

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5978000

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JACQUES MARCEL ARTHUR BUNEL	02/20/2020
ETIENNE GÉRARD JOSEPH CANELLE	02/20/2020
EMERIC CHRISTIAN AMAURY D'HERBIGNY	02/20/2020
PIERRICK BERNARD JEAN	02/20/2020
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SAFRAN AIRCRAFT ENGINES
<b>Street Address:</b>	2 BOULEVARD DU GÉNÉRAL MARTIAL VALIN
<b>City:</b>	PARIS
<b>State/Country:</b>	FRANCE
<b>Postal Code:</b>	75015
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16449573
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(216)579-6073
<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>	2165791700
<b>Email:</b>	kwiles@pearne.com
<b>Correspondent Name:</b>	PEARNE & GORDON LLP
<b>Address Line 1:</b>	1801 EAST 9TH STREET
<b>Address Line 2:</b>	SUITE 1200
<b>Address Line 4:</b>	CLEVELAND, OHIO 44114
<b>ATTORNEY DOCKET NUMBER:</b>	BRV5-61110
<b>NAME OF SUBMITTER:</b>	AARON A. FISHMAN
<b>SIGNATURE:</b>	/Aaron A. Fishman/
<b>DATE SIGNED:</b>	02/24/2020
This document serves as an Oath/Declaration (37 CFR 1.63).	
<b>Total Attachments: 4</b>	

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**PATENT**

**REEL: 051903 FRAME: 0289**

**Worldwide Assignment & US Declaration (37 CFR 1.63)  
for utility or design application using an application data sheet (37 CFR 1.76)**

As a below named inventor, I hereby declare that, I

Inventor Name	Complete Address
CANELLE, Etienne Gérard Joseph	c/o Safran CEPI, rond-Point René Ravaud – Réau 77550 MOISSY-CRAMAYEL FRANCE

(Hereinafter referred to as the Assignor) have made an invention entitled:

Title of Invention (in English)
DEVICE FOR COOLING A TURBOMACHINE CASING
Title of Invention (in French)

for which an application for Letters Patent has been filed in the following country:

Country	Filing Date	Serial Number
United States of America	06/24/2019	16/449573

The above-identified application(s) was/were 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.

AND, WHEREAS,

Corporation Name	Complete Address
SAFRAN AIRCRAFT ENGINES	2 Boulevard Du General Martial Valin 75015 Paris France

(Hereinafter referred to as the Assignee[s]) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

NOW THEREFORE, be it known that for and in consideration of One EURO (€1.00) and other good and valuable consideration, the receipt and sufficiency of which from the Assignee[s] is hereby acknowledged, by these presents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over unto the Assignee[s], its/their lawful successors and assigns, my entire right, title, and interest in and to this invention and these applications, and all divisions, and continuations thereof, and all Letters Patent that may be granted thereon, and all reissues thereof, and all rights to claim priority on these of such applications, and all applications for Letters Patent that may hereafter be filed for this invention in any country and all Letters Patent that may be granted on this invention in any country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioners of Patents (or other appropriate official whose duty is to issue patents) of the United States, Canada, and any other country, to issue Letters Patent for this invention to the Assignee[s], its/their successors and assigns, in accordance with the terms of this Assignment;

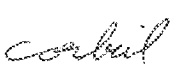

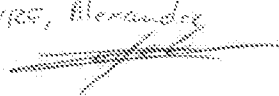
AND; I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will communicate with the Assignee[s], its/their successors and assigns, any facts known to me respecting this invention, testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee[s], its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee[s], its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee[s] or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee[s], its/their successors, and assigns.

This Assignment agreement is effective as of the earliest filing date mentioned above.

AND, I/WE HEREBY acknowledge that any wilful 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.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

Date	Place	Inventor Name & Signature	Witness Name & Signature
February 20, 2020		CANELLE, Etienne Gérard Joseph 	LEFEBVRE, Alexander 

# Worldwide Assignment & US Declaration (37 CFR 1.63) for utility or design application using an application data sheet (37 CFR 1.76)

As a below named inventor, I hereby declare that, I

Inventor Name	Complete Address
D'HERBIGNY, Emeric Christian Amaury	c/o Safran CEPI, rond-Point René Ravaud - Réau 77550 MOISSY-CRAMAYEL FRANCE

(Hereinafter referred to as the Assignor) have made an invention entitled:

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Corporation Name	Complete Address
SAFRAN AIRCRAFT ENGINES	2 Boulevard Du General Martial Valin 75015 Paris France

(Hereinafter referred to as the Assignee[s]) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

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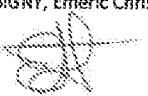
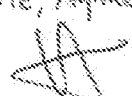
AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will communicate with the Assignee[s], its/their successors and assigns, any facts known to me respecting this invention, testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee[s], its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee[s], its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee[s] or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee[s], its/their successors, and assigns.

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IN TESTIMONY WHEREOF, I HAVE SIGNED:

Date	Place	Inventor Name & Signature	Witness Name & Signature
February 20, 2020	Villars-cha	D'HERBIGNY, Emeric Christian Amaury 	M. G. G. G., Aymeric Julien Michael 

**Worldwide Assignment & US Declaration (37 CFR 1.63)**  
**for utility or design application using an application data sheet (37 CFR 1.76)**

As a below named inventor, I hereby declare that, I

<i>Inventor Name</i>	<i>Complete Address</i>
BUNEL, Jacques Marcel Arthur	c/o Safran CEPI, rond-Point René Ravaud - Réau 77550 MOISSY-CRAMAYEL FRANCE

(Hereinafter referred to as the Assignor) have made an invention entitled:

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<i>Title of Invention (in French)</i>

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United States of America	06/24/2019	16/449573

The above-identified application(s) was/were 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.

AND, WHEREAS,

<i>Corporation Name</i>	<i>Complete Address</i>
SAFRAN AIRCRAFT ENGINES	2 Boulevard Du General Martial Valin 75015 Paris France

(Hereinafter referred to as the Assignee[s]) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

NOW THEREFORE, be it known that for and in consideration of One EURO (€1.00) and other good and valuable consideration, the receipt and sufficiency of which from the Assignee[s] is hereby acknowledged, by these presents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over unto the Assignee[s], its/their lawful successors and assigns, my entire right, title, and interest in and to this invention and these applications, and all divisions, and continuations thereof, and all Letters Patent that may be granted thereon, and all reissues thereof, and all rights to claim priority on these of such applications, and all applications for Letters Patent that may hereafter be filed for this invention in any country and all Letters Patent that may be granted on this invention in any country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioners of Patents (or other appropriate official whose duty is to issue patents) of the United States, Canada, and any other country, to issue Letters Patent for this invention to the Assignee[s], its/their successors and assigns, in accordance with the terms of this Assignment;

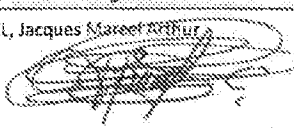

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AND, I HEREBY further covenant and agree that I will communicate with the Assignee[s], its/their successors and assigns, any facts known to me respecting this invention, testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee[s], its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee[s], its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee[s] or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee[s], its/their successors, and assigns.

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IN TESTIMONY WHEREOF, I HAVE SIGNED:

<i>Date</i>	<i>Place</i>	<i>Inventor Name &amp; Signature</i>	<i>Witness Name &amp; Signature</i>
February 20, 2020	Moissy Cramayel	BUNEL, Jacques Marcel Arthur 	 PACAY

**Worldwide Assignment & US Declaration (37 CFR 1.63)  
for utility or design application using an application data sheet (37 CFR 1.76)**

As a below named inventor, I hereby declare that, I

Inventor Name	Complete Address
JEAN, Pierrick Bernard	c/o Safran CEPI, rond-Point René Ravaud - Réau 77550 MOISSY-CRAMAYEL FRANCE

(Hereinafter referred to as the Assignor) have made an invention entitled:

Title of Invention (in English)
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Country	Filing Date	Serial Number
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I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

AND, WHEREAS,

Corporation Name	Complete Address
SAFRAN AIRCRAFT ENGINES	2 Boulevard Du General Martial Valin 75015 Paris France

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IN TESTIMONY WHEREOF, I HAVE SIGNED:

Date	Place	Inventor Name & Signature	Witness Name & Signature
February 26, 2020 20/02/2020	Corbeil	JEAN, Pierrick Bernard 	N. HERBLIN 

**PATENT**

**RECORDED: 02/24/2020**

**REEL: 051903 FRAME: 0293**