504925826 05/22/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4972572

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MARK ALLAN NELSON	04/30/2018
ASHISH B. TAJPURIA	04/30/2018
KAREN LEA MACQUEEN	05/02/2018
STEPHEN PHILIP SELFRIDGE	05/14/2018
STEVEN MICHAEL TWOMBLY	04/30/2018

RECEIVING PARTY DATA

Name:	BANK OF AMERICA CORPORATION
Street Address:	214 NORTH TRYON STREET
Internal Address:	MAILCODE: NC1-027-20-05
City:	CHARLOTTE
State/Country:	NORTH CAROLINA
Postal Code:	28255

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15986225

CORRESPONDENCE DATA

Fax Number: (704)339-5800

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.

Phone: 7043311000

damionnenobles@mvalaw.com, iplaw@mvalaw.com, Email:

bacdocket@mvalaw.com

Correspondent Name: MOORE & VAN ALLEN PLLC FOR BOFA

Address Line 1: 3015 CARRINGTON MILL BOULEVARD, STE 400

Address Line 2: POST OFFICE BOX 13706

Address Line 4: RESEARCH TRIANGLE PA, NORTH CAROLINA 27709

ATTORNEY DOCKET NUMBER:	8410US1.014033.3219
NAME OF SUBMITTER:	NICHOLAS C. RUSSELL
SIGNATURE:	/Nicholas C. Russell/
DATE SIGNED:	05/22/2018

PATENT REEL: 045873 FRAME: 0660 504925826

This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 10

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PATENT REEL: 045873 FRAME: 0661

PMN: 8410US1

Title of Invention	TWO FACTOR VEHICLE AUTHENTICATION
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
The above-ide	entified 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.
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or of not more than five (5) years, or both.
	ASSIGNMENT
Carolina (City, filed on even hereby autho	Mark Allan Nelson ("Assignor"), a citizen of the United States of America (Country), residing in Waxhaw, North State/Province) have invented the above invention. If the following lines are blank, the above application was date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor below, rize the attorneys for Bank of America to insert the filing date and application number below after they an and prior to filing the recordation.
	U.S. Application No, filed, filed
Delaware, and title and inter	NK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of dhaving its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, est in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the of America, and in any and all countries foreign thereto:
payment for the said Assignor, representative countries for ecountries in it entitled under Letters Patent continuationsecrets, confiduationize and Patent on said right, title and agree that I was successors, as will execute a testify in any	FORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or he making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal es, the full and exclusive right, title and interest for the territory of the United States of America and all sign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign sown name and to claim any priority rights for such foreign applications to which such applications are rinternational conventions, treaties, or otherwise), in and to said inventions and in and to all applications and granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, reviews, continuations, in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade dential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire a interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I ill without further consideration, but at the expense of Assignee, communicate to said Assignee, or its signs, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I ill non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, egal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all

Date: April 30, 2018

PMN: 8410US1

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: MARK ALLAN NEKSON

Signature:

[Page 2 of 2]

PMN: 8410US1

Title of Invention	TWO FACTOR VEHICLE AUTHENTICATION
As the below	named inventor, I hereby declare that:
This declarati	
	United States application or PCT international application number
The above-ide	entified 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.
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or tof not more than five (5) years, or both.
	ASSIGNMENT
California (Cit was filed on e below, hereb	Ashish B. Tajpuria ("Assignor"), a citizen of the United States of America (Country), residing in San Francisco, y, State/Province) have invented the above invention. If the following lines are blank, the above application ven date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor y authorize the attorneys for Bank of America to insert the filing date and application number below after they an and prior to filing the recordation.
	U.S. Application No. <u>15/986,225</u> , filed <u>May 22, 2018</u> .
Delaware, and title and inter	NK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of d having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, est in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the of America, and in any and all countries foreign thereto:
payment for the said Assignor, representative countries for a countries in it entitled under Letters Patent continuation-secrets, confinationize and Patent on said right, title and agree that I was successors, as will execute a testify in any	FORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal es, the full and exclusive right, title and interest for the territory of the United States of America and all eign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign so wn name and to claim any priority rights for such foreign applications to which such applications are rinternational conventions, treaties, or otherwise), in and to said inventions and in and to all applications and to granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, reviews, continuations, in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade dential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby a request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters of inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire of interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its usigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I ll non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all

PMN: 8410US1

WARNING:

LEGAL NAME OF INVENTOR		
Inventor: ASHISH B. TAJPURIA	Date:	April 30, 2018
Signature: Ashish Tajpuria		

PMN: 8410US1

Title of Invention	TWO FACTOR VEHICLE AUTHENTICATION	
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	
The above-ide	entified 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.	
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or of not more than five (5) years, or both.	
	ASSIGNMENT	
Ohio (City, Sta filed on even hereby author	Karen Lea MacQueen ("Assignor"), a citizen of the United States of America (Country), residing in Lyndhurst, ate/Province) have invented the above invention. If the following lines are blank, the above application was date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor below, rize the attorneys for Bank of America to insert the filing date and application number below after they and prior to filing the recordation. U.S. Application No	
	U.S. Application No, filed	
Delaware, and title and inter	NK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of dhaving its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, est in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the of America, and in any and all countries foreign thereto:	
NOW, THEREFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal representatives, the full and exclusive right, title and interest for the territory of the United States of America and all countries foreign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, reviews, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, confidential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and gene		

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WARNING:

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LEGAL NAME OF INVENTOR	
Inventor: KAREN LEA MACQUEEN	Date: <u>5/3/18</u>
Signature: Karen Lea Mac Ouse	1

PMN: 8410US1

Title of Invention	TWO FACTOR VEHICLE AUTHENTICATION
As the below na	named inventor, I hereby declare that:
This declaration is directed to:	The attached application, or
	United States application or PCT international application number
The above-ider	ntified 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.
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or of not more than five (5) years, or both.
	ASSIGNMENT
Huntersville, No above applicati assignment, I, a	Stephen Philip Selfridge ("Assignor"), a citizen of the United States of America (Country), residing in Jorth Carolina (City, State/Province) have invented the above invention. If the following lines are blank, the cion was filed on even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and application after they become known and prior to filing the recordation.
	U.S. Application No, filed, filed
Delaware, and title and interes	NK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, est in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the of America, and in any and all countries foreign thereto:
payment for the said Assignor, to representatives countries foreign countries in its entitled under Letters Patent gontinuation-in secrets, confide authorize and reparent on said right, title and if agree that I will successors, assimil execute all testify in any leteratives.	ORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or ne making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal es, the full and exclusive right, title and interest for the territory of the United States of America and all ign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign is own name and to claim any priority rights for such foreign applications to which such applications are international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, reviews, continuations, in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade lential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I ll without further consideration, but at the expense of Assignee, communicate to said Assignee, or its signs, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I l non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, egal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all

PMN: 8410US1

WARNING:

purposes are not retained in the application me and theresore	are not pasticly available.	,,,,,,,,,,,
LEGAL NAME OF INVENTOR		
Inventor: STEPHEN PHILIP SELFRIDGE	Date: 5/14/18	
Signature: Start Suffer		

PMN: 8410US1

Title of Invention	TWO FACTOR VEHICLE AUTHENTICATION		
As the below named inventor, I hereby declare that:			
This declaration			
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.			
	ASSIGNMENT		
WHEREAS, I, Steven Michael Twombly ("Assignor"), a citizen of the United States of America (Country), residing in Saco, Maine (City, State/Province) have invented the above invention. If the following lines are blank, the above application was filed on even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and application number below after they become known and prior to filing the recordation. U.S. Application No			
WHEREAS, BANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of Delaware, and having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, title and interest in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the United States of America, and in any and all countries foreign thereto:			
NOW, THEREFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal representatives, the full and exclusive right, title and interest for the territory of the United States of America and all countries foreign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, reviews, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, confidential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and gene			

PMN: 8410US1

WARNING:

LEGAL NAME OF INVENTOR		
Inventor: STEVEN ANCHAEL TWO	MBY Winebla	Date: <u>4/20/18</u>
