

March 20, 2018

Mr. Dan Croal
IVEC Systems LLC
S83 W18745 Saturn Dr.
Muskego, WI 53150

RE: U.S. Patent Application for: GENERAL VENTILATION SYSTEM WITH
AUTOMATIC CLEANING CYCLE
Application Number: 14/790,887
Filing Date: June 2, 2015
Our File Number: 013487-0003

Dan:

I am pleased to report that as a result of the above-identified application, United States Patent No. 9,914,086 was issued on March 13, 2018. We are pleased to enclose the original ribbon copy of the patent.

All products manufactured and sold under the patent on and after its date of issuance until July 7, 2035, (as long as proper maintenance fees are paid) should bear a proper notice. Notice should be given by fixing the words "U.S. Patent" or the abbreviations "U.S. Pat.", together with the patent number directly on the product. Notice may be given as follows: "U.S. Patent 9,914,086." The failure to mark your products properly could affect your ability to collect damages from infringers.

Under the Patent Laws of the United States and as noted on the interior of the cover of the ribbon copy of the patent:

maintenance fees are due three years and six months, seven years and six months, and eleven years and six months after the date of this grant, or within a grace period of six months thereafter upon payment of a surcharge as provided by law. The amount, number, and timing of the maintenance fees required may be changed by law or regulation.

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Maintenance fees may not be paid more than six months prior to each respective due date, therefor your first maintenance fee is payable beginning **March 13, 2021**, the second is payable beginning **March 13, 2025**, and the third is payable beginning **March 13, 2029**. Failure to pay any of the required maintenance fees by their due dates will result in the expiration of the patent upon the first such failure.

Please contact me at your convenience if you have any questions.

Regards,

GODFREY & KAHN, S.C.

A handwritten signature in black ink, appearing to read "SDelsman", with a long horizontal flourish extending to the right.

Shane Delsman

SD:rld
Enclosure
18661941.1

The
United
States
of
America



**The Director of the United States
Patent and Trademark Office**

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Alexei Ivanov

Director of the United States Patent and Trademark Office



US009914086B2

(12) **United States Patent**
Bohrer et al.

(10) **Patent No.:** **US 9,914,086 B2**
(45) **Date of Patent:** **Mar. 13, 2018**

- (54) **GENERAL VENTILATION SYSTEM WITH AUTOMATIC CLEANING CYCLE**
- (71) Applicant: **IVEC Systems, LLC**, New Berlin, WI (US)
- (72) Inventors: **David Bohrer**, Mukwonago, WI (US); **Daniel Bohrer**, Brookfield, WI (US); **DuWayne Bohrer**, Muskego, WI (US); **Thomas Scott Rich**, Waukesha, WI (US)
- (73) Assignee: **IVEC Systems, LLC**, New Berlin, WI (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 5 days.

(21) Appl. No.: **14/790,887**
(22) Filed: **Jul. 2, 2015**

(65) **Prior Publication Data**
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(60) Provisional application No. 62/074,929, filed on Nov. 4, 2014.

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B01D 46/46 (2006.01)
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(52) **U.S. Cl.**
CPC **B01D 46/46** (2013.01); **B01D 46/0064** (2013.01); **B01D 46/0068** (2013.01); **B01D 46/0086** (2013.01); **B01D 46/0093** (2013.01); **B01D 46/0095** (2013.01); **B01D 46/429** (2013.01); **B01D 46/444** (2013.01); **B01D 46/446** (2013.01); **B01D 46/448** (2013.01);
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(58) **Field of Classification Search**
CPC B01D 46/0067; B01D 46/0068; B01D 46/0071; B01D 46/0072; B01D 46/0075; B01D 46/0086; B01D 46/444; B01D 46/446; B01D 46/46; B01D 46/0001; B01D 46/48; F24F 3/1603; F24F 2003/1614; F24F 2003/1639
USPC 55/298, 300
See application file for complete search history.

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Primary Examiner — Robert Clemente
(74) *Attorney, Agent, or Firm* — Shane Delsman; Godfrey & Kahn, S.C.

(57) **ABSTRACT**
A general ventilation and air filtration system includes an air filtration control unit that monitors and controls an air flow through an air filter and maintains the air flow at a target velocity set point. The target velocity set point is maintained by monitoring and regulating the power of a motor powering a blower that generates an air flow through the air filtration system and through the air filter. By regulating the air flow and maintaining it in the target set point, power consumption and air filter life are significantly improved.

11 Claims, 8 Drawing Sheets

