PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Shinji Kitaoka	03/23/2009
Keisuke Atsumi	03/23/2009
Koji Takaira	03/24/2009
Seiji Hiroshima	03/23/2009
Takaaki Shimizu	03/23/2009

RECEIVING PARTY DATA

Name:	AISIN AI CO., LTD.	
Street Address:	1, Shiroyama, Ojima-cho, Nishio-shi	
City:	Aichi-ken	
State/Country:	JAPAN	

Name:	TOYOTA JIDOSHA KABUSHIKI KAISHA	
Street Address:	1, Toyota-cho, Toyota-shi	
City:	Aichi-ken	
State/Country:	JAPAN	
Postal Code:	471-8571	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12412875

CORRESPONDENCE DATA

Fax Number: (703)836-7419

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

7038366620 Phone:

Email: danielle.carro@bipc.com Correspondent Name: Buchanan Ingersoll & Rooney

Address Line 1: PO Box 1404

PATENT

REEL: 022463 FRAME: 0007

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Address Line 4: Alexandria, VIRGINIA 22313-1404		
ATTORNEY DOCKET NUMBER:	1033228-000212	
NAME OF SUBMITTER:	Matthew L. Schneider	
Total Attachments: 10 source=assignment#page1.tif source=assignment#page2.tif source=assignment#page3.tif source=assignment#page4.tif source=assignment#page5.tif source=assignment#page6.tif source=assignment#page7.tif source=assignment#page8.tif source=assignment#page9.tif source=assignment#page9.tif		

PATENT REEL: 022463 FRAME: 0008

Attorney	Docket No.	

(JOINT)

THIS ASSIGNMENT, by __(1)_Shinii KITAOKA, (2) Keisuke ATSUMI, (3) Koli TAKAIRA, (4)_Seiii HIROSHIMA, and (5) Takaaki SHIMIZU, residing at __(1) Tokal-shi, Aichi-ken, Japan, (2) Anloshi, Aichi-ken, Japan, (3) Okazaki-shi, Aichi-ken, Japan, (4) Okazaki-shi, Aichi-ken, Japan and __(5)_Takaaki SHIMIZU (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in <u>HELICAL</u>

<u>GEAR AND METHOD OF MANUFACTURING THE SAME</u> set forth in an application for Letters

Petent of the United States, which is a

[1]		rovisional application
	(a)	bearing Application No and filed on
	(b)	to be filed herewith; or .
2)	\boxtimes	on-provisional application
	(a)	bearing Application No, and filed on;
	(p)	having an eath or declaration executed on even date herewith prior to filing of application;
	(c)	having an eath or declaration executed on a different date than this Assignment; and

WHEREAS, AISIN AI CO., LTD and TOYOTA JIDOSHA KABUSHIKI KAISHA, corporations duly organized under and pursuant to the laws of JAPAN and JAPAN, and having principal places of business at 1. Shiroyama, Ojima-cho, Nishio-shi, Alchi-ken, Japan, and 1. Toyota-cho, Toyota-shi, Alchi-ken, 471-3571 Japan, respectively (hereinafter referred to as "the Assigness"), are destrous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon,

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignees, their successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignees, for its own use and behoof and the use and behoof of their successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignore had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, their successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

(7/06) Page 1 of 2

Application No.
Attorney Docket No.

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, their successors, legal representatives, and assigns that the Assigners will, whenever counsel of the Assignees, or the counsel of their successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interfarence proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Aesignees, their successors, legal representatives, and assigns, but at the cost and expense of the Assignees, their successors, legal representatives, and assigns;

AND the Assignors hereby authorize and request the attorneys of Buchanan Ingersoil & Rooney PC to insert in the spaces provided above the title of the invention, filing date, application number, and attorney's docket number of said application when known.

AND the Assignors hereby request the Commissioner of Petente to leave any and all said Letters Patent of the United States to the Assignees as the Assignees of said invention, the Letters Patent to be Jasued for the sole use and behoof of the Assignees, their successors, legal representatives, and assigns.

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PATENT REEL: 022463 FRAME: 0010

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(TMIOL)

THIS ASSIGNMENT, by __(1) Shinii KITAOKA, (2) Keisuke ATSUMI, (3) Koli TAKAIRA, (4) Seiii HIROSHIMA, and (5) Takaaki SHIMIZU, residing at __(1) Tokai-shi, Aichi-ken, Japan, (3) Okazaki-shi, Aichi-ken, Japan, (4) Okazaki-shi, Aichi-ken, Japan, and __(5) Takaaki SHIMIZU (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in <u>HELICAL</u>
<u>GEAR AND METHOD OF MANUFACTURING THE SAME</u> set forth in an application for Letters
Petent of the United States, which is a

(1)		provi	ional application
	(a)		bearing Application No, and filed on;
	(b)		to be filed herewith; or .
(2)	\boxtimes	non-p	provisional application
	(a)		bearing Application No, and filed on;
	(p)	X	having an oath or declaration executed on even date herewith prior to filing of application;
	(c)		having an eath or declaration executed on a different date than this Assignment; and

WHEREAS. AISIN AI CO., LTD and TOYOTA JIDOSHA KABUSHIKI KAISHA, corporations duly organized under and pursuant to the laws of JAPAN and JAPAN and having principal places of business at 1. Spiroyama, Ojima-cho, Nishio-shi, Alchi-ken, Japan, and 1. Toyota-cho, Toyota-shi, Alchi-ken, 471-8571 Japan, respectively (hereinafter referred to as "the Assigness"), are desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon,

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignees, their successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignees, for its own use and behoof and the use and behoof of their successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, their successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth:

(7/08) Page 1 of 2

Application No.	
Altorney Docket No.	_

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, their successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignees, or the counsel of their successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any releasue or extension of any Letters Patent or Patents to be obtained thereon, is lawful end desirable, sign all papers and documents, take all lawful caths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignees, their successors, legal representatives, and assigns, but at the cost and expense of the Assignees, their successors, legal representatives, and assigns, but at the cost and expense of the Assignees, their successors, legal representatives, and assigns,

AND the Assignors hereby authorize and request the attorneys of Buchanan Ingersoll & Rooney PC to insert in the spaces provided above the title of the invention, filing date, application number, and attorney's docket number of said application when known.

AND the Assignors hereby request the Commissioner of Patents to Isaue any and all said Letters Patent of the United States to the Assignees as the Assignees of said invention, the Letters Patent to be issued for the sole use and behoof of the Assignees, their successors, legal representatives, and assigns.

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(JOINT)

THIS ASSIGNMENT, by _(1) Shinii KITAOKA, (2) Keisuke ATSUMI, (3) Koli TAKAIRA, (4) Seiii HIROSHIMA, and (5) Takaaki SHIMIZU, residing at _(1) Tokai-shi, Aichi-ken, Japan, (2) Anloshi, Aichi-ken, Japan, (3) Okazaki-shi, Aichi-ken, Japan, (4) Okazaki-shi, Aichi-ken, Japan, and _(5) Takaaki SHIMIZU (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in <u>HELICAL</u> GEAR AND METHOD OF MANUFACTURING THE SAME. set forth in an application for Letters Petent of the United States, which is a

(1)		provi	sional application	
	(a)		bearing Application No and filed on	<u>.</u>
	(b)	\Box .	to be filed herewith; or .	
(2)	\boxtimes	non-p	provisional application	
	(a)		bearing Application No, and filed on	;
	(p)	X	having an oath or declaration executed on even date herewith pri- filing of application;	or to
	(c)		having an oath or declaration executed on a different date than the Assignment; and	is

WHEREAS. AISIN AI CO., LTD and TOYOTA JIDOSHA KABUSHIKI KAISHA, corporations duly organized under and pursuant to the laws of JAPAN and JAPAN, and having principal places of business at 1. Shiroyama, Ojima-cho, Nishio-shi, Alchi-ken, Japan, and 1. Toyota-cho, Toyota-shi, Alchi-ken, 471-8571 Japan, respectively (hereinafter referred to as "the Assignees"), are desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignees, their successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to fite applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any end all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignees, for its own use and behoof and the use and behoof of their successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignore had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, their successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth:

(7/08) Page 1 of 2

Assigness, their successors, legal representative counsel of the Assigness, or the counsel of fine advise that any proceeding in connection with a Patents, or any proceeding in connection with L country, including interference proceedings, is to prierity to said application, division, communation Patent or Patents, or any reissue or extension of the lawful and deal able, sign all papers and door or required to be done for the procurement, main or Patents for said inventions, without charge to representatives, and assigns;	d expense of the Assigners, their successors, legal	
AND the Assignors hereby authorize an Rocney PC to insert in the spaces provided about number, and attorney's docket number of said a	d request the attorneys of Buchanen Ingersoll & we the title of the Invention, filing date, application application When Knewn.	, .
AND the Assignors hereby request the Letters Patent of the United States to the Assign Patent to be issued for the sole use and behoof representatives, and essigns.	Commissioner of Patents to Issue any 20d all said nees as the Assignees of sald Invention, the Letters of the Assignees, their successors, legal	
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Application No.

Attorney Docket No.

PATENT REEL: 022463 FRAME: 0014

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Attorney	Docket No.	

(JOINT)

THIS ASSIGNMENT, by _(1) Shinii KITAOKA. (2) Keisuke ATSUMI. (3) Koli TAKAIRA. (4) Seiii HIROSHIMA. and (5) Takaaki SHIMIZU., residing at _(1) Tokai-shi. Aichi-ken. Japan. (2) Anloshi. Aichi-ken. Japan. (3) Okazaki-shi. Aichi-ken. Japan. (4) Okazaki-shi. Aichi-ken. Japan and _(5) Takaaki SHIMIZU (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in <u>HELICAL</u> GEAR AND METHOD OF MANUFACTURING THE SAME, set forth in an application for Letters Patent of the United States, which is a

(1)	·□	provis	sional application	
	(a)		bearing Application No and filed on	·
	(p)		to be filed herewith; or	
(2)	\boxtimes	non-p	orovisional application	
	(a)		bearing Application No, and filed on	<u></u> ;
	(b)	X	having an oath or declaration executed on even date herewith a filing of application;	orior to
	(c)		having an eath or declaration executed on a different date than Assignment; and	this

WHEREAS. AISIN ALCO. LTD and TOYOTA JIDOSHA KABUSHIKL KAISMA, corporations duly organized under and pursuant to the laws of JAPAN and JAPAN and having principal places of business at 1. Shiroyama, Ojima-cho, Nishio-shi, Aichi-ken, Japan, and 1. Toyota-cho, Toyota-shi, Alchi-ken, 471-8571 Japan, respectively (hereinafter referred to as "the Assignees"), are destrous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, essign, transfer, and set over, unto the Assignees, their successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any end all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignees, for its own use and behoof and the use and behoof of their successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, their successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

(7/06) Page 1 of 2

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Assignees, their successors, legal re- counsel of the Assignees, or the coun advise that any proceeding in connect Patents, or any proceeding in connect country, including interference proces priority to said application, division, or Patent or Patents, or any reissue or e lawful and desirable, sign all paper or required to be done for the procurs or Patents for said inventions, without representatives, and assigns, but at it representatives, and assigns; AND the Assignors hereby at number, and attorney's docket number	presentation with a continued and do continued and do continued and do continued and c	R Commissioner of Perents to Issue any and all and
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Application No.

PATENT Page 2 of 2
REEL: 022463 FRAME: 0016

Attorney Docket No.	
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(TOINT)

THIS ASSIGNMENT, by (1) Shinii KITAOKA. (2) Keisuke ATSUMI. (3) Koli TAKAIRA. (4) Seiii HIROSHIMA, and (5) Takaaki SHIMIZU, residing at __(1) Tokai-shi, Aichi-ken, Japan, (2) Anloshi, Aichi-ken, Japan, (3) Okazaki-shi, Aichi-ken, Japan, (4) Okazaki-shi, Aichi-ken, Japan, (5) Takaaki SHIMIZU (hereinafter referred to as "the Assignors"), respectively, witnesseth:

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> (7/08) Page 1 of 2

PATENT

REEL: 022463 FRAME: 0017

Application No.
Alternay Docket No.

AND for the same consideration, the Assignors hereby coverant and agree to and with the Assignees, their successors, logal representatives, and assigns that the Assigners will, whenever counsel of the Assignees, or the counsel of their successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any applications for Letters Patent or Patents, or any reissue or extension, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignees, their successors, legal representatives, and assigns, but at the cost and expense of the Assignees, their successors, legal representatives, and assigns;

AND the Assignors hereby authorize and request the attorneys of Buchanan Ingersell & Rooney PC to Insert In the spaces provided above the title of the Invention, filing date, application number, and attorney's docket number of sald application when known.

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	Page 2 of 2	

PATENT REEL: 022463 FRAME: 0018

RECORDED: 03/27/2009