11/13/2018 505188556

PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| CHRISTOPHER RAWSKY | 10/25/2018 |
| BERNARD NEFCY | 10/29/2018 |
| DANIEL COLVIN | 10/29/2018 |

RECEIVING PARTY DATA

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| Internal Address: | 330 TOWN CENTER DRIVE |
| City: | DEARBORN |
| State/Country: | MICHIGAN |
| Postal Code: | 48126 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16189505 |

CORRESPONDENCE DATA

Fax Number: (971)271-8021

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.

971-271-8020 Phone: Email: Tapia@mccrus.com **Correspondent Name:** MCCOY RUSSELL LLP

Address Line 1: 806 S.W. BROADWAY, SUITE 600 Address Line 4: PORTLAND, OREGON 97205

| ATTORNEY DOCKET NUMBER: | 84047355 |
|-------------------------|-------------------|
| NAME OF SUBMITTER: | ASHLEY R. TAPIA |
| SIGNATURE: | /Ashley R. Tapia/ |
| DATE SIGNED: | 11/13/2018 |

Total Attachments: 3

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| Attorney Docket Number | 84047355 |
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ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY, PROVISIONAL OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

| Title of Invention | SYSTEMS AND METHODS FOR OPERATING A HYBRID VEHICLE WITH A MANUAL SHIFT TRANSMISSION |
|---|--|
| This declaration is direct | |
| United | States application, or States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and then they become known.) |
| number mio ims torm wi | ien tiley become known. |
| The above-identified app | lication was made or authorized to be made by me. |
| I hereby state that I have including the claims. | re reviewed and understand the contents of the specification in the above-identified application, |
| I believe that I am the ori | ginal inventor or an original joint inventor of a claimed invention in the application. |
| continuation-in-part app | o disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for lications, material information which became available between the filing date of the prior nal or PCT international filing date of the continuation-in-part application. |
| Pursuant to my employment agreement heretofore made or by contractual obligation, I do sell, assign and set over unto FORD GLOBAL-TECHNOLOGIES, LLC, a Ford Motor Company subsidiary, organized and existing by virtue of the laws of the State of Delaware, having its principal place of business at Dearborn, County of Wayne, and State of Michigan, hereinafter referred to as the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and interest, domestic and foreign, in and to the inventions and discoveries in the above-identified invention including the right of the ASSIGNEE, its successors, assigns or other legal representatives to make applications and to receive Letters Patent for the inventions and discoveries in any and all countries, entities and intergovernmental organizations, in its or their own name or names, or in my name, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's attorney to insert the serial/application number and filing date of the application to receive Letters Patent herein: Serial No. 16/189,505, Filing DateNovember 13, 2018), and I hereby sell, assign and set over to the ASSIGNEE, its successors, assigns or other legal representatives, all rights of priority, including any provisional applications, in and to the inventions and discoveries in any and all countries, entities and intergovernmental organizations including all applications claiming benefit of the filing date hereof, continuations, continuations-in-part, divisionals, reexaminations and reissue applications. | |
| including applications for organizations, and to per | myself, my heirs, successors, assigns or other legal representatives to execute any and all papers, or Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental arform any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives becure thereto the rights herein sold, assigned and set over. |
| And I hereby represent a | nd warrant that I have not granted any rights inconsistent with the rights granted herein. |
| or imprisonment of not r | nat any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine nore than five (5) years or both. |
| LEGAL NAME OF INV | ENTOR Date: 10/25 /18 |
| | air Rausky |
| | a Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. on form for each additional inventor. |

| Attorney Docket Number | 84047355 |
|------------------------|----------|

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| This declaration is direct | ed to: |
| | ached application, or States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and they become known.) |
| The above-identified app | lication was made or authorized to be made by me. |
| I hereby state that I hav including the claims. | e reviewed and understand the contents of the specification in the above-identified application, |
| I believe that I am the ori | ginal inventor or an original joint inventor of a claimed invention in the application. |
| continuation-in-part appl | disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for lications, material information which became available between the filing date of the prior all or PCT international filing date of the continuation-in-part application. |
| of the State of Delaware hereinafter referred to as interest, domestic and for of the ASSIGNEE, its su for the inventions and disname or names, or in my insert the serial/applicat 16/189,505 ASSIGNEE, its success applications, in and to the | nent agreement heretofore made or by contractual obligation, I do sell, assign and set over unto NOLOGIES, LLC, a Ford Motor Company subsidiary, organized and existing by virtue of the laws, having its principal place of business at Dearborn, County of Wayne, and State of Michigan, the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and eign, in and to the inventions and discoveries in the above-identified invention including the right coessors, assigns or other legal representatives to make applications and to receive Letters Patent acoveries in any and all countries, entities and intergovernmental organizations, in its or their own name, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's attorney to ion number and filing date of the application to receive Letters Patent herein: Serial No. ——————————————————————————————————— |
| including applications for organizations, and to perf | hyself, my heirs, successors, assigns or other legal representatives to execute any and all papers, Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental form any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives cure thereto the rights herein sold, assigned and set over. |
| And I hereby represent an | d warrant that I have not granted any rights inconsistent with the rights granted herein. |
| or imprisonment of not in- | t any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine one than five (5) years or both. |
| LEGAL NAME OF INVE Inventor: Bernard N | |
| Signature: | Date: 10/29/2018 |
| Signature. | - Will |
| Note: An Application Data Use an additional declaration | Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form, form for each additional inventor. |

RECORDED: 11/13/2018

Please direct all correspondence to customer number: 36865

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| 84047355 |

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY, PROVISIONAL OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

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| | WITH A MANUAL SHIFT TRANSMISSION |
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| United | ached application, or States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and |
| number into this form wh | en they become known.) |
| The above-identified app | lication was made or authorized to be made by me. |
| I hereby state that I hav including the claims. | e reviewed and understand the contents of the specification in the above-identified application, |
| I believe that I am the ori | ginal inventor or an original joint inventor of a claimed invention in the application. |
| I am aware of the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application. | |
| FORD GLOBAL TECH? of the State of Delaware hereinafter referred to as interest, domestic and for of the ASSIGNEE, its surfor the inventions and disname or names, or in my insert the serial/applicat 16/189,505 ASSIGNEE, its success applications, in and to the including all application reexaminations and reissue. And I hereby agree for reincluding applications for | nyself, my heirs, successors, assigns or other legal representatives to execute any and all papers, r Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental |
| organizations, and to perform any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives may deem necessary to secure thereto the rights herein sold, assigned and set over. | |
| And I hereby represent and warrant that I have not granted any rights inconsistent with the rights granted herein. | |
| 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. | |
| LEGAL NAME OF INV | 11 " 1 "100 " 1 1 1 1 |
| Inventor: Daniel Co | lvin Date: |
| Signature: WO | unu own |
| Note: An Application Data | Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. |
| tion of distance decisions | Silver (I I COMP 14 to Equivalent), according naming the Come inventive entry, thus accompany this com- |