PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5208756

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SEBASTIEN NICOLAS JUIGNE	10/08/2018
KEVIN MICHEL ROBERT CONTAL	10/08/2018
MATHIEU GAILLOT	10/08/2018
FRANCOIS MARIE PAUL MARLIN	10/08/2018
STEVE MARCEL NICAISE	10/08/2018

RECEIVING PARTY DATA

Name:	SAFRAN AIRCRAFT ENGINES	
Street Address: 2 BOULEVARD DU GENERAL MARTIAL VALIN		
City:	PARIS	
State/Country:	FRANCE	
Postal Code:	75015	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16097030

CORRESPONDENCE DATA

Fax Number: (703)413-2220

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: (703) 413-3000
Email: ttraub@oblon.com
Correspondent Name: OBLON, ET AL.
Address Line 1: 1940 DUKE STREET

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	516891US
NAME OF SUBMITTER:	THOMAS TRAUB
SIGNATURE:	/thomas traub/
DATE SIGNED:	10/26/2018

Total Attachments: 5

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PATENT REEL: 047329 FRAME: 0166

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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
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Inventor Name	Complete Address
JUIGNE, Sébastien, Nicolas	14, riin du Commerce 91280 saint Pierie du Pereay France

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

*****	Title of in	wemike	i (in English)						***************************************	
	ARM I	FOR	TURBINE-	-ENGINE	CASING	COMPRISING	Α	REMOVABLE	ADDITIONAL	PIECE
	Title of in	reention	: (In French))
***************************************								***************************************		
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for which an application for Letters Patent has been filed in the following country:

Commy	Filma Date	Serial Number
FRANCE	APR-28-2016	1053827

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 Airchaft Engines	2 boulevard du Général Martial Valin 75015 PARIS FRANCE

(Hereinafter referred to as the Assignee(si) 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, it has Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over into 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 successors, and all applications for Letters Patent that may hereafter be filed for 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 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 reexamination 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 siffliates, 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 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.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

Date	Place	Inventor Name & Signature	Witness Name & Signature
October 8, 2018	11/brocke	JUIGNE, Sébastien, Nicolas	LOURIT, Damen Owniel

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
CONTAL, Kévin, Michel, Robert	1 rue Mazart - Appurtement 8104 91280 SAINT FIERRE DU PERRAY FRANCE

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

Title of	invention	(in English)							
ARM	FOR	TURBINE	-ENGINE	CASING	COMPRISING	Α	REMOVABLE	ADDITIONAL	PIECE
Title of	laventia:	(in French)							
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for which an application for Letters Patent has been filed in the following country:

1 Country	Filma Date	Serial Number
FRANCE	APR-28-2016	1853827

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 Général Mardal 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 for Letters Patent that may be granted on this invention in any country and all extens 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 Assignment; its/their successors and assigns, in accordance with the terms of this Assignment;

AND, I HERESY 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 reexamination 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 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.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

Date	Piace	koventor Name & Signature	Witness Name & Signature
October 8, 2018	stonoW	CONTAL, Kévin, Michel Robert	Mozar, Ridner Pière

Worldwide Assignment & US Declaration (37 CFR 1.63) for utility or design application using an application data sheat (37 CFR 1.75)

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As a helow named inventor, I here	by declare that, I	

ARLOV, Mathley reinafter referred to as the A life of invention (in English)		1		2 02 090 CDANCS			
		134 8k rue	194 8ks rue de Charenton - Appt 7 75013 PARIS FRANCE				
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Country	Fi	ing Date	Serial Number				
PRANCE	Á	PR-28-2015	1653827				

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	manifest of an ariding,						
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Carporation Name		Complete Address	1 Branches der Mande	irol Martial Valle 75015 PARIS FRANCE			
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NOW THEREFORE, of which from the Assignee(s) transfer and set over unto the and all divisions, and continue such applications, and all applications, and proper patent of conflict with the AND, I HEREBY for respecting this invention, terespecting this invention, terespecting the period of	be it known that for and is hereby acknowledge. Assignee[s], its/their lad assignee[s], its/their lad assignee[s], its/their lad assignee[s], its/their lad assignee[s], and all extensions, rety is to issue patents) of ins, in accordance with it venant that I have the fils Assignment; arther covenant and agostify in any legal proces rect the title to this invake all rightful oaths and rethis invention in any ent to the performance.	In consideration of One d, by these presents, I, the wful successors and assignters Patent that may be ent that may hereafter be mewals, and reissues the United States, Canad the terms of this Assignmuli right to convey the Interest of the William of the Communicatings, sign all lawful parention in said Assigneets is generally do everything to country, it being underst of the obligations of the partiest filing dates.	EURO (E1.DJ) and other goods e Assignor, have sold, assigne ms, my entire right, title, and granted thereon, and all reis if filed for this invention in am ereof; and i hereby authorize a, and any other country, to i ent; erest assigned by this Assigni- cate with the Assignee[s], its ters when called upon to do l, its/their successors or assignood that, irrespective of who present paragraph shall be both the mentioned above.	and valuable consideration, the receipt and sufficient of transferred, and set over, and do hereby sell, assignerest in and to this invention and these applications uses thereof, and all rights to claim priority on these of country and all Letters Patent that may be granted and request the Commissioners of Patents (or other and request the Commissioners of Patents (or other and I have not executed and will not execute a softenis successors and assigns, any facts known to so, execute and deliver any and all papers that may gins, execute all divisional, continuation, reissue, and so, its/their successors and assigns, to obtain and enfoether I am in the employ of the Assignee(s) or its/their successors, and assigns by the Assignee(s), its/their successors, and assigns by the Assignee(s), its/their successors, and assigns to obtain and enforce the result of the Assignee(s) or its/their successors, and assigns to obtain and enforce the result of the Assignee(s), its/their successors, and assigns to obtain and enforce the result of the Assignee(s), its/their successors, and assigns to obtain and enforce the result of the Assignee(s), its/their successors, and assigns to obtain and enforce the result of the Assignee(s), its/their successors, and assigns the result of the Assignee(s).			
NOW THEREFORE, of which from the Assignee(s) transfer and set over unto the and all divisions, and continue such applications, and all applications, and proper patent of conflict with the AND, I HEREBY for respecting this invention, terespecting this invention, terespecting the period of	be it known that for and is hereby acknowledge. Assignee[s], its/their lad assignee[s], its/their lad assignee[s], its/their lad assignee[s], its/their lad assignee[s], and all extensions, rety is to issue patents) of ins, in accordance with it venant that I have the fils Assignment; arther covenant and agostify in any legal proces rect the title to this invake all rightful oaths and rethis invention in any ent to the performance.	In consideration of One d, by these presents, I, the wful successors and assignters Patent that may be ent that may hereafter be mewals, and reissues the United States, Canad the terms of this Assignmuli right to convey the Interest of the William of the Communicatings, sign all lawful parention in said Assigneets is generally do everything to country, it being underst of the obligations of the partiest filing dates.	EURO (E1.DJ) and other goods e Assignor, have sold, assigne ms, my entire right, title, and granted thereon, and all reis if filed for this invention in am ereof; and i hereby authorize a, and any other country, to i ent; erest assigned by this Assigni- cate with the Assignee[s], its ters when called upon to do l, its/their successors or assignood that, irrespective of who present paragraph shall be both the mentioned above.	and valuable consideration, the receipt and sufficient of transferred, and set over, and do hereby sell, assignerest in and to this invention and these applications uses thereof, and all rights to claim priority on these of country and all Letters Patent that may be granted and request the Commissioners of Patents (or other and request the Commissioners of Patents (or other and I have not executed and will not execute a softenis successors and assigns, any facts known to so, execute and deliver any and all papers that may gins, execute all divisional, continuation, reissue, and so, its/their successors and assigns, to obtain and enfoether I am in the employ of the Assignee(s) or its/their successors, and assigns by the Assignee(s), its/their successors, and assigns by the Assignee(s), its/their successors, and assigns to obtain and enforce the result of the Assignee(s) or its/their successors, and assigns to obtain and enforce the result of the Assignee(s), its/their successors, and assigns to obtain and enforce the result of the Assignee(s), its/their successors, and assigns to obtain and enforce the result of the Assignee(s), its/their successors, and assigns to obtain and enforce the result of the Assignee(s), its/their successors, and assigns the result of the Assignee(s).			
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### Worldwide Assignment & US Declaration (37 CFR 1.63) for utility or design application using an application data sheet (37 CFR 1.76)

As a pelow named inventor,	I hereby declare that, I							
Inventor Name		***************************************	Complete Address					
MARLIN, François, Marie, Pa	aul		21 Rue Crause 77750 VILLIERS SOUS GREE FRANCE					
(Hereinafter referred to as t	he Assignor) have made	an invention er	rtitled:					
Title of Invention (in Engla	8)		***************************************					
		CASING	COMPRISING	G A REMC	VABLE ADDITIONAL PIECE			
Title of invention (in Frenc	h)							
for which an application for	Letters Patent has been	filed in the folk	owing country:					
Country		Filing Date		Serial Number				
FRANCE		APR-28-2016		1653827				
<u></u>				***************************************				
The above-identified applica	ition(s) was/were made	or authorized to	o be made by me.					
believe that I am the origin	al inventor or an original	joint inventor	of a claimed inventio	n in the applicati	on.			
AND, WHEREAS,								
Corporation Name		Complete	Address					
SAPRAN AIRCRAFT ENGIN	 ES			Scoleopel da Sá	mérai Martiai Valin 75015 PARIS FRANCE			
			a postacram pos cientas postant anto 12000 2000 2000 100000					
	***************************************		****	•••••				
(Hereinafter referred to as t	he Assignee(s)) is/are de	sirous of secur	ing the entire right, t	itle, and interest	t in and to this invention in all countries throughout			
of which from the Assignee, transfer and set over unto the and all divisions, and conting such applications, and all ap this invention in any countr	s] is hereby acknowledge ne Assignee[s], its/their la nations thereof, and all La plications for Letters Pate ny, and all-extensions, re uty is to issue patents) of	d, by these pre- wful successor etters Patent the ent that may he newals, and re the United Stat	sents, I, the Assignor, s and assigns, my ent lat may be granted the reafter be filed for the issues thereof; and I es, Canada, and any o	have sold, assign fre right, title, and ereon, and all re his invention in an hereby authoriz	ed and valuable consideration, the receipt and sufficie need, transferred, and set over, and do hereby sell, ass of interest in and to this invention and these applications the self of t			
AND, I HEREBY co agreement in conflict with the		ill right to conv	ey the interest assign	ed by this Assign	ment, and I have not executed and will not execute			
respecting this invention, to necessary or desirable to pe examination applications, m proper patent protection fo	stify in any legal proceed rfect the title to this inve ake all rightful oaths and r this invention in any o	lings, sign all la intion in said A generally do ev suntry, it being	wful papers when ca ssignee[s], its/their s erything possible to a understood that, in	illed upon to do uccessors or assi- id the Assignee! espective of who	s/their successors and assigns, any facts known to so, execute and deliver any and all papers that may gns, execute all divisional, continuation, reissue, and sel, its/their successors and assigns, to obtain and enfo ether I am in the employ of the Assignee[s] or its/their successors, and assignee by the Assignee[s].			
	agreement is effective as							
AND, I/WE HEREI		willful false sta	stement made in this	declaration is pu	unishable under 18 U.S.C. 1001 by fine or imprisonm			
N TESTIMONY WHEREOF, I								
Date	Place	league that their	re di Signature		Witness Nume & Signature			
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October 8, 2018	VICEARUCKE	ç	Service and		and Company of South & Marge 1979 Ages			
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***************************************	***************************************			*****				

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

Complete Address

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

Inventor Name

NICAISE, Stève, Marcel			5 rup de la Prospéria sazio la vasenne saunt hilaine france				
(Hereinafter referred to as the Assig	gnor) have made an I	invention e	ititled:				
Title of Invention (in English)	***************************************		····	********	***************************************		
ARM FOR TURBINE	-ENGINE CA	SING	COMPRISIN	G A	REMOVABLE	ADDITIONAL	PIECE
Title of Invention (in French)		*************	***************************************				~-~
for which an application for Letters	Patent has been filed	d in the folk	owing country:	****			
Country	Filo	ny Date		Serial :	Number		***************************************
FRANCE	API	8-28-201 <i>6</i>		16538	27		
,						***************************************	
believe that I am the original inven	tor or an original joir	it inventor	of a claimed inventio	n in the	application.		
Corporation Name		Complete.	Adéress		***************************************		
SAFRAN AIRCRAFT ENGINES		************	2 Boulevard du Général Martiel Vallo 75015 PARIS FRANCE				
		m-11			***************************************		
Hereinafter referred to as the Assig- world, and in and to the aforemental NOW THEREFORE, be it sufficiency of which from the Assig- sereby sell, assign, transfer and set end these applications, and all divisi- laim priority on these of such appl Patent that may be granted on the Commissioners of Patents (or other Patent for this invention to the Assig	inced applications for known that for and nec[s] is hereby ack over unto the Assign ons, and continuatio lications, and all app is invention in any of appropriate official	Letters Par I in conside mowledged nee[s], its/ti ns thereof, dications for country, an whose dut	ent on this invention eration of One EURC, by these presents, heir lawful successor and all letters Patent Letters Patent that d all extensions, re- y is to issue patents	and the in (£1.00 in the A is and as it that may he is ewals, it of the	a Letters Patent to be in and other good and assignor, have sold, as asigns, my entire right, hay be granted thereous reafter be filed for this and relasues thereof; United States, Canad:	issued upon these applic ( valuable consideration signed, transferred, and title, and interest in and 1, and all reissues thered is invention in any coun- and I hereby authorize a, and any other country	ations; i, the receipt and set over, and do f to this invention if, and all rights to try and all Letters and request the
AND, I HEREBY covenant i greement in conflict with this Assig	that I have the full de nment;	ght to convi	ey the interest assign	ed by th	is Assignment, and i h	ave not executed and wi	ll not execute any
AND, I HEREBY further or especting this invention, testify in a necessary or desirable to perfect the examination applications, make all enforce proper patent protection for ts/their affiliates, any expense including the second	my legal proceeding title to this invention rightful caths and go this invention in a	s, sign all la m in said As enerally do ny country,	wful papers when ca signee[s], its/their su everything possible it being understood	lied upo ccessor to aid t that, in	on to do so, execute a s or assigns, execute a the Assignee[s], its/th respective of whether	nd deliver any and all pa il divisional, continuation eir successors and assig I am in the employ of t	pers that may be n, reissue, and re- ns, to obtain and he Assignmeist or

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

AND, I/WE 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.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

and assigns.

Date	Place	Inventor Nome & Signature	Witness Home & Signature
October 8, 2018	Villacoha	NICAISE, Stève, Marcel	684480), Vinent descrit Jojis Literaturi

PATENT REEL: 047329 FRAME: 0172

**RECORDED: 10/26/2018**