504702845 12/22/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4749567

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| ANSELM HOPF | 12/19/2017 |
| GUENTER BARTSCH | 12/20/2017 |
| STEFAN QUIRING | 12/19/2017 |
| FLORIAN HUTH | 12/19/2017 |

RECEIVING PARTY DATA

| Name: | FORD GLOBAL TECHNOLOGIES, LLC |
|-------------------|--------------------------------|
| Street Address: | FAIRLANE PLAZA SOUTH SUITE 800 |
| Internal Address: | 330 TOWN CENTER DRIVE |
| City: | DEARBORN |
| State/Country: | MICHIGAN |
| Postal Code: | 48126 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15853520 |

CORRESPONDENCE DATA

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| ATTORNEY DOCKET NUMBER: | 83912618 |
|-------------------------|-------------------------|
| NAME OF SUBMITTER: | CARALINA M. CASPERSON |
| SIGNATURE: | /Caralina M. Casperson/ |
| DATE SIGNED: | 12/22/2017 |

Total Attachments: 4

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| Attorney Docket Num | nher X491261X |
|------------------------|-----------------|
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| Title of Invention | INTERNAL COMBUSTION ENGINE WITH CYLINDER HEAD | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|
| This declaration is direct | ed to: | | | | | | | | | | | |
| The attacked application, or United 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 | fication 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 and 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. 15/853,520 Filing Date December 22, 2017, which claims priority to German Patent Application No. 102017200002.3, filed on January 2, 2017, and to German Patent Application No. 102017200001.5, filed on January 2, 2017), 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. | | | | | | | | | | | | |
| And I hereby agree for myself, my heirs, successors, assigns or other legal representatives to execute any and all papers, including applications for 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 a | nd warrant that I have not granted any rights inconsistent with the rights granted herein. | | | | | | | | | | | |
| or imprisonment of not n | at 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 Inventor: <u>Anselm I</u> | | | | | | | | | | | | |
| Signature: | 494 | | | | | | | | | | | |
| | a Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. | | | | | | | | | | | |

| Attorney Docket Number | 00010010 |
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| SHORREY HOCKEL NHIDRER | [85912018 |
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| 1 Hie of Invention | INTERNAL COMBUSTION ENGINE WITH CYLINDER HEAD | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|
| This declaration is directed | ed to: | | | | | | | | | | | |
| United | sached application, or States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and ten they become known.) | | | | | | | | | | | |
| The above-identified app | lication was made or authorized to be made by me. | | | | | | | | | | | |
| I hereby state that I havincluding 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 app | 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 TECHI of the State of Delaware hereinafter referred to as interest, domestic and for of the ASSIGNEE, its suffor the inventions and diname or names, or in my insert the serial/application 15/853,520 Application No. 1020172 on January 2, 2017), as representatives, all rights and all countries, entities hereof, continuations, continuations, continuation applications for a including applications for | 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 meer the serial/application number and filing date of the application to receive Letters Patent herein: Serial No. 15/853,520 Filing Date December 22, 2017, which claims priority to German Patent Application No. 102017200002.3, filed on January 2, 2017, and to German Patent Application No. 102017200001.5, filed on January 2, 2017), 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. And I hereby agree for myself, my heirs, successors, assigns or other legal representatives to execute any and all papers, including applications, and to perform any and all facts which the ASSIGNEE, its successors, assigns or other legal representatives | | | | | | | | | | | |
| And I hereby represent as | nd warrant that I have not granted any rights inconsistent with the rights granted herein. | | | | | | | | | | | |
| or imprisonment of not m | at any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine tore than five (5) years or both. | | | | | | | | | | | |
| LEGAL NAME OF INV | | | | | | | | | | | | |
| Inventor: Guenter E | Date: 4.5.7.2.4.5.4. | | | | | | | | | | | |
| orginature. | W. C. | | | | | | | | | | | |
| | s Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. In form for each additional inventor. | | | | | | | | | | | |

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| Title of Invention | INTERNAL COMBUSTION ENGINE WITH CYLINDER HEAD | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|
| This declaration is direct | ed to: | | | | | | | | | | | |
| ☐ United | ached application, or States application or PCT international application number | | | | | | | | | | | |
| The above-identified application 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 ications, material information which became available between the filing date of the prior al or PCT international filing date of the continuation-in-part application. | | | | | | | | | | | |
| FORD GLOBAL TECHT of the State of Delaware hereinafter referred to as interest, domestic and for of the ASSIGNEE, its sufor the inventions and disname or names, or in my insert the serial/applicat 15/853,520 Application No. 1020172 on January 2, 2017), an representatives, all rights and all countries, entities hereof, continuations, cor And I hereby agree for n including applications for organizations, and to period the state of t | tent agreement heretofore made or by contractual obligation, I do sell, assign and set over unto IOLOGIES, 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 accessors, assigns or other legal representatives to make applications and to receive Letters Patent coveries 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 filling date of the application to receive Letters Patent herein: Serial No. ——————————————————————————————————— | | | | | | | | | | | |
| | cure thereto the rights herein sold, assigned and set over. d warrant that I have not granted any rights inconsistent with the rights granted herein. | | | | | | | | | | | |
| | | | | | | | | | | | | |
| I hereby acknowledge that or imprisonment of not m | t any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine ore than five (5) years or both. | | | | | | | | | | | |
| LEGAL NAME OF INVI | NTOR S S S | | | | | | | | | | | |
| Inventor: <u>Stefan Qui</u> | ring Date; // Jec < 072 | | | | | | | | | | | |
| Signature: | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | Sheel TPTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form, form for each additional inventor | | | | | | | | | | | |

| A 44 a 22 a 4 a 7 a -1 a 4 3 7 a 1 a 1 | 00010710 | |
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| Attorney Docket Number | 1 83912618 | |
| | 1 00 2 120 10 | |

| Title of Invention | INTERNAL COMBUSTION ENGINE WITH CYLINDER HEAD |
|---|---|
| This declaration is directed to: | |
| ☐ United | ached application, or States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and en they become known.) |
| The above-identified application was made or authorized to be made by me. | |
| I hereby state that I have including the claims. | e reviewed and understand the contents of the specification in the above-identified application, |
| I believe that I am the original | 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 ications, material information which became available between the filing date of the prior al or PCT international filing date of the continuation-in-part application. |
| FORD GLOBAL TECHN of the State of Delaware hereinafter referred to as interest, domestic and for of the ASSIGNEE, its surfor the inventions and dis name or names, or in my insert the serial/application No. 1020172 on January 2, 2017), and representatives, all rights and all countries, entities hereof, continuations, con And I hereby agree for mincluding applications for organizations, and to perf | ent agreement heretofore made or by contractual obligation, I do sell, assign and set over unto IOLOGIES, 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 excessors, assigns or other legal representatives to make applications and to receive Letters Patent coveries 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 on number and filing date of the application to receive Letters Patent herein: Serial No. — Filing Date — December 22, 2017 —, which claims priority to German Patent 00002.3, filed on January 2, 2017, and to German Patent Application No. 102017200001.5, filed I hereby sell, assign and set over to the ASSIGNEE, its successors, assigns or other legal of priority, including any provisional applications, in and to the inventions and discoveries in any and intergovernmental organizations including all applications claiming benefit of the filing date tinuations-in-part, divisionals, reexaminations and reissue applications. Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental orm 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 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 INVE | NTOR - 10 D- 2012 |
| Inventor: Florian Hu | th Date: 19. Dec. 2017 |
| Signature: Thu | Mi |
| 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. |

PATENT REEL: 044956 FRAME: 0579

RECORDED: 12/22/2017