

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	MIDWEST MECHANICS, LLC	08/08/2017
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	WINFIELD SOLUTIONS, LLC	
<b>Street Address:</b>	1080 COUNTY ROAD F WEST	
<b>City:</b>	SHOREVIEW	
<b>State/Country:</b>	MINNESOTA	
<b>Postal Code:</b>	55126	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	15701143
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>	(612)340-8827	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>		
<b>Phone:</b>	612-340-2600	
<b>Email:</b>	coffey.krista@dorsey.com	
<b>Correspondent Name:</b>	DORSEY & WHITNEY LLP - MINNEAPOLIS ATTEN	
<b>Address Line 1:</b>	INTELLECTUAL PROPERTY PRACTICE GROUP - P	
<b>Address Line 2:</b>	50 SOUTH SIXTH STREET, SUITE 1500	
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55402-1498	
<b>ATTORNEY DOCKET NUMBER:</b>	P266643.US.01	
<b>NAME OF SUBMITTER:</b>	KRISTA COFFEY	
<b>SIGNATURE:</b>	/Krista Coffey/	
<b>DATE SIGNED:</b>	02/06/2018	
<b>Total Attachments: 9</b>		
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**PATENT ASSIGNMENT**

This Patent Assignment, effective as of August 8<sup>th</sup>, 2017, is made by **Midwest Mechanics, LLC**, a Wisconsin corporation, with offices at 500 Evergreen Street, Baldwin, WI 54002, ("Assignor"), and **Winfield Solutions, LLC**, a Delaware corporation, with offices at 1080 County Road F West, Shoreview, MN 55126 ("Assignee");

WHEREAS, Assignor owns certain new and useful processes, methods, machines, devices, systems, manufactures, and/or compositions of matter, or new and useful improvements thereof as represented in the WINFIELD SOLUTIONS INVENTION DISCLOSURE form to be filed with the project name "Flow diverting wind tunnel for environmental conditioning" which is attached hereto in Exhibit A and any other related inventions developed with Winfield Solutions, LLC since 2012 (the "**Inventions**");

WHEREAS, Assignor now owns the entire right, title and interest in the **Inventions**;

WHEREAS, Assignor desires to assign any and all right, title and interest to said **Inventions**, and any patent properties including provisional, non-provisional, continuation, continuation-in-part, divisional, international, foreign, regional and convention applications corresponding thereto, and any and all Letters Patent of the United States and countries and regions foreign thereto which may grant or have granted thereto or be lodged in relation thereto, any reissue or reexamination thereof or to be obtained therefor, any renewals, or substitutes thereof ("**Patent Properties**"), and any and all priority rights or priority claims, International Convention rights, any and all rights to collect past damages for infringement of any and all Letters Patent of the United States and countries and regions foreign thereto which may be published, which may grant, or have granted thereto or be lodged in relation thereto, and other benefits accruing to or to accrue to Assignor with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto (the "**Patent Rights**");

NOW THEREFORE, for good and valuable consideration to Assignor, the receipt and sufficiency of which are hereby acknowledged, Assignor has sold, assigned, and transferred and by these presents does hereby sell, assign and transfer to the said Assignee, and said Assignee's legal representatives, successors and assigns, any and all of the entire right, title and interest in and to the **Inventions**, the **Patent Rights**, and any and all Letters Patent to be obtained therefor;

UPON SAID CONSIDERATION, the Assignor hereby covenants and agrees with the said Assignee that it will not execute any writing or do any act whatsoever conflicting with these presents, and that it will, at any time upon request, without further or additional consideration, but at the expense of the said Assignee, execute such additional assignments and other writings and do such additional acts as said Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary

assistance in making application for and obtaining original, provisionals, non-provisionals, continuations, continuations-in-part, continuing prosecutions, divisionals, renewals, reissues, reexamined or extended Letters Patent of the United States, or of any and all foreign countries, on said **Inventions** and the **Patent Rights**, and execute confirmatory assignments or acknowledgments of this assignment as necessary for full enjoyment of the **Inventions** and the **Patent Rights** and for recording in foreign patent offices, and in enforcing any rights or choses in action accruing as a result of such **Inventions** and the **Patent Rights**, by giving testimony in any proceedings or transactions involving such **Inventions** and **Patent Rights**, and by executing preliminary statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of both parties;

UPON SAID CONSIDERATION, Assignor represents and warrants that Assignor has the right, title, and authority to execute this Assignment and to convey any and all right, title, and interest in the **Inventions** and **Patent Rights**, and that Assignor has not conveyed nor will convey hereafter all or part of the **Inventions** or **Patent Rights** to a third party;

ASSIGNOR HEREBY AUTHORIZES said Assignee, its successors, and assigns, or anyone it may properly designate, to apply for Letters Patent in the U.S. and any and all foreign countries and regions, in its own name if desired, and additionally to claim priority to the filing date of the **Patent Properties** and otherwise take advantage of the provisions of any international conventions.

IN WITNESS WHEREOF, the Assignor hereunto has executed this Assignment upon the date indicated below.

MIDWEST MECHANICS, LLC

Date: August 8, 2017

By:

Name:

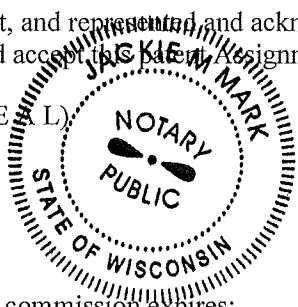
Title:

STATE OF WI )  
COUNTY OF St Croix ) ss.

On this 8 day of August, 2017, before me a Notary Public in and for said county, personally appeared Christopher E. Naujok the above-mentioned representative of the Assignor, Midwest Mechanics, who executed the foregoing patent

Assignment, and represented and acknowledged that he had the requisite corporate authority to execute and accept the Patent Assignment and the same was executed as a free act and deed.

(SEAL)



Jackie M Mark

Notary Public

My commission expires: 4-28-21

ACCEPTANCE OF ASSIGNMENT

The Assignee hereby acknowledges and accepts the foregoing assignment of rights by Assignor.

IN TESTIMONY WHEREOF, the Assignee, by its undersigned officer, confirms its acceptance on the date and in the place set forth below.

WINFIELD SOLUTIONS, LLC

Date: August 10, 2017

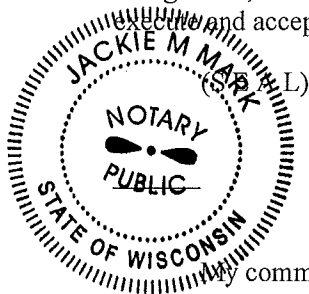
By: [Signature]

Name: Bret Bruggeman

Title: VP Mktg

STATE OF WI)  
COUNTY OF St Croix) ss.

On this 10 day of August, 2017, before me a Notary Public in and for said county, personally appeared Bret H Bruggeman, the above-mentioned representative of the Assignee, Winfield Solutions, LLC, who executed the foregoing patent Assignment, and represented and acknowledged that he had the requisite corporate authority to execute and accept this patent Assignment and the same was executed as a free act and deed.



[Signature]

Notary Public

My commission expires: 4-28-21

**EXHIBIT A:**

## WINFIELD SOLUTIONS INVENTION DISCLOSURE

Date: 06-01-2017

### Instructions

1. Use ink or type.
2. Do not erase. Errors may be lined through if initialed and dated.
3. Contact Gretta Hanson (x5-2831) with questions.

### 1. Name and Address of Inventor or all Inventors

William Hambleton, 1028 6th St Hudson, WI 54016  
Daniel C Bissell, 3921 Boston Circle, Eagan MN 55123

### 2. Disclosure

☒ Yes ☐ No Invention has been disclosed to non-Winfield personnel

If Yes, to whom?

Midwest Mechanics

Bill Hambleton was an employee of Midwest Mechanics at the time of invention.

Form of disclosure:

☐ Oral presentation ☐ Written format ☒ Prototypes

☐ Yes ☒ No Was there a confidentiality agreement existing at time of disclosure?

Date disclosed: August 2016

☐ Yes ☒ No Disclosure, publication or presentation planned?

If Yes:

When \_\_\_\_\_

Where \_\_\_\_\_

### 3. Title of Invention

Flow diverting wind tunnel for environmental conditioning.

### 4. List any key words to describe the invention

Open-Return Close-Return wind tunnel, Adjustable turning vanes

### 5. Type of Invention - Describe in general terms the objectives of the invention

Mechanical airflow handling, HVAC

### 6. Date of Conception



October 2016

7. Date Invention was First Successfully Tested

June 2017

8. Description of Invention (Use sketches and written explanations).

Describe in detail the steps that need to be taken to implement or construct the invention (use sketches and written explanations).

Traditionally, wind tunnels are considered in two design categories: open-return and closed-return configurations. Open return implies that the air traveling through the test section only passes one time through the measurement area and is expelled to the environment external to the tunnel facility (into the room, or outdoors). Closed return configurations continuously recirculate the airflow internally within the wind tunnel system.

The novelty of this design uses the existing infrastructure of a closed return wind tunnel (i.e. corner turning vanes and tunnel fan), to redirect the flow of the tunnel transforming the flow path from a closed-return circuit to an open-return circuit. In doing so, this allows for a flow path to refresh the airflow within the tunnel, effectively reconditioning (temperature/humidity) the internal tunnel air.



Wind Tunnel Layout  
August 2016.pptm

Are there alternate methods for implementation and/or construction?

Yes, a baffle can be placed within the tunnel instead of using rotating turning vanes.

9. Describe Advantages Over What Has Been Done Before

(i.e. flexibilities, economics, consistency and product quality and applications)

What is the "old" method?

Traditional closed return tunnels do not of a dedicated means of air exchange within the tunnel. Alternatively, make-up air within the tunnel could be supplied by external ductwork, but not in a way to utilize existing infrastructure of the wind tunnel.

What specific features of this invention make it more advantageous than the previous approaches?

This features allows the tunnel to transform between two modes of operation, and refresh/recondition the air within the tunnel.

What markets could use this invention?

Agriculture, Aerospace/Aerodynamics

10. Have any prototypes, samples, etc., been made of the invention?

X Yes         No

If so, when?

June 2016

11. State of development of invention

What is the state of development of the invention now?

Fully implemented into final design of new spray analysis wind tunnel.

Describe plans for continued future research and/or study on the invention.

Preliminary plans in place for scaled-up version of spray wind tunnel which may implement/revise this airflow design.

Wind Tunnel Layout August 2016.pptm:

