504318305 04/12/2017

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT	
CONVEYING PARTY D	ΔΤΔ	1		
		Name	Execution Date	
ALEXANDER G. SAPPOK			04/02/2017	
PAUL A. RAGALLER			04/07/2017	
LESLIE BROMBERG			04/12/2017	
ANDREW D. HERMAN			04/07/2017	
RECEIVING PARTY DA	ТА			
Name: CTS CORPORATION				
Street Address:	2375 CABOT DRIVE			
City:	LISLE			
State/Country:	ILLINOIS			
Postal Code:	60532			
PROPERTY NUMBERS	Total: 1			
Property Type		Number]	
Application Number:		15481670		
	ΑΤΑ	(020) 577 0000		
		(630)577-8896 • the e-mail address first; if that is un	successful, it will be sent	
		l; if that is unsuccessful, it will be se		
		630-577-8800		
Email:		daniel.deneufbourg@ctscorp.com		
Correspondent Name:CTS CORPORATIONAddress Line 1:2375 CABOT DRIVE				
Address Line 1: Address Line 4:		LISLE, ILLINOIS 60532		
Address Line 4.				
ATTORNEY DOCKET NUMBER:		CTS2837		
NAME OF SUBMITTER:			DANIEL DENEUFBOURG	
SIGNATURE:		/Daniel Deneufbourg/		
DATE SIGNED:		04/12/2017		
Total Attachments: 4				
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PATENT REEL: 041984 FRAME: 0864

ASSIGNMENT

WHEREAS, I, Alexander G. Sappok, of the City of Cambridge, Middlesex County, Massachusetts, have made a certain new and useful invention entitled "RADIO FREQUENCY SYSTEM AND METHOD FOR MONITORING ENGINE-OUT EXHAUST CONSTITUENTS", including the subject matter described and claimed in the application for Letters Patent of the United States, U.S. Application Serial No. 15/481,670 filed on April 7, 2017; and

WHEREAS, CTS CORPORATION, a corporation duly organized under the laws of the State of Indiana and doing business in the City of Elkhart, the County of Elkhart and the State of Indiana, is desirous of acquiring the full and exclusive right, title and interest which I have or may have in and to the invention, design, and the application, including any continuation and any division of the application, and any Letters Patent of the United States and of foreign countries that may be granted for the invention and the design, and any renewal, any reissue and any extension of any such Letters Patent;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, I do hereby assign to CTS CORPORATION all the right, title and interest which I have or may have in and to the invention, design, and the application and any Letters Patent of the United States and of foreign countries that may be granted for the invention and the design and any continuation, division, renewal, reissue, and any extension of any such Letters Patent; the same to be held and enjoyed by CTS CORPORATION, its successors, legal representatives and assigns, as fully and entirely as the same would have been held and enjoyed by me if this assignment had not been made; and I hereby covenant and warrant that I have not executed and will not execute any instrument purporting to convey, mortgage, lease or otherwise transfer all, or any part of the interest, to anyone other than CTS CORPORATION, its successors, legal representatives and assigns.

And, for the above consideration, I hereby covenant and agree that I will, at the request of CTS CORPORATION, its successors, legal representatives and assigns, execute any and all renewal, continuation and divisional applications, both United States and foreign, for Letters Patent for the invention and design; and any and all applications for the renewal, the reissue and the extension of any Letters Patent, both United States and foreign, that may be granted for the invention and the design and do any and all other and further acts to obtain any such Letters Patent, and any renewal, any reissue and any extension of the same that CTS CORPORATION, its successors, legal representatives and assigns may deem necessary or expedient, without further compensation, but at the expense of CTS CORPORATION, its successors, legal representatives and assigns.

Dated: 4/7/2017

Alexander G. Sappok

PATENT REEL: 041984 FRAME: 0865

ASSIGNMENT

WHEREAS, I, Paul A. Ragaller, of the City of Dorchester, Suffolk County, Massachusetts, have made a certain new and useful invention entitled "RADIO FREQUENCY SYSTEM AND METHOD FOR MONITORING ENGINE-OUT EXHAUST CONSTITUENTS", including the subject matter described and claimed in the application for Letters Patent of the United States, U.S. Application Serial No. 15/481,670 filed on April 7, 2017; and

WHEREAS, CTS CORPORATION, a corporation duly organized under the laws of the State of Indiana and doing business in the City of Elkhart, the County of Elkhart and the State of Indiana, is desirous of acquiring the full and exclusive right. title and interest which I have or may have in and to the invention, design, and the application, including any continuation and any division of the application, and any Letters Patent of the United States and of foreign countries that may be granted for the invention and the design, and any renewal, any reissue and any extension of any such Letters Patent:

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, I do hereby assign to CTS CORPORATION all the right, title and interest which I have or may have in and to the invention, design, and the application and any Letters Patent of the United States and of foreign countries that may be granted for the invention and the design and any continuation, division, renewal, reissue, and any extension of any such Letters Patent; the same to be held and enjoyed by CTS CORPORATION, its successors, legal representatives and assigns, as fully and entirely as the same would have been held and enjoyed by me if this assignment had not been made; and I hereby covenant and warrant that I have not executed and will not execute any instrument purporting to convey, mortgage, lease or otherwise transfer all, or any part of the interest, to anyone other than CTS CORPORATION, its successors, legal representatives and assigns.

And, for the above consideration, I hereby covenant and agree that I will, at the request of CTS CORPORATION, its successors, legal representatives and assigns, execute any and all renewal, continuation and divisional applications, both United States and foreign, for Letters Patent for the invention and design; and any and all applications for the renewal, the reissue and the extension of any Letters Patent, both United States and foreign, that may be granted for the invention and the design and do any and all other and further acts to obtain any such Letters Patent, and any renewal, any reissue and any extension of the same that CTS CORPORATION, its successors, legal representatives and assigns may deem necessary or expedient, without further compensation, but at the expense of CTS CORPORATION, its successors, legal representatives and assigns.

Dated: 4/7/17

<u>Have Kagaller</u> Paul A. Ragaller

PATENT REEL: 041984 FRAME: 0866

CTS2837

ASSIGNMENT

WHEREAS, I. Leslie Bromberg, of the City of Sharon, Norfolk County, Massachusetts, have made a certain new and useful invention entitled "RADIO FREQUENCY SYSTEM AND METHOD FOR MONITORING ENGINE-OUT EXHAUST CONSTITUENTS", including the subject matter described and claimed in the application for Letters Patent of the United States, U.S. Application Serial No. 15/481,670 filed on April 7, 2017; and

WHEREAS, CTS CORPORATION, a corporation duly organized under the laws of the State of Indiana and doing business in the City of Elkhart, the County of Elkhart and the State of Indiana, is desirous of acquiring the full and exclusive right, title and interest which I have or may have in and to the invention, design, and the application, including any continuation and any division of the application, and any Letters Patent of the United States and of foreign countries that may be granted for the invention and the design, and any renewal, any reissue and any extension of any such Letters Patent;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, I do hereby assign to CTS CORPORATION all the right, title and interest which I have or may have in and to the invention, design, and the application and any Letters Patent of the United States and of foreign countries that may be granted for the invention and the design and any continuation, division, renewal, reissue, and any extension of any such Letters Patent; the same to be held and enjoyed by CTS CORPORATION, its successors, legal representatives and assigns, as fully and entirely as the same would have been held and enjoyed by me if this assignment had not been made; and I hereby covenant and warrant that I have not executed and will not execute any instrument purporting to convey, mortgage, lease or otherwise transfer all, or any part of the interest, to anyone other than CTS CORPORATION, its successors, legal representatives and assigns and assigns.

And, for the above consideration, I hereby covenant and agree that I will, at the request of CTS CORPORATION, its successors, legal representatives and assigns, execute any and all renewal, continuation and divisional applications, both United States and foreign, for Letters Patent for the invention and design; and any and all applications for the renewal, the reissue and the extension of any Letters Patent, both United States and foreign, that may be granted for the invention and the design and do any and all other and further acts to obtain any such Letters Patent, and any renewal, any reissue and any extension of the same that CTS CORPORATION, its successors, legal representatives and assigns may deem necessary or expedient, without further compensation, but at the expense of CTS CORPORATION, its successors, legal representatives and assigns.

Dated: 4/12/2017

Leslic Bromborg

ASSIGNMENT

WHEREAS, I, Andrew D. Herman, of the City of Granger, St. Joseph County, Indiana, have made a certain new and useful invention entitled "RADIO FREQUENCY SYSTEM AND METHOD FOR MONITORING ENGINE-OUT EXHAUST CONSTITUENTS", including the subject matter described and claimed in the application for Letters Patent of the United States, U.S. Application Serial No. 15/481,670 filed on April 7, 2017; and

WHEREAS, CTS CORPORATION, a corporation duly organized under the laws of the State of Indiana and doing business in the City of Elkhart, the County of Elkhart and the State of Indiana, is desirous of acquiring the full and exclusive right, title and interest which I have or may have in and to the invention, design, and the application, including any continuation and any division of the application, and any Letters Patent of the United States and of foreign countries that may be granted for the invention and the design, and any renewal, any reissue and any extension of any such Letters Patent;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, I do hereby assign to CTS CORPORATION all the right, title and interest which I have or may have in and to the invention, design, and the application and any Letters Patent of the United States and of foreign countries that may be granted for the invention and the design and any continuation, division, renewal, reissue, and any extension of any such Letters Patent; the same to be held and enjoyed by CTS CORPORATION, its successors, legal representatives and assigns, as fully and entirely as the same would have been held and enjoyed by me if this assignment had not been made; and I hereby covenant and warrant that I have not executed and will not execute any instrument purporting to convey, mortgage, lease or otherwise transfer all, or any part of the interest, to anyone other than CTS CORPORATION, its successors, legal representatives and assigns.

And, for the above consideration, I hereby covenant and agree that I will, at the request of CTS CORPORATION, its successors, legal representatives and assigns, execute any and all renewal, continuation and divisional applications, both United States and foreign, for Letters Patent for the invention and design; and any and all applications for the renewal, the reissue and the extension of any Letters Patent, both United States and foreign, that may be granted for the invention and the design and do any and all other and further acts to obtain any such Letters Patent, and any renewal, any reissue and any extension of the same that CTS CORPORATION, its successors, legal representatives and assigns may deem necessary or expedient, without further compensation, but at the expense of CTS CORPORATION, its successors, legal representatives and assigns.

Dated: 7pm207

Andrew 97. Herman