this application. Claims 1 and 14 are independent.

Discussion of the Rejections Under 35 U.S.C. §112

Claim 20 stands rejected under 35 U.S.C. § 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite. Specifically, the Examiner noted that “14” was both crossed out and underlined in the prior response.

As noted above, claim 20 has been amended to clarify that it is dependent from claim 14.

Withdrawal of the rejections under 35 U.S.C. §112 is respectfully requested.

Discussion of the Rejections Under 35 U.S.C. §102

Claims 1, 2, 6, 7, 10, 12-15, 19, 20, 23, 25, and 26 stand rejected as being anticipated by Marakov et al. (U.S. Patent Publication No. 2007/0289267 A1). Claims 1, 5, 8, 9, 14, 18, 21, and 22 stand rejected as being anticipated by Eriksson et al. (U.S. Patent No. 3,877,902).

As the Examiner will appreciate, a single prior art reference anticipates a patent claim if it expressly or inherently describes each and every limitation set forth in the patent claim: *Trintec Indus. Inc. v. Top-U.S.A. Corp.*, 63 USPQ2d 1597, 1599 (Fed. Cir. 2002).

Discussion of the Patentability of Independent Claims 1 and 14

As noted above, claims 1 and 14 have been amended to clarify that the hand vacuum cleaner comprises a drive handle provided on the main body, the drive handle having a hand grip portion, the hand grip portion having a hand grip portion length, and to clarify that a distance between a portion of the drive handle and the suction motor is less than the hand grip portion length, and that when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle.

In view of this clarification, Applicant understands that claims 1 and 14 and claims dependent therefrom are allowable over the cited art.

Discussion of the Patentability of the Dependent Claims

The rest of the rejected claims depend from base claims 1 or 14 and further define additional technical features of the present invention. In view of the patentability of claims 1 and 14 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.

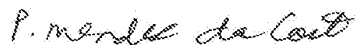
No Disclaimers or Disavowals

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.

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.

Respectfully submitted,

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



By _____
Philip C. Mendes da Costa
Reg. No. 33,106
Tel: 416-364-7311



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.
15/051,272	02/23/2016	Wayne Ernest Conrad	10452-P38886US04	1035
1059 7590 05/30/2017 BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l. 40 KING STREET WEST 40th Floor TORONTO, ON M5H 3Y2 CANADA			EXAMINER CRANDALL, JOEL DILLON	
			ART UNIT 3723	PAPER NUMBER
			MAIL DATE 05/30/2017	DELIVERY MODE PAPER

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.

Office Action Summary	Application No. 15/051,272	Applicant(s) CONRAD, WAYNE ERNEST	
	Examiner JOEL CRANDALL	Art Unit 3723	AIA (First Inventor to File) Status No

-- 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 04/10/2017.
☐ 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) 1,2,5-10,12-15,18-23 and 25 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1,2,5-10,12-15,18-23 and 25 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 ____ 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) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date <u>04/10/2017</u> . | 4) ☐ Other: ____. |

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Response to Amendments

1. The Request for Continue Examination (RCE) filed 04/10/2017 has been entered. The previous 35 USC 112 rejection(s) of claim(s) 20 are withdrawn in light of Applicant's amendments.

Claim Rejections - 35 USC § 102

2. **The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

A person shall be entitled to a patent unless –

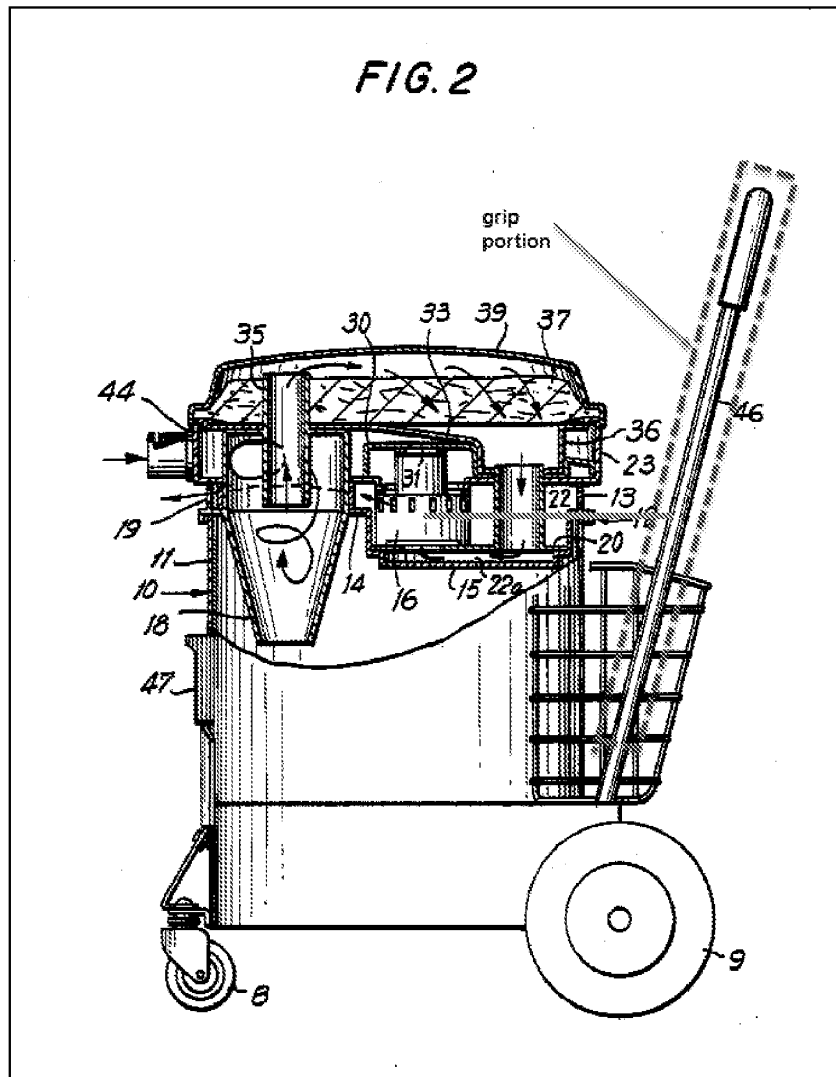
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claim(s) 1, 5, 8, 9, 10, 12-15, 18, 20-23, and 25 is/are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Eriksson et al. (US-3,877,902).**

Regarding claim 1, Eriksson discloses a hand carryable surface cleaning apparatus having a front end, a rear end and comprising: (a) a main housing (10); (b) a dirty fluid inlet (hose connected at 44); (c) a cyclone bin assembly comprising a cyclone chamber (18) downstream of the dirty fluid inlet (hose connected at 44), the cyclone chamber comprising a first end, a second end, a cyclone axis, a cyclone air inlet (44) and a cyclone air outlet (35) that is located at the second end (top end) (Fig. 1); (d) a pre-motor filter (37) comprising an upstream side and a downstream side (Fig. 1), the pre-motor filter (37) is positioned in a pre-motor filter housing (33) having an openable cover (39), the cyclone axis extends through the pre-motor filter housing (33) (Fig. 1); (e) a suction motor (16) positioned in the main housing and located downstream of the pre-motor filter (37) and rearward of the cyclone bin assembly (18); (f) an air flow path extending from the pre-motor filter (37) to the suction motor (16); (g) a clean

Art Unit: 3723

air outlet (19) downstream of the suction motor (16) (Fig. 1); and, (h) a drive handle (46) provided on the main body (Fig. 2), the drive handle (46) having a hand grip portion (Fig. 2), the hand grip portion having a hand grip portion length (Fig. 2), and the pre-motor filter housing (33) is openable without moving the handle (46) (Fig. 2) wherein the pre-motor filter housing cover (39) is openable (capable of being opened) with the cyclone bin assembly (18) is in fluid flow communication with the suction motor (16), and wherein the suction motor (16) has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber (18) (Figs. 1 and 2), wherein a distance between a portion of the drive handle and the suction motor is less than the hand grip portion length (Fig. 2); and, wherein when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle (Fig. 2).



Regarding claim 5, Eriksson discloses the hand carriable surface cleaning apparatus of claim 1 wherein the cyclone air inlet (44) is provided at the second end (top end) (Fig. 1) and a dirt outlet is provided at the first end (the bottom end) (Fig. 2) and a dirt collection chamber (11) is positioned below the cyclone chamber (18) (Figs. 1 and 2).

Regarding claim 8. Eriksson discloses the hand carriable surface cleaning apparatus of claim 1 wherein the upstream side of the pre-motor filter (37) is spaced further from the cyclone chamber (18) than the downstream side of the pre-motor filter (37) (Figs. 1 and 2).

Regarding claim 9. Eriksson discloses the hand carriable surface cleaning apparatus of claim 8 further comprising a conduit (35) that is in flow communication with the air outlet of the cyclone chamber (18) and extends through the pre-motor filter (37) (Figs. 1 and 2).

Regarding claim 10. Eriksson discloses the hand vacuum cleaner of claim 8 further comprising an upstream header (35) on the upstream side of the pre-motor filter (37) and the upstream header (35) is opened when the openable cover (39) is opened.

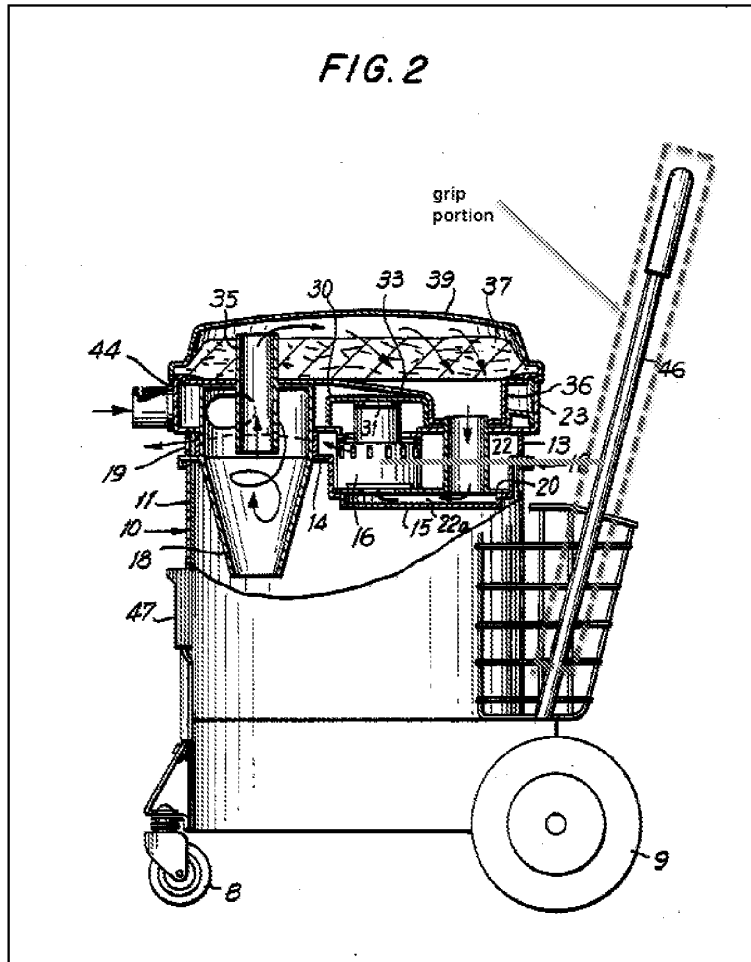
Regarding claim 12. Eriksson discloses the hand vacuum cleaner of claim 1, wherein each of the upstream and downstream sides of the pre-motor filter (37) has a front end positioned proximate the front end and extending rearwardly (Figs. 1 and 2), the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber (18) and downstream of the cyclone chamber (18), the cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter (37) (Figs. 1 and 2).

Regarding claim 13. Eriksson discloses the hand vacuum cleaner of claim 1 wherein the pre-motor filter (37) is positioned axially outwardly from the second end of the cyclone chamber (18) and downstream of the cyclone chamber (18), the pre-motor filter (37) overlies at least a portion of the second end of the cyclone chamber (18) (Figs. 1 and 2).

Regarding claim 14. Eriksson discloses a hand carriable surface cleaning apparatus having a front end, a rear end and comprising: (a) a main housing (10); (b) a dirty fluid inlet (hose connected at 44); (c) a cyclone bin assembly comprising a cyclone chamber/air treatment member (18) downstream of the dirty fluid inlet (hose connected at 44), the cyclone chamber having an interior volume having an axial length (Figs. 1 and 2), the air treatment member (18)

Art Unit: 3723

comprising a first end, a second end, a cyclone axis, a cyclone air inlet (44) and a cyclone air outlet (35) that is located at the second end (top end) (Fig. 1); (d) a pre-motor filter (37) comprising an upstream side and a downstream side (Fig. 1), the pre-motor filter (37) is positioned in a pre-motor filter housing (33) having an openable cover (39), the cyclone axis extends through the pre-motor filter housing (33) (Fig. 1); (e) a suction motor (16) positioned in the main housing and located downstream of the pre-motor filter (37) and rearward of the cyclone bin assembly (18); (f) an air flow path extending from the pre-motor filter (37) to the suction motor (16); (g) a clean air outlet (19) downstream of the suction motor (16) (Fig. 1); and, (h) a drive handle (46) provided on the main body (Figs. 1 and 2), the drive handle (46) having a hand grip portion (Fig. 1), the hand grip portion having a hand grip portion length (Fig. 1) and the pre-motor filter housing (33) is openable without moving the handle (46) (Fig. 2) wherein the pre-motor filter housing cover (39) is openable (capable of being opened) when the cyclone bin assembly (18) is in fluid flow communication with the suction motor (16), and wherein the suction motor (16) has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber (18) (Figs. 1 and 2); wherein a distance between the drive handle (46) and the suction motor (16) is less than the hand grip portion length (Fig. 1); and, wherein when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle (Fig. 1).



Regarding claim 15. Eriksson discloses the hand vacuum cleaner of claim 14 wherein the suction motor (16) comprises a fan and a motor (16) (Figs. 1 and 2) and an upstream side of the fan is positioned proximate the air treatment member (18).

Regarding claim 18. Eriksson discloses the hand carriable surface cleaning apparatus of claim 14 wherein the cyclone air inlet (44) is provided at the second end (top end) (Fig. 1) and a dirt outlet is provided at the first end (the bottom end) (Fig. 2) and a dirt collection chamber (11) is positioned below the cyclone chamber (18) (Figs. 1 and 2).

Regarding claim 20, Eriksson discloses the hand vacuum cleaner of claim 14 further comprising a downstream header (35) on the downstream side of the pre-motor filter (37) and the downstream header (35) is opened when the openable cover (39) is opened (Fig. 1).

Regarding claim 21, Eriksson discloses the hand carriable surface cleaning apparatus of claim 14 wherein the upstream side of the pre-motor filter (37) is spaced further from the cyclone chamber (18) than the downstream side of the pre-motor filter (37) (Figs. 1 and 2).

Regarding claim 22, Eriksson discloses the hand carriable surface cleaning apparatus of claim 21 further comprising a conduit (35) that is in flow communication with the air outlet of the cyclone chamber (18) and extends through the pre-motor filter (37) (Figs. 1 and 2).

Regarding claim 23, Eriksson discloses the hand vacuum cleaner of claim 21, further comprising a downstream header (35) on the downstream side of the pre-motor filter (37) and the downstream header (35) is opened when the openable cover (39) is opened (Fig. 1).

Regarding claim 25, Eriksson discloses the hand vacuum cleaner of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter (37) has a front end positioned proximate the front end and extending rearwardly (Figs. 1 and 2), the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber (18) and downstream of the cyclone chamber (18), the cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter (37) (Figs. 1 and 2).

4. Claim(s) 1 is/are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Eriksson et al. (US-3,870,486).

Regarding claim 1, Eriksson discloses a hand vacuum cleaner having a front end, a rear end, and comprising: (a) a main housing (10); (b) a dirty fluid inlet (13); (c) a cyclone bin (16) assembly comprising a cyclone chamber (16) downstream of the dirty fluid inlet (13), the cyclone chamber (16) comprising a first end, a second end, a cyclone axis, a cyclone air inlet

and a cyclone air outlet that is located at the second end (Fig. 3); (d) a pre-motor filter (23) comprising an upstream side and a downstream side, the pre-motor filter (23) is positioned in a pre-motor filter housing (Fig. 3) having an openable cover (33), the cyclone axis extends through the pre-motor filter housing (Fig. 3); (e) a suction motor (15) positioned in the main housing (10) and located downstream of the pre-motor filter (23) and rearward of the cyclone bin assembly (16) (Fig. 3); (f) an air flow path extending from the pre-motor filter (23) to the suction motor (15) (Fig. 3); (g) a clean air outlet downstream of the suction motor (15); and, (h) a drive handle (41) provided on the main body (Fig. 3), the drive handle (41) having a hand grip portion (the length of handle 41), the hand grip portion having a hand grip portion length (Fig. 3), and the pre-motor filter housing (Fig. 3) is openable without moving the handle (41) (Fig. 3); wherein the pre-motor filter housing cover (33) is openable with the cyclone bin assembly (16) in fluid flow communication with the suction motor (15), wherein the suction motor (15) has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber (16) (Fig. 3); wherein a distance between a portion of the drive handle (41) and the suction motor (15) is less than the hand grip portion length (length of handle 41); and, wherein when the hand grip portion is generally parallel to a floor, the dirty fluid inlet (13) extends at a downward angle (Fig. 3).

5. Claim(s) 1, 6, 7, 14, and 19 is/are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Conrad (US-2008/0134460).

Regarding claim 1, Conrad discloses a hand vacuum cleaner having a front end, a rear end, and comprising: (a) a main housing (Fig. 3); (b) a dirty fluid inlet (38); (c) a cyclone bin (34) assembly comprising a cyclone chamber (34) downstream of the dirty fluid inlet (38), the cyclone chamber (34) comprising a first end, a second end, a cyclone axis, a cyclone air inlet and a cyclone air outlet that is located at the second end (Fig. 4); (d) a pre-motor filter (48)

Art Unit: 3723

comprising an upstream side and a downstream side, the pre-motor filter (48) is positioned in a pre-motor filter housing (Fig. 4) having an openable cover (20), the cyclone axis extends through the pre-motor filter housing (Fig. 3); (e) a suction motor (52) positioned in the main housing (Fig. 4) and located downstream of the pre-motor filter (48) and rearward of the cyclone bin assembly (34) (Fig. 4); (f) an air flow path extending from the pre-motor filter (48) to the suction motor (52) (Fig. 4); (g) a clean air outlet downstream of the suction motor (52); and, (h) a drive handle (96) provided on the main body (Fig. 4), the drive handle (96) having a hand grip portion (96), the hand grip portion (96) having a hand grip portion length (Fig. 4), and the premotor filter housing (Fig. 4) is openable without moving the handle (96) (handle stays immovable relative to the cover) (Fig. 4); wherein the pre-motor filter housing cover (Fig. 3) is openable with the cyclone bin assembly (34) in fluid flow communication with the suction motor (52) (Fig. 4), wherein the suction motor (52) has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber (34) (Fig. 4); wherein a distance between a portion of the drive handle (96) and the suction motor (52) is less than the hand grip portion length (96) (Fig. 4); and, wherein when the hand grip portion (96) is generally parallel to a floor, the dirty fluid inlet (38) extends at a downward angle (Fig. 4).

Regarding claim 6. Conrad discloses the hand vacuum cleaner of claim 1 wherein the downstream side of the pre-motor filter (48) is spaced further from the cyclone chamber (34) than the upstream side of the pre-motor filter (48) (Fig. 4).

Regarding claim 7. Conrad discloses the hand vacuum cleaner of claim 6 further comprising a downstream header on the downstream side of the pre-motor filter (48) and the downstream header is opened when the openable cover (20) is opened (Figs. 3 and 4).

Regarding claim 14, Conrad discloses a hand vacuum cleaner having a front end, a rear end, and comprising: (a) a main housing (Fig. 3); (b) a dirty fluid inlet (38); (c) a cyclone bin (34) assembly comprising a cyclone chamber (34) downstream of the dirty fluid inlet (38), the cyclone chamber (34) comprising a first end, a second end, a cyclone axis, a cyclone air inlet and a cyclone air outlet that is located at the second end (Fig. 4); (d) a pre-motor filter (48) comprising an upstream side and a downstream side, the pre-motor filter (48) is positioned in a pre-motor filter housing (Fig. 4) having an openable cover (20), the cyclone axis extends through the pre-motor filter housing (Fig. 3); (e) a suction motor (52) positioned in the main housing (Fig. 4) and located downstream of the pre-motor filter (48) and rearward of the cyclone bin assembly (34) (Fig. 4); (f) an air flow path extending from the pre-motor filter (48) to the suction motor (52) (Fig. 4); (g) a clean air outlet downstream of the suction motor (52); and, (h) a drive handle (96) provided on the main body (Fig. 4), the drive handle (96) having a hand grip portion (96), the hand grip portion (96) having a hand grip portion length (Fig. 4), and the pre-motor filter housing (Fig. 4) is openable without moving the handle (96) (handle stays immovable relative to the cover) (Fig. 4); wherein the pre-motor filter housing cover (Fig. 3) is openable with the cyclone bin assembly (34) in fluid flow communication with the suction motor (52) (Fig. 4), wherein the suction motor (52) has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber (34) (Fig. 4); wherein a distance between a portion of the drive handle (96) and the suction motor (52) is less than the hand grip portion length (96) (Fig. 4); and, wherein when the hand grip portion (96) is generally parallel to a floor, the dirty fluid inlet (38) extends at a downward angle (Fig. 4).

Regarding claim 19, Conrad discloses the hand vacuum cleaner of claim 14 wherein the downstream side of the pre-motor filter (48) is spaced further from the cyclone chamber (34) than the upstream side of the pre-motor filter (48) (Fig. 4).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOEL CRANDALL whose telephone number is (571)270-5947. The examiner can normally be reached on (Flex) Monday - Friday 7:30 - 5:00.

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, Joseph Hail can be reached on (571)272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOEL CRANDALL/
Examiner, Art Unit 3723

/Joseph J Hail/
Supervisory Patent Examiner, Art Unit 3723

Bereskin & Parr

INTELLECTUAL PROPERTY LAW

Appl. No : 15/051,272
Inventor(s) : CONRAD, Wayne Ernest
Filed : February 23, 2016
Title : HAND CARRIABLE SURFACE CLEANING APPARATUS

TC./A.U. : 3723
Examiner : CRANDALL, Joel Dillon

Docket No. : 10452-P38886US04
Customer No.: 01059

Date: August 23, 2017
Confirmation No.:1035

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT

In response to the Office Action of May 30, 2017, 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 7 of this paper.

Bereskin & Parr LLP
Scotia Plaza, 40 King Street West, 40th Floor, Toronto, Ontario, Canada M5H 3Y2
Tel: 416.364.7311 Fax: 416.361.1398 www.bereskinparr.com
TORONTO MISSISSAUGA WATERLOO MONTRÉAL

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A hand vacuum cleaner having a front end, a rear end, and comprising:
 - (a) a main housing;
 - (b) a dirty fluid inlet;
 - (c) a cyclone bin assembly comprising a cyclone chamber downstream of the dirty fluid inlet, the cyclone chamber comprising a first end, a second end, a cyclone axis, a cyclone air inlet and a cyclone air outlet wherein the cyclone air outlet that is located at the second end;
 - (d) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the cyclone axis extends through the pre-motor filter housing;
 - (e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the cyclone bin assembly;
 - (f) an air flow path extending from the pre-motor filter to the suction motor;
 - (g) a clean air outlet downstream of the suction motor; and,
 - (h) ~~a drive handle provided on the main body, the drive handle having a hand-grip portion, the hand-grip portion having a hand-grip portion length, connected to the~~ hand vacuum cleaner at first and second locations wherein the first location is at a position of the suction motor in the main housing, a projection of a portion of the handle that connects to the first location extends through the suction motor, and the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber;wherein the pre-motor filter housing cover is openable with the cyclone bin assembly in fluid flow communication with the suction motor;
~~wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the cyclone chamber;~~

~~wherein a distance between a portion of the drive handle and the suction motor is less than the hand grip portion length; and,~~
~~wherein when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle.~~

2. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the cyclone inlet.
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the downstream side of the pre-motor filter is spaced further from the cyclone chamber than the upstream side of the pre-motor filter.
7. (Previously Presented) The hand vacuum cleaner of claim 6 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.
8. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the upstream side of the pre-motor filter is spaced further from the cyclone chamber than the downstream side of the pre-motor filter.
9. (Previously Presented) The hand vacuum cleaner of claim 8 further comprising a conduit that is in flow communication with the air outlet of the cyclone chamber and extends through the pre-motor filter.
10. (Previously Presented) The hand vacuum cleaner of claim 8 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.

11. (Cancelled)

12. (Previously Presented) The hand vacuum cleaner of claim 1 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter.

13. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the pre-motor filter overlies at least a portion of the second end of the cyclone chamber.

14. (Currently Amended) A hand vacuum cleaner having a front end, a rear end and comprising:

(a) a main housing;

(b) a dirty fluid inlet;

(c) ~~an air treatment member~~ a cyclone bin assembly comprising a cyclone chamber downstream of the dirty fluid inlet, ~~the air treatment member having an interior volume having an axial length,~~ the ~~air treatment member~~ cyclone chamber comprising a first end, a second end, ~~an air treatment member~~ a cyclone air inlet, a cyclone axis, and ~~an air treatment member~~ a cyclone air outlet that is located at the second end ~~and has an air treatment member air outlet axis;~~

(d) ~~a~~ a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, ~~the air treatment member air outlet axis extends through the pre-motor filter housing;~~

(e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the ~~air treatment member~~ cyclone bin assembly;

(f) an air flow path extending from the pre-motor filter to the suction motor;
(g) a clean air outlet downstream of the suction motor; and,
(h) a ~~drive handle provided on the main body, the drive handle having a hand grip portion, the hand grip portion having a hand grip portion length,~~ connected to the hand vacuum cleaner at first and second locations wherein the first location is forward of the second location and one of the first and second locations is at a position of the suction motor in the main housing, a projection of a portion of the handle that connects to the hand vacuum cleaner at the position of the suction motor extends through the suction motor, and the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber;

wherein the pre-motor filter housing cover is openable with the ~~air treatment member~~ cyclone chamber in fluid flow communication with the suction motor;—

~~wherein the suction motor has a suction motor axis and a projection of the suction motor axis does not intersect the air treatment member;~~

~~wherein a distance between the drive handle and the suction motor is less than the hand grip portion length; and,—~~

~~wherein when the hand grip portion is generally parallel to a floor, the dirty fluid inlet extends at a downward angle.~~

15. (Currently Amended) The hand vacuum cleaner of claim 14 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the ~~air treatment member~~ cyclone air inlet.

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Currently Amended) The hand vacuum cleaner of claim 14 wherein the downstream side of the pre-motor filter is spaced further from the ~~air treatment member~~ cyclone chamber than the upstream side of the pre-motor filter.

20. (Previously Presented) The hand vacuum cleaner of claim 14 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.
21. (Currently Amended) The hand vacuum cleaner of claim 14 wherein the upstream side of the pre-motor filter is spaced further from the ~~air treatment member~~ cyclone chamber than the downstream side of the pre-motor filter.
22. (Currently Amended) The hand vacuum cleaner of claim 21 further comprising a conduit that is in flow communication with the cyclone air outlet of the ~~air treatment member~~ and extends through the pre-motor filter.
23. (Previously Presented) The hand vacuum cleaner of claim 21 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.
24. (Cancelled)
25. (Currently Amended) The hand vacuum cleaner of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the ~~air treatment member~~ cyclone chamber and downstream of the ~~air treatment member~~ cyclone chamber, the ~~air treatment member~~ cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter.
26. (Cancelled)
27. (New) The hand vacuum cleaner of claim 1 wherein the suction motor has a suction motor axis and when the hand vacuum cleaner is carried by the handle, the suction motor axis extends generally horizontally.
28. (New) The hand vacuum cleaner of claim 27 wherein when the hand vacuum cleaner is carried by the handle, the cyclone axis extends generally horizontally.

29. (New) The hand vacuum cleaner of claim 1 wherein when the hand vacuum cleaner is carried by the handle, the cyclone axis extends generally horizontally.
30. (New) The hand vacuum cleaner of claim 14 wherein the suction motor has a suction motor axis and when the hand vacuum cleaner is carried by the handle, the suction motor axis extends generally horizontally.
31. (New) The hand vacuum cleaner of claim 30 wherein when the hand vacuum cleaner is carried by the handle, the cyclone axis extends generally horizontally.
32. (New) The hand vacuum cleaner of claim 14 wherein when the hand vacuum cleaner is carried by the handle, the cyclone axis extends generally horizontally.
33. (New) The hand vacuum cleaner of claim 1 wherein the pre-motor filter comprises a physical filter media.
34. (New) The hand vacuum cleaner of claim 14 wherein the pre-motor filter comprises a physical filter media.

REMARKS/ARGUMENTS

This letter is responsive to the Office Action dated May 30, 2017. Therefore, this response is timely filed. Applicant respectfully requests entry of the amendments and reconsideration of the present application in view of the amendments and remarks set forth below.

Remarks Regarding Claim Amendments

To expedite prosecution, and without prejudice, claim 1 has been amended to clarify, *inter alia*, that the hand vacuum cleaner comprises a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is at a position of the suction motor in the main housing, a projection of a portion of the handle that connects to the first location extends through the suction motor, and the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber.

Claim 14 has been amended to clarify, *inter alia*, that the hand vacuum cleaner comprises a cyclone bin assembly comprising a cyclone chamber downstream of the dirty fluid inlet, the cyclone chamber comprising a first end, a second end, a cyclone air inlet, a cyclone axis, and a cyclone air outlet that is located at the second end, and that the hand vacuum cleaner comprises a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is forward of the second location and one of the first and second locations is at a position of the suction motor in the main housing, a projection of a portion of the handle that connects to the hand vacuum cleaner at the position of the suction motor extends through the suction motor, and the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber.

Claims 15, 19, 21, 22, and 25 have been amended for consistency with amended claim 14.

Claims 5 and 18 have been cancelled, without prejudice.

New claims 27-34 have been added.

Applicant respectfully submits that no new matter has been added.

Claims 1, 2, 6-10, 12-15, 19-23, 25, and 27-34 are pending in this application. Claims 1 and 14 are independent.

Discussion of the Rejections Under 35 U.S.C. §102

Claims 1, 5, 8-10, 12-15, 18, 20-23, and 25 stand rejected as being anticipated by Eriksson et al. (U.S. Patent No. 3,877,902). Claim 1 stands rejected as being anticipated by Eriksson et al. (U.S. Patent No. 3,870,486). Claims 1, 6, 7, 14, and 19 stand rejected as being anticipated by Conrad (U.S. Patent Publication No. 2008/0134460 A1).

No rejection of claim 2 was presented in the Office Action. Applicant has presumed that the Examiner intended to reject this claim as anticipated by one of the cited references, and that the omission of a rejection for this claim was a clerical oversight. Should this presumption be incorrect, the Examiner is kindly requested to contact Applicant's representative by telephone at the Examiner's convenience.

As the Examiner will appreciate, a single prior art reference anticipates a patent claim if it expressly or inherently describes each and every limitation set forth in the patent claim: *Trintec Indus. Inc. v. Top-U.S.A. Corp.*, 63 USPQ2d 1597, 1599 (Fed. Cir. 2002).

Discussion of the Patentability of Independent Claims 1 and 14—Ericksson '902 and '486

As noted above, claim 1 has been amended to clarify that the hand vacuum cleaner comprises a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is at a position of the suction motor in the main housing, and a projection of a portion of the handle that connects to the first location extends through the suction motor. Claim 14 has been amended to clarify that the hand vacuum cleaner comprises a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is forward of the second location and one of the first and second locations is at a position of the suction motor in the main housing, a projection of a portion of the handle that connects to the hand vacuum cleaner at the position of the

suction motor extends through the suction motor. Neither Eriksson '902 nor Eriksson '486 disclose such a hand vacuum cleaner.

Eriksson '902 and Eriksson '486 are each directed to 'Shop Vac' style canister vacuum cleaners. In both Eriksson '902 and Eriksson '486, the handle ("operating handle 46" / "handle 41") is connected to a "carriage" or base that supports the main body at a location near the rear wheels ("rear wheels 9" / "wheels 12"). Neither handle is connected to the respective vacuum cleaner at a position of the suction motor in the main housing. Also, a projection of a portion of the handle that connects to the first location does not extend through the suction motor in Eriksson '902 or Eriksson '486.

Accordingly, for at least this reason, claims 1 and 14 are not anticipated by Eriksson '902 or Eriksson '486.

For completeness, Applicant points out that claims 1 and 14 are directed to hand vacuum cleaners. The Examiner stated that Eriksson '902 is a hand carriable surface cleaning apparatus. However, Applicant submits that neither Eriksson '902 nor Eriksson '486 disclose a hand vacuum cleaner and therefore neither Eriksson '902 nor Eriksson '486 can anticipate the subject matter of claims 1 or 14. A person skilled in the art would appreciate that a hand vacuum cleaner is a different type of surface cleaning apparatus than e.g. a 'Shop Vac' style canister vacuum, such as disclosed by Eriksson '902 and Eriksson '486. Therefore, a person skilled in the art, contrary to the apparent position of the Examiner, would not consider the cited references to have every feature of claims 1 and 14 and therefore would not consider the claims to be anticipated by either of these references.

Accordingly, for at least this reason, claims 1 and 14 are not anticipated by Eriksson '902 or Eriksson '486.

Discussion of the Patentability of Independent Claims 1 and 14 – Conrad

Also, as noted above, claims 1 and 14 have been amended to clarify that the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber.

In Conrad, access to the pre-motor filter is provided by opening or removing lid 20, and the handle 96 identified by the Examiner is coupled to the lid 20. Accordingly, it does not appear possible to open the pre-motor filter housing of Conrad without moving the handle of Conrad.

Accordingly, for at least this reason, claims 1 and 14 are not anticipated by Conrad.

Discussion of the Patentability of the Dependent Claims

The rest of the rejected claims depend from base claims 1 or 14 and further define additional technical features of the present invention. In view of the patentability of claims 1 and 14 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.

Respectfully submitted,

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

/Philip C. Mendes da Costa/

By _____
Philip C. Mendes da Costa
Reg. No. 33,106
Tel: 416-364-7311



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.
15/051,272	02/23/2016	Wayne Ernest Conrad	10452-P38886US04	1035
1059 7590 11/30/2017 BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l. 40 KING STREET WEST 40th Floor TORONTO, ON M5H 3Y2 CANADA			EXAMINER CRANDALL, JOEL DILLON	
			ART UNIT 3723	PAPER NUMBER
			MAIL DATE 11/30/2017	DELIVERY MODE PAPER

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.

Office Action Summary	Application No. 15/051,272	Applicant(s) CONRAD, WAYNE ERNEST	
	Examiner JOEL CRANDALL	Art Unit 3723	AIA (First Inventor to File) Status No

-- 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 08/23/2017.
☐ 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) 1,2,6-10,12-15,19-23,25 and 27-34 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1,2,6-10,12-15,19-23,25 and 27-34 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 2/23/2016 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) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date <u>08/23/2017</u> . | 4) ☐ Other: ____. |

- 1) The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Response to Amendments

1. The action is responsive to the amendment filed 08/23/2017.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “projection of a portion of the handle that connects to the first location extends through the suction motor” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1, and those depending therefrom including claims 2, 6-10, 12, 13, 27-29, and 33 as well as Claim 14 and those depending therefrom including claims 15, 19-23, 25, 30-32, and 34 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added claim language "a projection of a portion of the handle that connects to the first location extends **through the suction motor**" is new matter." Paragraph 0079 of the specification refers to the handle, stating:

Referring to Figure 7, a handle 1152 is provided on the top of the cyclone bin assembly 1110. The handle 1152 is configured to be grasped by a user. When the cyclone bin assembly 1110 is mounted on the body 1112, the handle 1152 can be used to manipulate the surface cleaning apparatus 1100. When the cyclone bin assembly 1110 is removed from the body 1112, the handle 1152 can be used to carry the cyclone bin

assembly 110, for example to position the cyclone bin assembly 1110 above a waste receptacle for emptying. In the illustrated example, the handle 1152 is integral with a lid 1154 of the cyclone bin assembly 110.

Therefore, the specification is silent as to the handle extending through the suction motor. As to the figures, Figure 7 does not show the suction motor. The suction motor 1114 in Figure 10 is shown as a solid block with nothing seen extending through the motor 1114. Furthermore, the motor of a vacuum typically rotates about an axis, and a structure extending through the motor would likely cause the motor to not work properly. For the purpose of examination, the examiner will consider this to be "a projection of a portion of the handle that connects to the first location extends **through the suction motor axis.**"

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim(s) 14, 15, 19-23, 25, 30-32, and 34 is/are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Conrad (US-2008/0134460).

Regarding claim 14, Conrad discloses a hand vacuum cleaner having a front end, a rear end and comprising: a main housing (10); a dirty fluid inlet (38); a cyclone bin assembly (12) comprising a cyclone chamber (12) downstream of the dirty fluid inlet (38), the cyclone chamber (12) comprising a first end, a second end, a cyclone air inlet (38), a cyclone axis, and a cyclone air outlet (40) that is located at the second end; a pre-motor filter (48) comprising an upstream side and a downstream side (Fig. 4), the pre-motor filter (48) is positioned in a pre-motor filter housing (58) (Fig. 4) having an openable cover (20); a suction motor (52) positioned in the main

housing (10) and located downstream of the pre-motor filter (48) (Fig. 4) and rearward of the cyclone bin assembly (12); an air flow path extending from the pre-motor filter (48) to the suction motor (52); a clean air outlet (54) downstream of the suction motor (52); and, a handle (96) connected to the hand vacuum cleaner at first and second locations wherein the first location is forward of the second location and one of the first and second locations is at a position of the suction motor (52) in the main housing (Fig. 4), a projection of a portion of the handle (96) that connects to the hand vacuum cleaner at the position of the suction motor (52) extends through the suction motor axis (52) (Fig. 4), and the pre-motor filter housing (58) is openable without moving the handle (96) with respect to the cyclone chamber (12) (the handle doesn't require moving the handle to remove housing 58 when it is open as in Figure 2); wherein the pre-motor filter housing (58) (Fig. 2) cover (20) is openable with the cyclone chamber (12) in fluid flow communication with the suction motor (52) (Fig. 4).

Regarding claim 15, Conrad discloses the hand vacuum cleaner of claim 14 wherein the suction motor (52) comprises a fan and a motor [Conrad; paragraph 0156] and an upstream side of the fan is positioned proximate the cyclone air inlet (38) (Fig. 4).

Regarding claim 19, Conrad discloses the hand vacuum cleaner of claim 14 wherein the downstream side of the pre-motor filter (48) is spaced further from the cyclone chamber than the upstream side of the pre-motor filter (48) (in the flow path) (Fig. 4).

Regarding claim 20, Conrad discloses the hand vacuum cleaner of claim 14 further comprising a downstream header ("a header or merely an open volume that communicates with the outlet 40 and the inlets of the second stage cyclone") [Conrad; paragraph 0173] on the downstream side of the pre-motor filter (48) and the downstream header is opened when the openable cover (20) is opened (Figs. 3 and 4).

Regarding claim 21, Conrad discloses the hand vacuum cleaner of claim 14 wherein the upstream side of the pre-motor filter (48) is spaced further from the cyclone chamber (12) than the downstream side of the pre-motor filter (48) (Fig. 4).

Regarding claim 22, Conrad discloses the hand vacuum cleaner of claim 21, further comprising a conduit (64) that is in flow communication with the cyclone air outlet (40) and extends through the pre-motor filter (48) (Fig. 4).

Regarding claim 23, Conrad discloses the hand vacuum cleaner of claim 21 further comprising an upstream header on the upstream side of the pre-motor filter (48) and the upstream header is opened when the openable cover (20) is opened ("a header or merely an open volume that communicates with the outlet 40 and the inlets of the second stage cyclone") [Conrad; paragraph 0173].

Regarding claim 25, Conrad discloses the hand vacuum cleaner of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter (48) has a front end positioned proximate the front end and extending rearwardly (Fig. 4), the pre-motor filter (48) is positioned axially outwardly from the second end of the cyclone chamber (12) and downstream of the cyclone chamber (12), the cyclone air outlet (40) is positioned at a location spaced from the front end of the pre-motor filter (48) (Fig. 4).

Regarding claim 30, Conrad discloses the hand vacuum cleaner of claim 14, wherein the suction motor has a suction motor (52) axis and when the hand vacuum cleaner is carried by the handle (96), the suction motor (52) axis extends generally horizontally (Fig. 4). As to carrying the hand vacuum cleaner such that the suction motor axis extends generally horizontally, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647

(1987). In this case, one intending to employ the vacuum of Conrad such that the motor axis extended generally horizontally would be capable of doing so with the claimed handle structure, as shown in Figure 4.

Regarding claim 31, Conrad discloses the hand vacuum cleaner of claim 30, wherein when the hand vacuum cleaner is carried by the handle (96), the cyclone axis extends generally horizontally (Fig. 4). As to the carrying the hand vacuum cleaner such that the cyclone axis extends generally horizontally, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987). In this case, one intending to employ the vacuum of Conrad such that the cyclone axis extended generally horizontally would be capable of doing so with the claimed handle structure, as shown in Figure 4.

Regarding claim 32, Conrad discloses the hand vacuum cleaner of claim 14 wherein when the hand vacuum cleaner is carried by the handle (96), the cyclone axis extends generally horizontally (Fig. 4). As to the carrying the hand vacuum cleaner such that the cyclone axis extends generally horizontally, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987). In this case, one intending to employ the vacuum of Conrad such that the cyclone axis extended generally horizontally would be capable of doing so with the claimed handle structure, as shown in Figure 4.

Regarding claim 34, Conrad discloses the hand vacuum cleaner of claim 14, wherein the pre-motor filter (48) comprises a physical filter media [Conrad; paragraph 0156].

Response to Arguments

5. Applicant's arguments with respect to the claims have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Allowable Subject Matter

6. Claim 1 and those depending therefrom would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), 1st paragraph, set forth in this Office action.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to anticipate or render obvious the hand vacuum cleaner of claim 1 comprising:

- the cyclone axis extends through the pre-motor filter housing;
- a drive handle connected to the hand vacuum cleaner at first and second locations wherein the first location is at a position of the suction motor (52) in the main housing (10) (Fig. 4), a projection of a portion of the handle (96) that connects to the first location extends through the suction motor axis;
- the pre-motor filter housing (64) is openable without moving the handle with respect to the cyclone chamber.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOEL CRANDALL whose telephone number is (571)270-5947. The examiner can normally be reached on (Flex) Monday - Friday 7:30 - 5:00.

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, Joseph Hail can be reached on (571)272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3723

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOEL CRANDALL/
Examiner, Art Unit 3723

/CHRISTOPHER M. KOEHLER/
Primary Examiner, Art Unit 3726

Bereskin & Parr

Appl. No : 15/051,272
Inventor(s) : CONRAD, Wayne Ernest
Filed : February 23, 2016
Title : HAND CARRIABLE SURFACE CLEANING APPARATUS

TC./A.U. : 3723
Examiner : CRANDALL, Joel Dillon

Docket No. : 10452-P38886US04
Customer No.: 01059

Date: March 28, 2018
Confirmation No.:1035

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT

In response to the Office Action of November 30, 2017, please amend the above-identified application as noted below. A petition for a one-month extension of time under 37 C.F.R. 1.136(a) and a Request for Consideration Under the After Final Consideration Pilot Program 2.0 accompanies this response.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper.

Amendments to the Drawings begin on page 8 of this paper and include attached replacement sheets.

Remarks/Arguments begin on page 9 of this paper.



Bereskin & Parr LLP

Sootia Plaza, 40 King Street West, 40th Floor, Toronto, ON M5H 3Y2 Canada
Tel: 416.364.7311 Fax: 416.361.1398 bereskinparr.com

Amendments to the Specification

Please replace paragraph [0040] with the following rewritten paragraph:

[0040] Referring to Figure 1, an embodiment of a surface cleaning apparatus 200 is shown. In this embodiment the surface cleaning apparatus 200 is a hand operable surface cleaning apparatus. The surface cleaning apparatus 200 is usable in a forward direction of motion, indicated by arrow A in Figure 1. A handle 215 is provided on an upper portion of the surface cleaning apparatus 200. The handle 215 is configured to be grasped by a user, and can be used to manipulate the surface cleaning apparatus 200. In the illustrated example, a first portion 211 of the handle 215 is connected to the surface cleaning apparatus 200 at a first location 213.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A hand vacuum cleaner having a front end, a rear end, and comprising:
 - (a) a main housing;
 - (b) a dirty fluid inlet;
 - (c) a cyclone bin assembly comprising a cyclone chamber downstream of the dirty fluid inlet, the cyclone chamber comprising a first end, a second end, a cyclone axis, a cyclone air inlet and a cyclone air outlet wherein the cyclone air outlet is located at the second end;
 - (d) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover, the cyclone axis extends through the pre-motor filter housing;
 - (e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the cyclone bin assembly;
 - (f) an air flow path extending from the pre-motor filter to the suction motor;
 - (g) a clean air outlet downstream of the suction motor; and,
 - (h) a handle connected to the hand vacuum cleaner at first and second locations, wherein the first location is at a position of the suction motor in the main housing and a first handle portion is connected at the first location, wherein a projection of a portion of the first handle portion that connects to the first location extends through the suction motor, [[and]]
wherein the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber,[[;]] and
wherein the pre-motor filter housing cover is openable ~~with~~ while the cyclone bin assembly is in fluid flow communication with the suction motor.

2. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the cyclone inlet.
- 3-5. (Cancelled)
6. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the downstream side of the pre-motor filter is spaced further from the cyclone chamber than the upstream side of the pre-motor filter.
7. (Previously Presented) The hand vacuum cleaner of claim 6 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.
8. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the upstream side of the pre-motor filter is spaced further from the cyclone chamber than the downstream side of the pre-motor filter.
9. (Previously Presented) The hand vacuum cleaner of claim 8 further comprising a conduit that is in flow communication with the air outlet of the cyclone chamber and extends through the pre-motor filter.
10. (Previously Presented) The hand vacuum cleaner of claim 8 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.
11. (Cancelled)
12. (Previously Presented) The hand vacuum cleaner of claim 1 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter.

13. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the pre-motor filter overlies at least a portion of the second end of the cyclone chamber.

14. (Currently Amended) A hand vacuum cleaner having a front end, a rear end and comprising:

- (a) a main housing;
- (b) a dirty fluid inlet;
- (c) a cyclone bin assembly comprising a cyclone chamber downstream of the dirty fluid inlet, the cyclone chamber comprising a first end, a second end, a cyclone air inlet, a cyclone axis, and a cyclone air outlet that is located at the second end;
- (d) a pre-motor filter comprising an upstream side and a downstream side, the pre-motor filter is positioned in a pre-motor filter housing having an openable cover;
- (e) a suction motor positioned in the main housing and located downstream of the pre-motor filter and rearward of the cyclone bin assembly;
- (f) an air flow path extending from the pre-motor filter to the suction motor;
- (g) a clean air outlet downstream of the suction motor; and,
- (h) a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is ~~forward of the second location and one of the first and second locations~~ is at a position of the suction motor in the main housing, the handle has a first handle portion provided at the first location, a projection of ~~[[a]] the first handle portion of the handle that connects to the hand vacuum cleaner at the position of the suction motor~~ extends through the suction motor, and the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber;

wherein the pre-motor filter housing cover is openable ~~with~~ while the cyclone chamber is in fluid flow communication with the suction motor, and wherein the first and second locations are provided other than on the openable pre-motor filter housing cover.

15. (Previously Presented) The hand vacuum cleaner of claim 14 wherein the suction motor comprises a fan and a motor and an upstream side of the fan is positioned proximate the cyclone air inlet.

16-18. (Cancelled)

19. (Previously Presented) The hand vacuum cleaner of claim 14 wherein the downstream side of the pre-motor filter is spaced further from the cyclone chamber than the upstream side of the pre-motor filter.

20. (Previously Presented) The hand vacuum cleaner of claim 14 further comprising a downstream header on the downstream side of the pre-motor filter and the downstream header is opened when the openable cover is opened.

21. (Previously Presented) The hand vacuum cleaner of claim 14 wherein the upstream side of the pre-motor filter is spaced further from the cyclone chamber than the downstream side of the pre-motor filter.

22. (Previously Presented) The hand vacuum cleaner of claim 21 further comprising a conduit that is in flow communication with the cyclone air outlet and extends through the pre-motor filter.

23. (Previously Presented) The hand vacuum cleaner of claim 21 further comprising an upstream header on the upstream side of the pre-motor filter and the upstream header is opened when the openable cover is opened.

24. (Cancelled)

25. (Previously Presented) The hand vacuum cleaner of claim 14 wherein each of the upstream and downstream sides of the pre-motor filter has a front end positioned proximate the front end and extending rearwardly, the pre-motor filter is positioned axially outwardly from the second end of the cyclone chamber and downstream of the cyclone chamber, the cyclone air outlet is positioned at a location spaced from the front end of the pre-motor filter.

26. (Cancelled)

27. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the suction motor has a suction motor axis and when the hand vacuum cleaner is carried by the handle, the suction motor axis extends generally horizontally.

28. (Previously Presented) The hand vacuum cleaner of claim 27 wherein when the hand vacuum cleaner is carried by the handle, the cyclone axis extends generally horizontally.

29. (Previously Presented) The hand vacuum cleaner of claim 1 wherein when the hand vacuum cleaner is carried by the handle, the cyclone axis extends generally horizontally.

30. (Previously Presented) The hand vacuum cleaner of claim 14 wherein the suction motor has a suction motor axis and when the hand vacuum cleaner is carried by the handle, the suction motor axis extends generally horizontally.

31. (Previously Presented) The hand vacuum cleaner of claim 30 wherein when the hand vacuum cleaner is carried by the handle, the cyclone axis extends generally horizontally.

32. (Previously Presented) The hand vacuum cleaner of claim 14 wherein when the hand vacuum cleaner is carried by the handle, the cyclone axis extends generally horizontally.

33. (Previously Presented) The hand vacuum cleaner of claim 1 wherein the pre-motor filter comprises a physical filter media.

34. (Previously Presented) The hand vacuum cleaner of claim 14 wherein the pre-motor filter comprises a physical filter media.

Amendments to the Drawings:

The attached replacement sheets of drawings include changes to Figures 1, 3, 3B, 4, 4B, 6A, and 6B. These sheets, which include Figures 1, 3, 3B, 4, 4B, 6A, and 6B, replace the original sheets including Figures 1, 3, 3B, 4, 4B, 6A, and 6B.

Attachment: Replacement Sheets

REMARKS/ARGUMENTS

This letter is responsive to the Office Action dated November 30, 2017, and is accompanied by a request for a one-month extension of time. Accordingly, this response is timely filed. This response is also filed concurrently with a request for participation in the After Final Consideration Pilot 2.0 (AFCP 2.0).

Applicant respectfully requests entry of the amendments and reconsideration of the present application in view of the amendments and remarks set forth below.

Summary of Telephonic Interviews

Applicant's representatives Philip Mendes da Costa and Christopher Bury conducted a telephone interview with Examiner Crandall on February 6, 2018, and on March 28, 2018. During the interviews, the subject matter of the application, the rejections based on 35 U.S.C. § 112, and the rejections based on 35 U.S.C. § 102 were discussed. At the conclusion of the interview of March 28, 2018, Applicant's representatives understood that amendments consistent with those presented herein would overcome the current rejections.

Applicant's representatives thank Examiner Crandall for his efforts to expedite prosecution of this application.

Remarks Regarding Amendments to the Specification

Paragraph [0040] has been amended to explicitly describe the handle, a first portion of the handle, and first location at which the handle is connected to the hand vacuum cleaner shown in at least Figures 1, 3, and 3B. Applicant respectfully submit that at least paragraph [0040] and Figures 1, 3, and 3B as filed clearly support the specific identification and description of the first portion and the first location as shown in the amended paragraph [0040]. Specifically, the specification states that the embodiment of a surface cleaning apparatus 200 shown in Figure 1 "is a hand operable surface cleaning apparatus ... usable in a forward direction of motion, indicated by arrow A in Figure 1". Applicant respectfully submits that a person of ordinary skill in the art would clearly recognize the part now identified by reference numeral 25 is a handle 215, and

that the addition of a specific reference to the illustrated handle portion and the illustrated connection location do not add new matter.

Applicant respectfully submits that no new matter has been added.

Remarks Regarding Amendments to the Drawings

Figures 1, 3, and 3B have been amended to explicitly identify the handle 215, a first portion of the handle 211, and first location 213 at which the handle is connected to the hand vacuum cleaner, in order show every feature of the invention specified in the claims, as prescribed by 37 C.F.R. § 1.83(a). Applicant respectfully submit that at least paragraph [0040] and Figures 1, 3A, and 3B as filed clearly support the labeling of handle 215, first portion 211, and first location 213 as shown in the replacement Figures 1, 3, and 3B. Specifically, the specification states that the embodiment of a surface cleaning apparatus 200 shown in Figure 1 “is a hand operable surface cleaning apparatus ... usable in a forward direction of motion, indicated by arrow A in Figure 1”. Applicant respectfully submits that a person of ordinary skill in the art would clearly recognize the now-identified handle 215 as such, and that the addition of reference characters 215, 211, and 213 to replacement Figures 1, 3A, and 3B does not add new matter.

Figures 4 and 4B have been amended to explicitly identify handle 415, a first portion of the handle 411, and first location 413 at which the handle is connected to the hand vacuum cleaner. Applicant respectfully submits that at least paragraphs [0040] and [0053], and Figures 4 and 4B as filed clearly support the labeling of handle 415, first portion 411, and first location 413 as shown in the replacement Figures 4 and 4B, for at least substantially the same reasons discussed above with respect to handle 215.

Figures 6 and 6B have been amended to explicitly identify handle 915, a first portion of the handle 911, and first location 913 at which the handle is connected to the hand vacuum cleaner. Applicant respectfully submits that at least paragraphs [0040] and [0069], and Figures 6 and 6B as filed clearly support the labeling of handle 915, first portion 911, and first location 913 as shown in the replacement Figures 6 and 6B, for at least substantially the same reasons discussed above with respect to handle 215.

Applicant respectfully submits that no new matter has been added.

Remarks Regarding Claim Amendments

To expedite prosecution, and without prejudice, claim 1 has been amended to clarify, *inter alia*, that the hand vacuum cleaner comprises a handle connected to the hand vacuum cleaner at first and second locations, wherein the first location is at a position of the suction motor in the main housing and a first handle portion is connected at the first location, wherein a projection of the first handle portion extends through the suction motor.

Claim 14 has been amended to clarify, *inter alia*, that the handle has a first handle portion and that the first and second locations are provided other than on the openable pre-motor filter housing cover.

Applicant respectfully submits that no new matter has been added.

Claims 1, 2, 6-10, 12-15, 19-23, 25, and 27-34 are pending in this application. Claims 1 and 14 are independent.

Discussion of the Objections to the Drawings

The drawings were objected to under 37 C.F.R. § 1.83(a), for failing to show “a projection of a portion of the handle that connects to the first location extends through the suction motor”.

As discussed above, claim 1 has been amended to specify that “a projection of the first handle portion” extends through the suction motor. A similar change has been made to claim 14. The drawings now show the first handle portion. Therefore, the Applicant respectfully submits that the objection has been addressed.

Withdrawal of the objection to the drawings is respectfully requested.

Discussion of the Rejections Under 35 U.S.C. §112

Claims 1 and 14, and claims depending therefrom, stand rejected under 35 U.S.C. § 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement.

Based on the discussion during the interviews, Applicant understands that the Examiner was interpreting the phrase “the projection of a portion of a handle” as a physical structure that extends through – and thus would interfere with – the suction motor. As discussed during the interviews, the projection of the portion of the handle recited in claims 1 and 14 is not a physical projection, but rather a ‘virtual’ extension of the handle portion. It is submitted that the revision to the language of claims 1 and 14 clarifies this point.

Withdrawal of the rejections under 35 U.S.C. § 112 is respectfully requested.

Discussion of the Rejections Under 35 U.S.C. §102

Claims 14, 15, 19-23, 25, 30-32, and 34 stand rejected under pre-AIA 35 U.S.C. § 102(b) as being anticipated by Conrad (U.S. Patent Publication No. 2008/0134460 A1).

As the Examiner will appreciate, a single prior art reference anticipates a patent claim if it expressly or inherently describes each and every limitation set forth in the patent claim: *Trintec Indus. Inc. v. Top-U.S.A. Corp.*, 63 USPQ2d 1597, 1599 (Fed. Cir. 2002).

Discussion of the Patentability of Independent Claim 14

In the rejection of claim 14 presented in the Office Action, Conrad’s “central section 96” was referred to as being analogous to the handle recited in claim 14, and “lid 20” was referred to as being analogous to the openable pre-motor filter housing cover.

As noted above, claim 14 has been amended to clarify that the first and second locations [at which the handle is connected to the hand vacuum cleaner] are provided other than on the openable pre-motor filter housing cover”. As shown in e.g. Figs. 1 and 3 of Conrad, central section 96 is connected to lid 20.

Based on at least the foregoing, Conrad does not anticipate the subject matter of claim 14. Withdrawal of the rejections under 35 U.S.C. § 102 is respectfully requested.

Discussion of the Patentability of the Dependent Claims

The rest of the rejected claims depend from base claim 14 and further define additional technical features of the present invention. In view of the patentability of claim 14 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.

Allowable Subject Matter

Applicant thanks the Examiner for indicating that claim 1 and claims depending therefrom would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. § 112.

As noted above, claim 1 has been amended to overcome the rejections under 35 U.S.C. § 112. Accordingly, Applicant submits that amended claim 1 is allowable, and that claims 2, 6-10, 12, 13, 27, 29, and 33 are allowable at least by virtue of their dependency from an allowable claim.

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.

Respectfully submitted,

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

/Philip C. Mendes da Costa/

By _____
Philip C. Mendes da Costa
Reg. No. 33,106
Tel: 416-364-7311

CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0		
Practitioner Docket No.: 10452-P38886US04	Application No.: 15/051,272	Filing Date: 2016-02-23
First Named Inventor: Conrad, Wayne E.	Title: HAND CARRIABLE 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 (<i>e.g.</i>, 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 Office's electronic filing system (EFS-Web). 7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, <i>e.g.</i>, 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>i.e.</i>, 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, <i>e.g.</i>, 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 /Philip C. Mendes da Costa/	Date March 28, 2018	
Name (Print/Typed) Philip C. Mendes da Costa	Practitioner Registration No. 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, see below*.		
☐ * Total of _____ forms are submitted.		

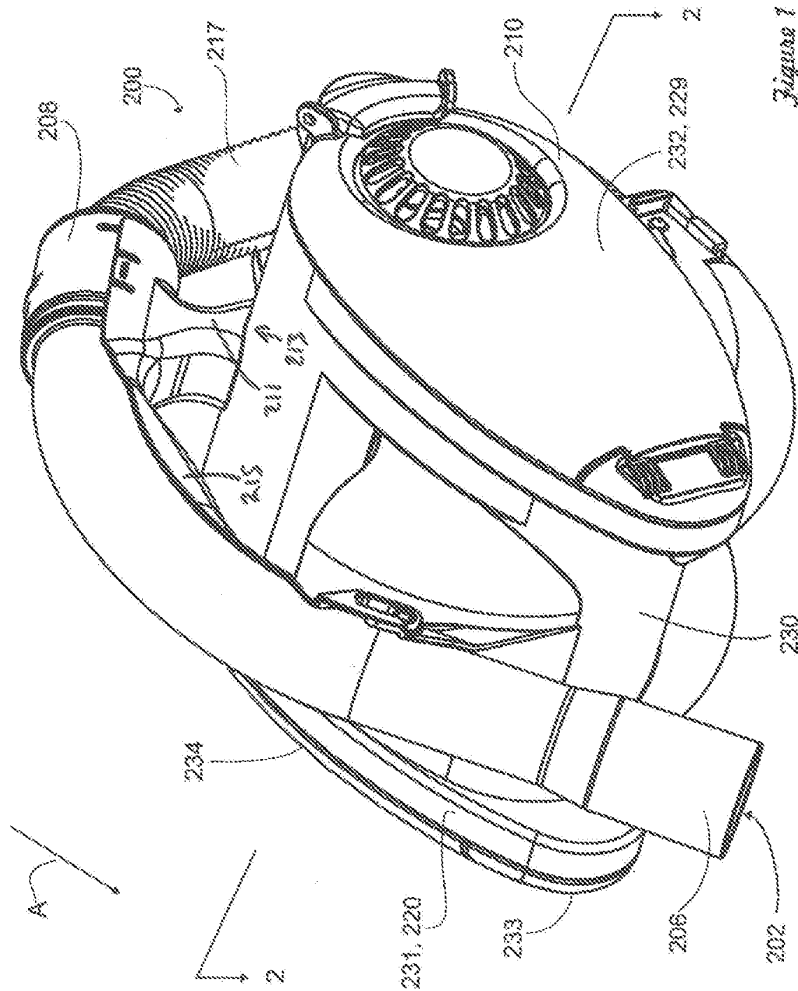
Privacy Act Statement

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.

REPLACEMENT SHEET



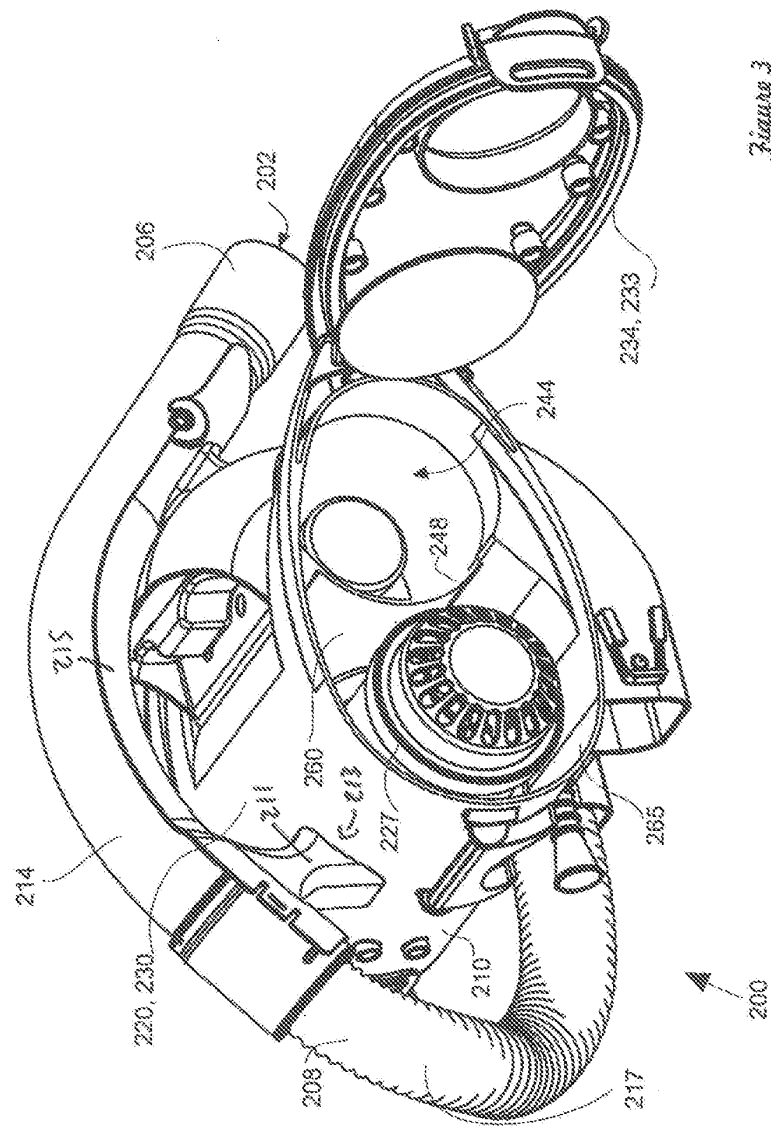


Figure 3

REPLACEMENT SHEET

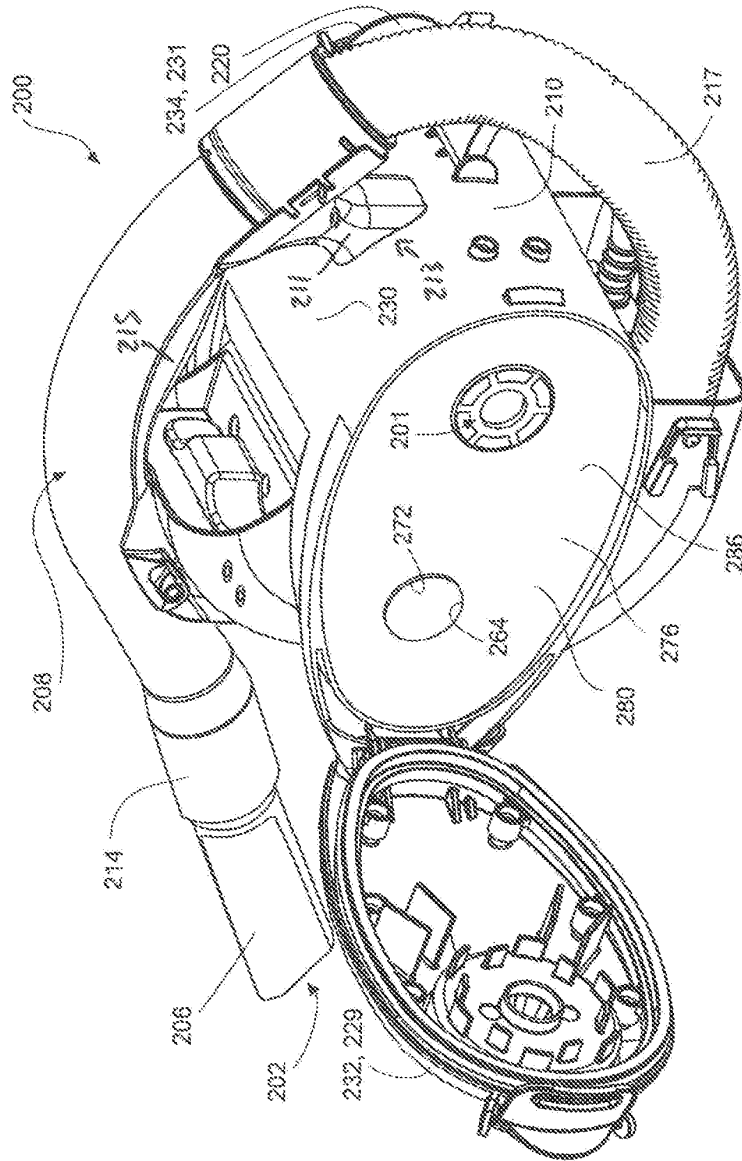


Figure 3B

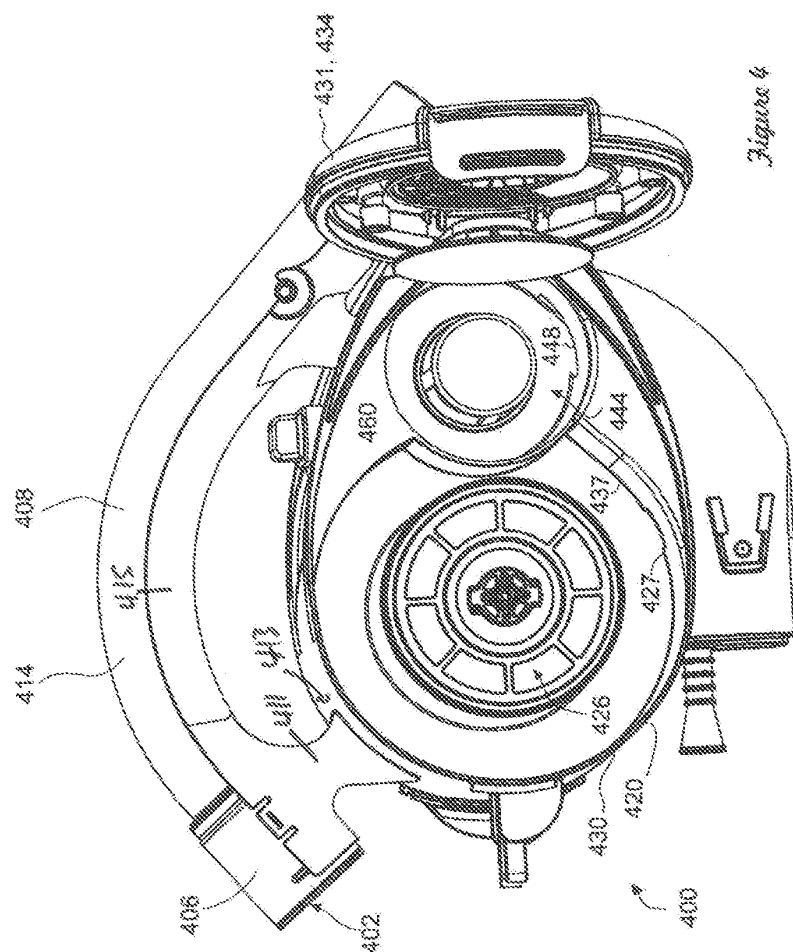


Figure 4

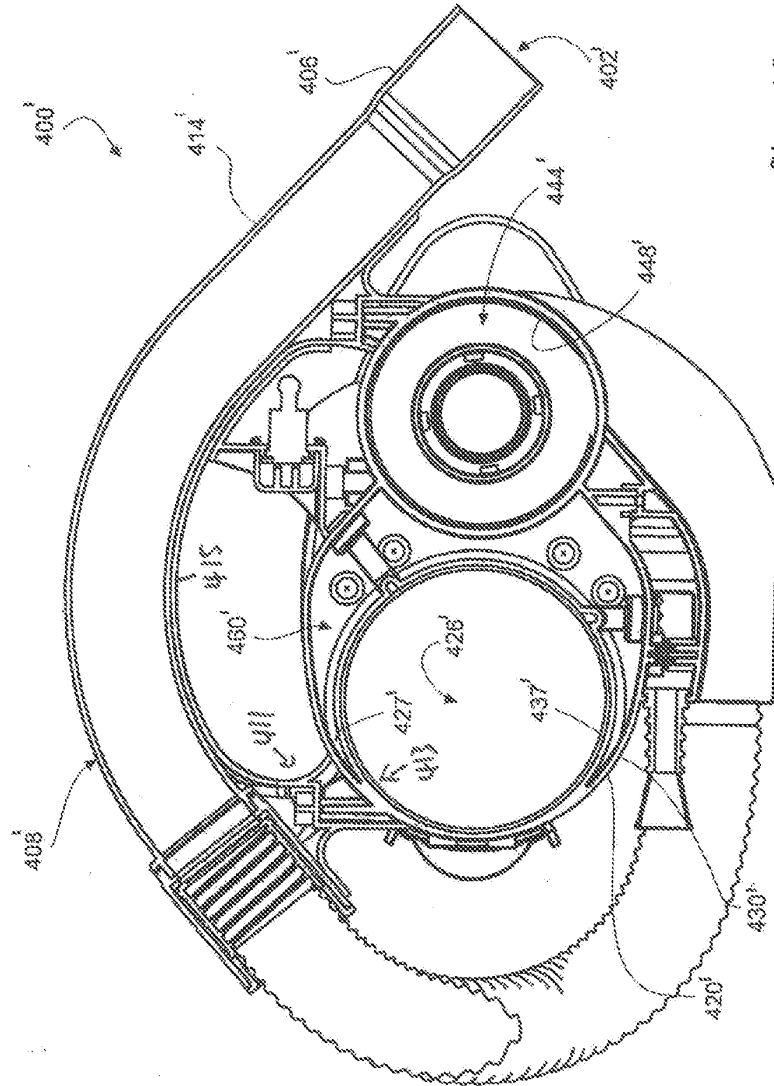
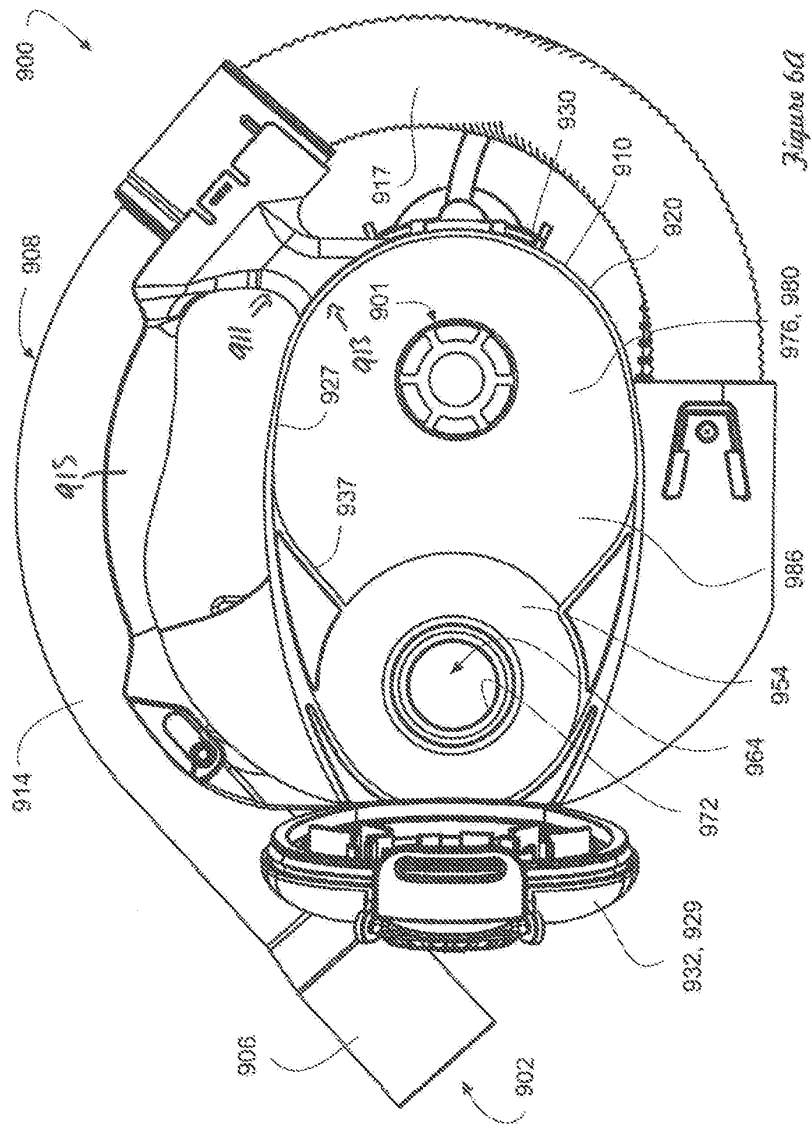


Figure 4B

REPLACEMENT SHEET



REPLACEMENT SHEET

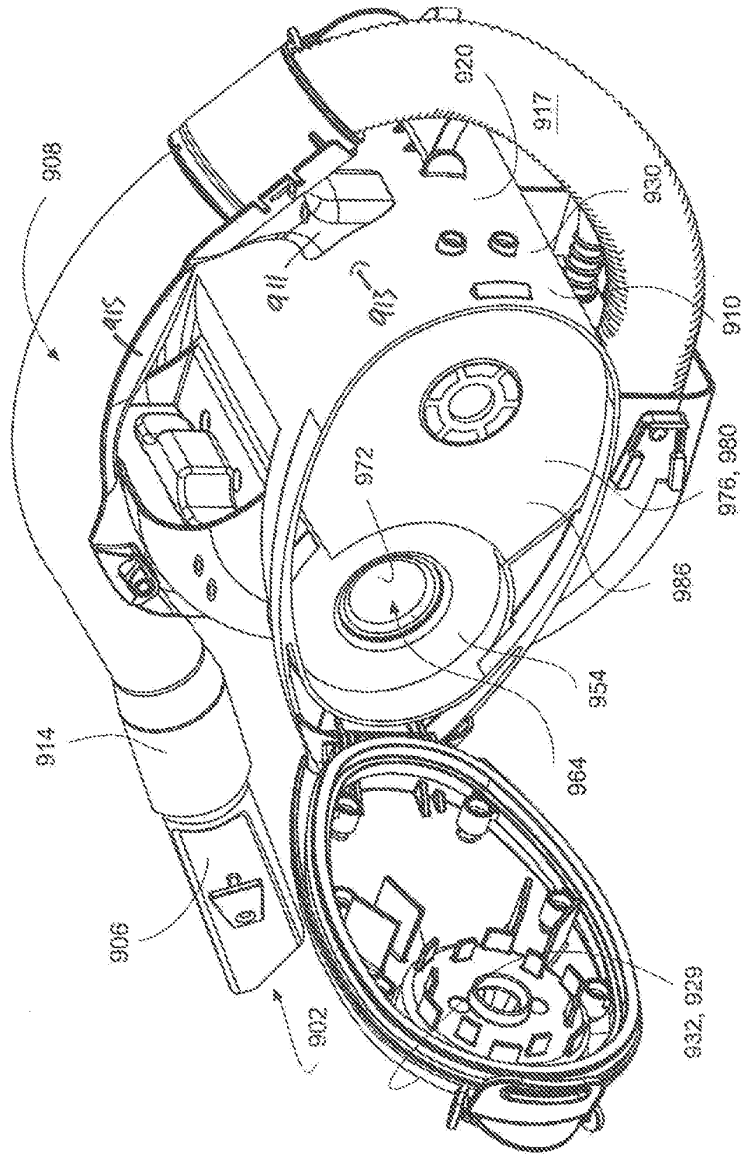


Figure 6B



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

NOTICE OF ALLOWANCE AND FEE(S) DUE

1059 7590 06/04/2018
BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40th Floor
TORONTO, ON M5H 3Y2
CANADA

EXAMINER

CRANDALL, JOEL DILLON

ART UNIT

PAPER NUMBER

3723

DATE MAILED: 06/04/2018

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/051,272	02/23/2016	Wayne Ernest Conrad	10452-P38886US04	1035

TITLE OF INVENTION: HAND CARRIABLE 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	\$1000	\$0	\$0	\$1000	09/04/2018

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 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity 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 and an extra copy of the form should be submitted. 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), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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 including the Patent, advance orders and notification of maintenance fees 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.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

1059 7590 06/04/2018
BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40th Floor
TORONTO, ON 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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/051,272	02/23/2016	Wayne Ernest Conrad	10452-P38886US04	1035

TITLE OF INVENTION: HAND CARRIABLE 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	\$1000	\$0	\$0	\$1000	09/04/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
CRANDALL, JOEL DILLON	3723	015-347000

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/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form 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, 1 _____
- (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. 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 has been filed for recordation as set forth in 37 CFR 3.11. 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. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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. _____



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.
15/051,272	02/23/2016	Wayne Ernest Conrad	10452-P38886US04	1035

EXAMINER
CRANDALL, JOEL DILLON

ART UNIT	PAPER NUMBER
3723	

1059 7590 06/04/2018
BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40th Floor
TORONTO, ON M5H 3Y2
CANADA

DATE MAILED: 06/04/2018

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.

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 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, 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. 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.

Notice of Allowability	Application No. 15/051,272	Applicant(s) CONRAD, WAYNE ERNEST	
	Examiner JOEL CRANDALL	Art Unit 3723	AIA (First Inventor to File) Status No

-- 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 03/28/2018.
☐ 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 1,2,6-10,12-15,19-23,25 and 27-34. 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) | 5. ☐ Examiner's Amendment/Comment |
| 2. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 6. ☒ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☒ Other <u>PTO-2323</u> . |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/CHRISTOPHER M. KOEHLER/
Primary Examiner, Art Unit 3726

/JOEL CRANDALL/
Examiner, Art Unit 3723

1. The present application is being examined under the pre-AIA first to invent provisions.
2. The drawings were received on 03/28/2018. These drawings are accepted.
3. The amendments to the specification were received on 03/28/2018. These amendments are accepted.
4. The Amendment filed 03/28/2018 has been entered. The previous drawing objection(s) have been withdrawn in light of the amended drawings. The previous 35 USC 112 rejection(s) of claim(s) 1, 2, 6-10, 12-15, 19-23, 25, and 27-34 are withdrawn in light of Applicant's amendments.

Reasons for Allowance

5. Claims 1, 2, 6-10, 12, 13, 27-29, and 33 are allowed.
6. The following is an examiner's statement of reasons for allowance: The prior art fails to anticipate or render obvious:

- "the cyclone axis extends through the pre-motor filter housing;"
- "a handle connected to the hand vacuum cleaner at first and second locations, wherein the first location is at a position of the suction motor in the main housing and a first handle portion is connected at the first location, wherein a projection of the first handle portion extends through the motor;" and
- "where the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber."

Devices such as Eriksson (US-3,870,486) fail to anticipate "a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is at a position of the suction motor in the main housing, the handle has a first handle portion provided at the first location, a projection of the first handle portion extends through the suction motor."

Art Unit: 3723

Were one to add a pull handle (i.e. "a handle connected to the hand vacuum cleaner at first and second locations") to the cover, then the claimed "the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber" would not be true. Additionally, the prior art fails to render obvious attaching a pull handle on the side of a vacuum cleaner such as Eriksson's, wherein the claimed projection of the first handle portion extending through the suction motor is true.

The prior art of Conrad (US-2008/0134460) fails to anticipate or render obvious the claimed "the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber." The handle 96 of Conrad is attached to the cover and therefore must be moved with the cover for opening the pre-motor filter housing where filter (48) is stored.

The prior art of Han et al. (US-2008/0263813) fails to anticipate or render obvious "a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is at a position of the suction motor in the main housing, the handle has a first handle portion provided at the first location, a projection of the first handle portion extends through the suction motor."

7. Claims 14, 15, 19-23, 25, 30, 31, 32, and 34 are allowed.

8. The following is an examiner's statement of reasons for allowance: The prior art fails to anticipate or render obvious:

- "a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is at a position of the suction motor in the main housing, the handle has a first handle portion provided at the first location, a projection of the first handle portion extends through the suction motor;"

- “wherein the first and second locations are provided other than on the openable pre-motor filter housing cover;”
- “the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber;” and
- “wherein the pre-motor filter housing cover is openable while the cyclone chamber is in fluid flow communication with the suction motor.”

Devices such as Eriksson (US-3,870,486) fail to anticipate “a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is at a position of the suction motor in the main housing, the handle has a first handle portion provided at the first location, a projection of the first handle portion extends through the suction motor.” Were one to add a pull handle (i.e. “a handle connected to the hand vacuum cleaner at first and second locations”) to the cover, then the claimed “the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber” would not be true. Additionally, the prior art fails to render obvious attaching a pull handle on the side of a vacuum cleaner such as Eriksson's, wherein the claimed projection of the first handle portion extending through the suction motor is true.

The prior art of Conrad (US-2008/0134460) fails to anticipate or render obvious the claimed “the pre-motor filter housing is openable without moving the handle with respect to the cyclone chamber.” The handle 96 of Conrad is attached to the cover and therefore must be moved with the cover for opening the pre-motor filter housing where filter (48) is stored.

The prior art of Han et al. (US-2008/0263813) fails to anticipate or render obvious “a handle connected to the hand vacuum cleaner at first and second locations wherein the first location is at a position of the suction motor in the main housing, the handle has a first handle portion

Art Unit: 3723

provided at the first location, a projection of the first handle portion extends through the suction motor.”

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.”

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOEL CRANDALL whose telephone number is (571)270-5947. The examiner can normally be reached on (Flex) Monday - Friday 7:30 - 5:00.

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, Joseph Hail can be reached on (571)272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3723

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOEL CRANDALL/
Examiner, Art Unit 3723

/CHRISTOPHER M. KOEHLER/
Primary Examiner, Art Unit 3726



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.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/051,272	09/25/2018	10080472	10452-P38886US04	1035

1059 7590 09/05/2018
BERESKIN & PARR LLP/S.E.N.C.R.L., s.r.l.
40 KING STREET WEST
40th Floor
TORONTO, ON M5H 3Y2
CANADA

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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 Application Information Retrieval (PAIR) WEB site (<http://pair.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 Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Omachron Intellectual Property Inc., Hampton, CANADA;
Wayne Ernest Conrad, 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.