PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7279456

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHRISTOPHER KEPNER	05/27/2016
MICHAEL STARMAN	02/11/2016
DENNIS CHRISTOPHER HOWARD	02/11/2016

RECEIVING PARTY DATA

Name:	LOEC, INC.	
Street Address: 714 GREEN VALLEY ROAD		
City: GREENSBORO		
State/Country: NORTH CAROLINA		
Postal Code: 27408		

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	17204685	

CORRESPONDENCE DATA

Fax Number:

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.

Email: MN-IPMail@Dykema.com

Correspondent Name: REED R. HEIMBECHER / DYKEMA GOSSETT PLLC

Address Line 1: 90 SOUTH SEVENTH STREET

Address Line 2: 4000 WELLS FARGO CENTER

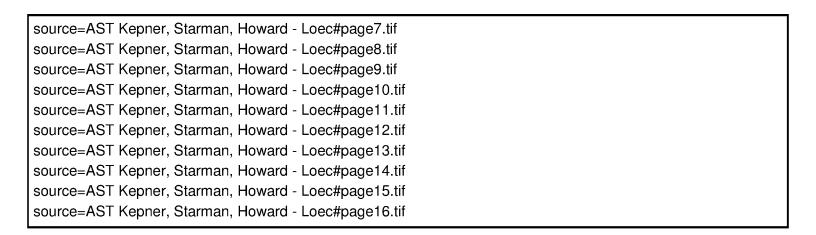
Address Line 4: MINNEAPOLIS, MINNESOTA 55402

ATTORNEY DOCKET NUMBER:	065887-001194
NAME OF SUBMITTER:	LAURA L DEBOUCHE
SIGNATURE:	/Laura DeBouche/
DATE SIGNED:	04/14/2022

Total Attachments: 14

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CONFIRMATORY ASSIGNMENT

WHEREAS, I, Christopher Kepner of 93 Shelley Avenue, Campbell, CA 95008 (hereinafter ASSIGNOR) am a named inventor for the inventions, patent applications, and/or patents set forth in Schedule A hereto;

NOW, THEREFORE, for and in consideration of good and valuable consideration, the receipt of which is hereby acknowledged, said ASSIGNOR hereby confirms that I have assigned and hereby assign unto LOEC, Inc. (hereinafter ASSIGNEE), its successors and assigns, my entire right, title, and interest in, to, and under the inventions, patent applications, and/or patents set forth in Schedule A hereto, including my entire right, title, and interest in, to, and under any and all patents obtained, or yet to be obtained, therefor throughout the world (hereinafter the Territory), and including all divisions, continuations, continuations-in-part, reissues, renewals or national and regional phase filings thereof, and any other patents that have issued and that may or shall issue therefor in said Territory, including all of ASSIGNOR's entire rights under any and all international conventions, and including the ASSIGNOR's right to sue for infringement, to seek injunctive relief, and to collect, inter alia, money damages, royalties, lost profits, attorney fees, and costs for any infringement of the intellectual property assets set forth in Schedule A, whether such infringement may have already occurred or may occur in the future;

AND **ASSIGNOR** HEREBY confirms that **ASSIGNEE**, its successors and assigns, or anyone it has properly designated, is authorized to apply for patents, in its own name if desired, throughout said **Territory**, and additionally is authorized to claim the filing date of any aforesaid application, and otherwise take advantage of the provisions of any and all international conventions;

AND **ASSIGNOR** HEREBY authorizes and requests any official of any State whose duty includes issuing patents, or other evidence or forms of any industrial property protection, on any aforesaid application, to issue same to said **ASSIGNEE**, its successors and assigns, in accordance herewith;

AND ASSIGNOR HEREBY covenants and agrees with ASSIGNEE, its successors and assigns, that ASSIGNOR had the full right to convey the entire interest confirmed herein, and that ASSIGNOR had not and has not executed, and will not execute, any agreement in conflict herewith, and that ASSIGNOR has not done and will not do any other act whatsoever conflicting with these presents, and that ASSIGNOR or ASSIGNOR's successors, assigns, executors, or administrators will at any time upon request, without further or additional consideration, but at the expense of ASSIGNEE, its successors and assigns, communicate to ASSIGNEE, its successors and assigns, any facts known to ASSIGNOR respecting said inventions, patent applications, and patents, and testify in any legal proceedings, sign any lawful papers, execute any original, divisional, continuation, continuation-in-part, and reissue applications, make any rightful oaths, and generally do such additional acts as ASSIGNEE, its successors and assigns, may deem necessary or desirable to obtain and enforce protection for said inventions throughout said Territory;

AND ASSIGNOR HEREBY FURTHER covenants and agrees that this Confirmatory Assignment is effective as to each invention, patent application, and patent set forth in Schedule A hereto as of at least as early as the filing date for each patent application listed in Schedule A; and ASSIGNOR hereby confirms title in said ASSIGNEE as of at least as early as each said filing date.

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ASSIGNOR's Initials

IN TESTIMONY WHEREOF, said ASSIGNOR hereunto sets ASSIGNOR 's hand on the under-mentioned day and year, and delivers this Confirmatory Assignment .				
5-27-16 (Date)	By: Christophy Norway (Signature of ASSIGNOR)			
	CHRISTOPHER J. KEPNER (Printed Name of ASSIGNOR)			
State of California				
County of				
Onbefore me personally appeared Christopher Kepner, who proved to me on the basis of				
satisfactory evidence to be the persons whose name is subscribed to this Assignment and acknowledged to me that				
he executed the same in his authorized capacity, and that by his signature on the instrument the persons, or the				
entity upon behalf of which the persons acted, executed the instrument.				
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true				
and correct.				
WITNESS my hand and official seal.	SEE ATTACHED ACKNOWLEDGEMENT FROM NOTARY			
Motary Public Signature	Notary Public Seal			

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ASSIGNOR's Initials

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of the individual who signed the validity of that document. IVEZ, Notary Public and Title of the Officer Person(s) whose name(s) (s) have the the instrument the person(s) ument.
and Title of the Officer Proon(s) whose name(s) (is/are in the instrument the person(s)
be/they executed the same in on the instrument the person(of
OF PERJURY under the laws a that the foregoing paragraph official seal.
ature of Notary Public
Iteration of the document or
document. of Date: のみれん
• — Title(s): ited □ General

SAID **ASSIGNEE** HEREBY acknowledges the aforesaid statements and accepts the aforesaid **Confirmatory Assignment**.

	LOEC, Inc.	
/Plada)	By: (Signature of ASSIGNEE Representative)	
(Date)	(aifuginia di vaaloure Kahiasaugina)	
	(Printed Name of ASSIGNEE Representative)	
	(Title of ASSIGNEE Representative)	
(Witness #1: Signature)	(Witness #2: Signature)	
(Witness #1: Printed Name)	(Witness #2: Printed Name)	

SCHEDULE A

Co	Application	Filing Date	Title	Inventors
US	61/839,589	26-Jun-13	METHOD, SYSTEM AND DEVICE FOR SWITCHLESS DETECTION CHARGING	Alarcon, Ramon Blau, David Kepner, Christopher
US	61/866,360	15-Aug-13	METHOD, SYSTEM AND DEVICE FOR SWITCHLESS DETECTION CHARGING	Alarcon, Ramon Blau, David Kepner, Christopher
wo	PCT/US2014/051368	15-Aug-14	METHOD, SYSTEM AND DEVICE FOR SWITCHLESS DETECTION AND CHARGING	Alarcon, Ramon Blau, David Kepner, Christopher
US	61/887,065	4-Oct-13	RETAIL ENGINE FOR ELECTRONIC SMOKING DEVICE	Kepner, Christopher Alarcon, Ramon
wo	PCT/US2014/059356	6-Oct-14	RETAIL ENGINE FOR ELECTRONIC SMOKING DEVICE	Alarcon, Ramon Kepner, Christopher
US	14/507,685	6-Oct-14	RETAIL ENGINE FOR ELECTRONIC SMOKING DEVICE	Alarcon, Ramon Kepner, Christopher
US	61/907,239	21-Nov-13	DEVICE, METHOD AND SYSTEM FOR LOGGING SMOKING DATA	Howard, Chris Starman, Michael Kepner, Chris Alarcon, Ramon
wo	PCT/US2014/066950	21-Nov-14	DEVICE, METHOD AND SYSTEM FOR LOGGING SMOKING DATA	Alarcon, Ramon Kepner, Chris Starman, Michael Howard, Dennis Christopher
US	14/550,717	21-Nov-14	DEVICE, METHOD AND SYSTEM FOR LOGGING SMOKING DATA	Kepner, Chris Alarcon, Ramon Starman, Michael Howard, Dennis Christopher

ASSIGNOR's Initials

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CONFIRMATORY ASSIGNMENT

WHEREAS, I, **Michael Starman** of 20879 Locust Drive, Los Gatos, CA 95033 (hereinafter **ASSIGNOR**) am a named inventor for the inventions, patent applications, and/or patents set forth in **Schedule A** hereto;

NOW, THEREFORE, for and in consideration of good and valuable consideration, the receipt of which is hereby acknowledged, said **ASSIGNOR** hereby confirms that I have assigned and hereby assign unto **LOEC**, **Inc.** (hereinafter **ASSIGNEE**), its successors and assigns, my entire right, title, and interest in, to, and under the inventions, patent applications, and/or patents set forth in **Schedule A** hereto, including my entire right, title, and interest in, to, and under any and all patents obtained, or yet to be obtained, therefor throughout the world (hereinafter the **Territory**), and including all divisions, continuations, continuations-in-part, reissues, or renewals thereof, and any other patents that have issued and that may or shall issue therefor in said **Territory**, including all of **ASSIGNOR**'s entire rights under any and all international conventions, and including the **ASSIGNOR**'s right to sue for infringement, to seek injunctive relief, and to collect, inter alia, money damages, royalties, lost profits, attorney fees, and costs for any infringement of the intellectual property assets set forth in **Schedule A**, whether such infringement may have already occurred or may occur in the future;

AND **ASSIGNOR** HEREBY confirms that **ASSIGNEE**, its successors and assigns, or anyone it has properly designated, is authorized to apply for patents, in its own name if desired, throughout said **Territory**, and additionally is authorized to claim the filing date of any aforesaid application, and otherwise take advantage of the provisions of any and all international conventions;

AND **ASSIGNOR** HEREBY authorizes and requests any official of any State whose duty includes issuing patents, or other evidence or forms of any industrial property protection, on any aforesaid application, to issue same to said **ASSIGNEE**, its successors and assigns, in accordance herewith;

AND ASSIGNOR HEREBY covenants and agrees with ASSIGNEE, its successors and assigns, that ASSIGNOR had the full right to convey the entire interest confirmed herein, and that ASSIGNOR had not and has not executed, and will not execute, any agreement in conflict herewith, and that ASSIGNOR has not done and will not do any other act whatsoever conflicting with these presents, and that ASSIGNOR or ASSIGNOR's successors, assigns, executors, or administrators will at any time upon request, without further or additional consideration, but at the expense of ASSIGNEE, its successors and assigns, communicate to ASSIGNEE, its successors and assigns, any facts known to ASSIGNOR respecting said inventions, patent applications, and patents, and testify in any legal proceedings, sign any lawful papers, execute any original, divisional, continuation, continuation-in-part, and reissue applications, make any rightful oaths, and generally do such additional acts as ASSIGNEE, its successors and assigns, may deem necessary or desirable to obtain and enforce protection for said inventions throughout said Territory:

AND **ASSIGNOR** HEREBY FURTHER covenants and agrees that this **Confirmatory Assignment** is effective as to each invention, patent application, and patent set forth in **Schedule A** hereto as of at least as early as the filling date for each patent application listed in **Schedule A**; and **ASSIGNOR** hereby confirms title in said **ASSIGNEE** as of at least as early as said filling date.

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ASSIGNOR's Jahitals

IN TESTIMONY WHEREOF, said ASS day and year, and delivers this Confirmatory A	SIGNOR hereunto sets ASSIGNOR's hand on the under-mentioned assignment.
Feb 11 th , 2016 (Date)	By:
	Michael Starman (Printed Name of ASSIGNOR)
State of California	
County of SAME CURS	
On <u>Fus. III, 2010</u> before me personally a	appeared Michael Starman , who proved to me on the basis of
satisfactory evidence to be the persons whose n	name is subscribed to this Assignment and acknowledged to me that
he executed the same in his authorized capacity	y, and that by his signature on the instrument the persons, or the
entity upon behalf of which the persons acted, e	executed the instrument.
I certify under PENALTY OF PERJURY under the	ne laws of the State of California that the foregoing paragraph is true
and correct.	
WITNESS my hand and official seal.	FERSANDO CROCS Commission # 2050326 Notary Profile - California Santa Clara County

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ASSIGNOR'S Initials

Notary Public Signature

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Notary Public Seal

SAID **ASSIGNEE** HEREBY acknowledges the aforesaid statements and accepts the aforesaid **Confirmatory Assignment**.

	LUEC, inc.	
(Date)	By: (Signature of ASSIGNEE Representative)	
	(Printed Name of ASSIGNEE Representative)	
	(Title of ASSIGNEE Representative)	
(Witness #1: Signature)	(Witness #2: Signature)	
(Witness #1: Printed Name)	(Witness #2: Printed Name)	

SCHEDULE A

Co	Application	Filing Date	Title	Inventors
US	61/992,669	13-May-14	CHARACTERIZATION AND INTELLIGENT CHARGING OF ELECTRONIC CIGARETTES	Alarcon, Ramon Starman, Michael
wo	PCT/US2015/030632	13-May-15	CHARACTERIZATION AND INTELLIGENT CHARGING OF ELECTRONIC CIGARETTES	Alarcon, Ramon Starman, Michael
US	14/711,593	13-May-15	CHARACTERIZATION AND INTELLIGENT CHARGING OF ELECTRONIC CIGARETTES	Starman, Michael Alarcon, Ramon
US	61/836,923	19-Jun-13	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
wo	PCT/US2014/043253	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
CN	201480035481.8	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
AU	2014281351	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
CA	2,916,242	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
IN	201647001494	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
JP	US2014/043253	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
MX	US2014/043253	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
RU	2016101273	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
KR	10-2016-7001524	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Alarcon, Ramon Starman, Michael
EP	14813245.9	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Starman, Michael Alarcon, Ramon
BR	BR112015032001-5	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Starman, Michael Alarcon, Ramon
ZA	2016/00046	19-Jun-14	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Starman, Michael Alarcon, Ramon
US	14/899,103	16-Dec-15	DEVICE AND METHOD FOR SENSING MASS AIRFLOW	Starman, Michael Alarcon, Ramon



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Co	Application	Filing Date	Title	Inventors
US	61/907,239	21-Nov-13	DEVICE, METHOD AND SYSTEM FOR LOGGING SMOKING DATA	Howard, Chris Starman, Michael Kepner, Chris Alarcon, Ramon
wo	PCT/US2014/066950	21-Nov-14	DEVICE, METHOD AND SYSTEM FOR LOGGING SMOKING DATA	Alarcon, Ramon Kepner, Chris Starman, Michael Howard, Dennis Christopher
US	14/550,717	21-Nov-14	DEVICE, METHOD AND SYSTEM FOR LOGGING SMOKING DATA	Kepner, Chris Alarcon, Ramon Starman, Michael Howard, Dennis Christopher
US	14/834,238	24-Aug-15	METHOD, SYSTEM AND DEVICE FOR CONTROLLING A HEATING ELEMENT	Starman, Michael Alarcon, Ramon



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CONFIRMATORY ASSIGNMENT

WHEREAS, I, **Dennis Christopher Howard** of 6192 Moores Creek Drive, Summerfield, NC 27358 (hereinafter **ASSIGNOR**) am a named inventor for the inventions, patent applications, and/or patents set forth in **Schedule A** hereto:

NOW, THEREFORE, for and in consideration of good and valuable consideration, the receipt of which is hereby acknowledged, said **ASSIGNOR** hereby confirms that I have assigned and hereby assign unto **Lorillard Tobacco Company** (hereinafter **ASSIGNEE**), its successors and assigns, my entire right, title, and interest in, to, and under the inventions, patent applications, and/or patents set forth in **Schedule A** hereto, including my entire right, title, and interest in, to, and under any and all patents obtained, or yet to be obtained, therefor throughout the world (hereinafter the **Territory**), and including all divisions, continuations, continuations-in-part, reissues, or renewals thereof, and any other patents that have issued and that may or shall issue therefor in said **Territory**, including all of **ASSIGNOR**'s entire rights under any and all international conventions, and including the **ASSIGNOR**'s right to sue for infringement, to seek injunctive relief, and to collect, inter alla, money damages, royalties, lost profits, attorney fees, and costs for any infringement of the intellectual property assets set forth in **Schedule A**, whether such infringement may have already occurred or may occur in the future;

AND **ASSIGNOR** HEREBY confirms that **ASSIGNEE**, its successors and assigns, or anyone it has properly designated, is authorized to apply for patents, in its own name if desired, throughout said **Territory**, and additionally is authorized to claim the filing date of any aforesaid application, and otherwise take advantage of the provisions of any and all international conventions:

AND **ASSIGNOR** HEREBY authorizes and requests any official of any State whose duty includes issuing patents, or other evidence or forms of any industrial property protection, on any aforesaid application, to issue same to said **ASSIGNEE**, its successors and assigns, in accordance herewith;

AND ASSIGNOR HEREBY covenants and agrees with ASSIGNEE, its successors and assigns, that ASSIGNOR had the full right to convey the entire interest confirmed herein, and that ASSIGNOR had not and has not executed, and will not execute, any agreement in conflict herewith, and that ASSIGNOR has not done and will not do any other act whatsoever conflicting with these presents, and that ASSIGNOR or ASSIGNOR's successors, assigns, executors, or administrators will at any time upon request, without further or additional consideration, but at the expense of ASSIGNEE, its successors and assigns, communicate to ASSIGNEE, its successors and assigns, any facts known to ASSIGNOR respecting said inventions, patent applications, and patents, and testify in any legal proceedings, sign any lawful papers, execute any original, divisional, continuation, continuation-in-part, and reissue applications, make any rightful oaths, and generally do such additional acts as ASSIGNEE, its successors and assigns, may deem necessary or desirable to obtain and enforce protection for said inventions throughout said Territory:

AND **ASSIGNOR** HEREBY FURTHER covenants and agrees that this **Confirmatory Assignment** is effective as to each invention, patent application, and patent set forth in **Schedule A** hereto as of at least as early as the filing date for each patent application listed in **Schedule A**; and **ASSIGNOR** hereby confirms title in said **ASSIGNEE** as of at least as early as said filing date.

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ASSIGNOR's Initials

Page 1 of 4

IN TESTIMONY WHEREOF, so day and year, and delivers this Confirm . $2 - 11 - 2016$				
(Date)	By: (Signature of ASSIGNOR)			
	DENNIS CHRISTOPHER HOWALD			
	(Printed Name of ASSIGNOR)			
State of California				
County of Same CLASA				
On Fos. 11, 2016 before me pers	sonally appeared Dennis Christopher Howard , who proved to me on the			

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Page 2 of 4

basis of satisfactory evidence to be the persons whose name is subscribed to this Assignment and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the persons, or

WITNESS my hand and official seals

PERNAMBO CROCE Commission # 2050328 Matery Pel Bo - California Santa Clara County My Compt. Expires One 24, 2017.

Notary Public Signature

Notary Public Seal

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the entity upon behalf of which the persons acted, executed the instrument.

SAID **ASSIGNEE** HEREBY acknowledges the aforesaid statements and accepts the aforesaid **Confirmatory Assignment**.

Lorillard Tobacco Company

(Date) By: (Signature of ASSIGNEE Representative) (Printed Name of ASSIGNEE Representative) (Title of ASSIGNEE Representative) (Witness #1: Signature) (Witness #2: Signature) (Witness #2: Printed Name)

ASSIGNOR's Initials

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SCHEDULE A

Со	Application	Filing Date	Title	Inventors
US	61/907,239	21-Nov-13	DEVICE, METHOD AND SYSTEM FOR LOGGING SMOKING DATA	Howard, Dennis Christopher Starman, Michael Kepner, Chris Alarcon, Ramon
US	61/837,860	21-Jun-13	CLINICAL INTERFACE	Howard, Dennis Christopher Alarcon, Ramon
CN	201420131795.5	21-Mar-14	ELECTRONIC CIGARETTE CHARGING PACK WITH STABILIZATION SLEEVE	Howard, Dennis Christopher Alarcon, Ramon
wo	PCT/US2014/043742	23-Jun-14	CLINICAL INTERFACE	Alarcon, Ramon Howard, Dennis Christopher
US	14/550,717	21-Nov-14	DEVICE, METHOD AND SYSTEM FOR LOGGING SMOKING DATA	Kepner, Chris Alarcon, Ramon Starman, Michael Howard, Dennis Christopher
wo	PCT/US2014/066950	21-Nov-14	DEVICE, METHOD AND SYSTEM FOR LOGGING SMOKING DATA	Alarcon, Ramon Kepner, Chris Starman, Michael Howard, Dennis Christopher
US	14/899,098	16-Dec-15	CLINICAL INTERFACE	Howard, Dennis Christopher Alarcon, Ramon
CN	US2014/043742	23-Jun-14	CLINICAL INTERFACE	Alarcon, Ramon Howard, Dennis Christopher
EP	14813272.3	23-Jun-14	CLINICAL INTERFACE	Howard, Dennis Christopher Alarcon, Ramon

ASSIGNOR's Initials

RECORDED: 05/05/2022

PATENT