Mail Stop: Assignment Recordation Services Director of the U.S. Patent and Trademark Office		RECORDATION FORM COVER SHEET PATENTS ONLY U.S. DEPARTMENT OF Patent and Tr		U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office
	. Box 1450 candria, VA 22313-1450		At	torney Docket No. 142173
	ase record the attached document.			
Tota	al number of pages including cover she	et, altachments, and docume	nt: <u>4</u>	
1.	A. Name of conveying parties: 1) David Reginald TRAINI 2) Thomas Conan Joseph F 3) Gareth Edward MOORE B. Additional name(s) of conveying	EEHALLY	ROLL 65 BU LONE	nd address of receiving party: S-ROYCE PLC ICKINGHAM GATE DON, SW1E 6AT AT BRITAIN
3.	A. Nature of conveyance:		B. Additio	nal name(s) & address(es) attached? □Yes ☑ No
	Assignment Security Agreement Other B. Execution Date: 1) October 2009; 3) June 18, 2009.	·		
4.	A. Patent Application No. 12/45	<u>8,733</u>	B. Patent	No.(s)
	Additional numbers attached?			
	C. Title of Application: AN E	<u>LECTROMECHANICA</u>	L ARRANGEMI	<u>ENT</u>
5.	Name and address of party to whom concerning document should be mail	correspondence led:	6. Total numbe	r of applications and patents involved: 1
	Name: <u>James A. Oliff</u>		7. Please c total fee	harge Deposit Account No. 15-0461 the (37 CFR 3.41) in the amount of \$40.00.
	Address: OLIFF & BERRIDGE, 1 P.O. Box 320850 Alexandria, VA 22 Phone Number: 703-83 Fax Number: 703-836	1 2320-4850 16-6400		verpayment or charge any underpayment to unt number 15-0461.
9.	Statement and signature. To the best of my knowledge and be original document. James A. Oliff Registration No. 27, Matthew C. Barthalow Registration	075		ct and any attached copy is a true copy of the : October 23, 2009

PATENT REEL: 023418 FRAME: 0813

ASSIGNMENT

			ASSESTABLE			
		(1)	DAVID REGINALD TRAINER (5))		
(1-8)	Insert Name(s)	(2)	THOMAS CONAN JOSEPH (6' FEEHALLY)		
	of Inventor(s)	(3)	GARETH EDWARD MOORE (7))		
		(4)	(8)		
				0) and other good and valuable consideration paid o assign, and hereby does assign, transfer and set		
(9)	Insert Name of	(0)	ROLLS-ROYCE PLC			
(10)	Assignee Insert Address of	(9) (10)	65 BUCKINGHAM GATE, LONDON, SWI.	C CAT COEAT DESTAIN!		
	Assignee	heirs, successors, assigns and logal representatives, f America as defined in 35 U.S.C. §100, in the my and all provisional, non-provisional, divisional, if reissue application(s), and all Letters Patent, may be granted on the invention known as				
(11)	Insert	(11)	1) AN ELECTROMECHANICAL ARRANGEMENT			
	Identification such as Title, Case		4138 TAL			
	Number, or Foreign		1/0179			
	Application Number	•				
			ch the undersigned has (have) executed an opport of date herewith or	ilication for patent in the United States of America		
(12)	Insert Date of	(12)	on Ontober 14 2000 Tune	30, 2009 and June 18, 2009		
	Signing of Application	(12)	OCTOBER 14, Z009, June	30, 2009 and June 18, 2009		
(13)	Alternative	(13)	U.S. application Serial Number 12/45	58,733		
	Identification for filed applications	filed	July 21, 2009			
claims of reexamic Patents full right and agroidentific	ignee in every way possible in 3) Each undersigned agrees or provisions of the Internation 4) Each undersigned agrees ination a grant of a valid Unity 5) Each undersigned author of the United States resulting at to convey the entire interest ees that this assignment is bin 6) Each undersigned hereby cation that may be necessary of this document.	obtaining to execute to perform to perform said from said therein a ding on a grants to desiral	g evidence and going forward with such interfite all papers and documents and perform any a ention for Protection of Industrial Property or a mall affirmative acts which may be necessary patent to the Assignee. requests the Commissioner of the U.S. Patent a dapplication(s) to the said Assignee, as Assignesigned, and that he has not executed, and will sim and his heirs, successors, assigns and legate firm of OLIFF & BERRIDGE, PLC the power the in order to comply with the rules of the Uniter the said and the Uniter the said and the Uniter the said and the Uniter the Said Assigned the Uniter the said and the Uniter the Said Assigned the Uniter the Uniter the Uniter the Said Assigned the Uniter the Unit	not which may be necessary in connection with similar agreements. It to obtain, maintain or confirm by reissue or and Trademark Office to issue any and all Letters nee of the entire interest, and covenants that he has not execute, any agreements in conflict herewith, I representatives. It is insert on this assignment ary further ted States Patent and Trademark Office for		
	In witness whereof, execut	ed by th	undersigned on the date(s) opposite the un			
Date	140 Ctober 2	200	Inventor Signature Ownid, David Regin	R Trainer (SEAL)		
Date			Inventor SignatureThomas Con	an Joseph Fechally (SEAL)		
Date			Inventor Signature Gareth Edwa	rd Moore (SEAL)		
Date			Inventor Signature	(SEAL)		
Date				(SEAL)		
Date				(SEAL)		
				(SEAL)		
Date -						
Date				· · · · · · · · · · · · · · · · · · ·		
neither, Date Date	then it should be signed before	rg at leas	two witnesses who also sign here: Witness	e U.S.A. (b) a U.S. Consul if outside the U.S.A. If		

PATENT REEL: 023418 FRAME: 0814

ASSIGNMENT

		(1) _	DAVID REGINALD TRA	INER (5)			
(1-8		(2)	THOMAS CONAN FEEHALLY	JOSEPH (6)			
	Name(s) of Inventor(s)	(3) _	GARETH EDWARD MOC	ORE (7)			
		(4)		(8)			
		la to each c over to	consideration of the sum of	of one dollar (\$1.00) and other good a dersigned agrees to assign, and herel	and valuable consideration paid		
(9)	Insert Name of Assignee	(9)	ROLLS-ROYCE PLC				
(10)	Insert Address of Assignce	(hereinafi the entire invention continuat					
(H)	Insert	(H) _/	AN ELECTROMECHANIC	CAL ARRANGEMENT			
	Identification such as Title, Case Number, or Forciga Application Number	_4	4138 TAL				
		(Attorney	Docket No. 1421)		
		for which on even d	for which the undersigned has (have) executed an application for patent in the United States of America on even date herewith or				
(12)	Insert Date of Signing of Application	(12) on	30th June	2009, June 18, 20	009, and October 14,2009		
(13)	Alternative Identification for			per <u>12/458,733</u>			
	filed applications	filed	July 21, 2009				
any ap the As claims reexam Patents full rig and ago identifi recorda	e applications for the inventior attions and patents as the Assig 2). Each undersigned agrees plication or continuation or dissignee in every way possible it. 3). Each undersigned agrees or provisions of the Internatio 4). Each undersigned agrees ination a grant of a valid Unit. 5). Each undersigned author of the United States resulting that to convey the entire interest tees that this assignment is bin. 6). Each undersigned bereby cation that may be necessary of this document.	o, and any pat- time may deer to to execute a vision thereo to execute a nal Conventi- to perform a ed States pate izes and requ from said ap herein assign ding on him a grants the fin or desirable in	ent(s) issuing thereon, and mecessary. Il papers necessary in conner, or any patent or reissue a vidence and going forward il papers and documents are not for Protection of Industrial affirmative acts which ment to the Assignee. ests the Commissioner of a plication(s) to the said Assied, and that he has not example and his heirs, successors, a model of the comply with the attersigned on the date(s) of the	also to execute separate assignment, also to execute separate assignment, ection with any interference which rapplication based thereon, for the invented with such interference, and perform any act which may be needed after the executed and without the U.S. Patent and Trademark Officialities, as Assigned of the entire intersecuted, and will not execute, any agressing and legal representatives. PLC the power to insert on this assignules of the United States Patent and expression the undersigned name(s).	s in connection with such pay be declared concerning ention, and to cooperate with essary in connection with or confirm by reissue or to issue any and all Letters est, and covenants that he has been ents in conflict herewith, gament any further Trademark Office for		
Date			Inventor Signature	David Reginald Trainer	(SEAL)		
Date	30th June 2	2009	Inventor Signature	Thomas Conan Joseph Fechally	(SEAL)		
Date			Inventor Signature	Gareth Edward Moore	(SEAL)		
Date			Inventor Signature		(SEAL)		
Date .			Inventor Signature		(SEAL)		
Date							
Date _							
Date			Inventor Signature		(SEAL)		

PATENT REEL: 023418 FRAME: 0815

ASSIGNMENT

		(1) DAVID REGINALD TRAINER (5)			
(1-8)	Insert	(2) THOMAS CONAN JOSEPH (6) FEEHALLY			
	Name(s) of Inventor(s)	(3) GARETH EDWARD MOORE (7)			
		(4)			
		In consideration of the sum of one dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, each undersigned agrees to assign, and hereby does assign, transfer and set over to			
(9)	Insert Name of Assignce	(9) ROLLS-ROYCE PLC			
(10)	Insert Address of Assignee	(10) 65 BUCKINGHAM GATE, LONDON, SWIE 6AT, GREAT BRITAIN			
(11)	Insert Identification such as Title, Case Number, or Foreign Application Number	(hereinafter designated as the Assignee) and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and interest for the United States of America as defined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all provisional, non-provisional, divisional, continuation, international, confirmation, substitute and reissue application(s), and all Letters Patent, extensions, reissues and reexamination certificates that may be granted on the invention known as (11) AN ELECTROMECHANICAL ARRANGEMENT 4138 TAL			
		(Attorney Docket No. 142173			
		for which the undersigned has (have) executed an application for patent in the United States of America on even date herewith or			
(12)	Insert Date of Signing of Application	(12) on October 14, 2009, June 30, 2009, and June 18, 2009			
(13)	Alternative Identification for filed applications	(13) U.S. application Serial Number 12/458,733			
		filed July 21, 2009			
	1) Each undersigned agree	es to execute all papers necessary in connection with any application and any continuing, divisional or			

1) Each undersigned agrees to execute all papers necessary in connection with any application and any continuing, divisional or reissue applications for the invention, and any patent(s) issuing thereon, and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary.

2) Each undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning any application or continuation or division thereof, or any patent or reissue application based thereon, for the invention, and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignee.

5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office to issue any and all Letters Patents of the United States resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreements in conflict herewith, and agrees that this assignment is binding on him and his heirs, successors, assigns and legal representatives.

6) Each undersigned hereby grants the firm of OLIFF & BERRIDGE, PLC the power to insert on this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date		Inventor Signature	David Reginald Trainer	(SEAL)
Date		Inventor Signature	homas Conan Joseph Feehally	(SEAL)
Date	JUNE 18th 2009	Inventor Signature G	y wette Home	(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date	This assignment should preferably be signed then it should be signed before at least two values of the state	vitnesses who also sign here: Witness	Twithin the U.S.A. (b) a U.S. Consul if outside the Felioc Zamely	ne U.S.A. II'
Date	18th June 2009	Witness	Magy:	

PATENT REEL: 023418 FRAME: 0816

RECORDED: 10/23/2009