PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4935600

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HIROYASU SHICHI	03/27/2018
MASAKI HASEGAWA	03/27/2018
TERUO KOHASHI	04/06/2018
SHINICHI MATSUBARA	03/27/2018

RECEIVING PARTY DATA

Name:	HITACHI, LTD.
Street Address:	6-6, MARUNOUCHI 1-CHOME
City:	CHIYODA-KU, TOKYO
State/Country:	JAPAN
Postal Code:	100-8280

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15548531

CORRESPONDENCE DATA

Fax Number: (202)628-8844

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: 2026242800

Email: ehorne@crowell.com

Correspondent Name: CROWELL & MORING LLP

Address Line 1: P.O. BOX 14300

Address Line 4: WASHINGTON, D.C. 20044-4300

ATTORNEY DOCKET NUMBER:	056208.PA273US
NAME OF SUBMITTER:	MICHAEL H. JACOBS
SIGNATURE:	/Michael H. Jacobs/
DATE SIGNED:	04/27/2018

Total Attachments: 4

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> **PATENT** REEL: 045653 FRAME: 0217 504888859

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PATENT REEL: 045653 FRAME: 0218

ASSIGNMENT

(譲渡証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me citizen of Japan by Hitachi, Ltd.

a corporation organized under the laws of Japan,

located at 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8280, Japan

receipt of which is hereby acknowledged I do hereby sell and assign to said Hitachi, Ltd.

its successor and assigns, all my right, title and interest, in and for the United States of America, in and to

MIRROR ION MICROSCOPE AND ION BEAM CONTROL METHOD

invented by me (if only one is named below) or us (if plural inventors are named below) and described in the application for United States Letters Patent therefor, executed on even date herewith, and all United States Letters Patent which may be granted therefor, and all divisions, continuations and extensions thereof, the said interest being the entire ownership of the said Letters Patent when granted,

to be held and enjoyed by said Hitachi, Ltd.

its successor, assigns or other legal representatives, to the full end of term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me or us if this assignment and sale had not been made;

And I hereby agree to sign and execute any further documents or instruments which may be necessary, lawful, and proper in the prosecution of the above-named application or in the preparation and prosecution of any continuing, continuation-in-part, substitute, divisional, renewal, reviewed or reissue applications or in any amendment, extension, or interference proceedings, or otherwise to secure the title thereto in said assignee;

And I do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to said Hitachi, Ltd.

Signed on the date(s) indicated aside our signatures:

INVENTOR(S)

(発明者フルネームサイン)		(署名目)	
1)	Hiroyasu SlichiHiroyasu SHICHI	March 27. 2018	
2)	v Masaki HASEGAWA		
	Teruo KOHASHI		
4)	Shinichi MATSUBARA	•	
5)	· · · · · · · · · · · · · · · · · · ·		
6)			
7)			
	·		
10)			

PATENT REEL: 045653 FRAME: 0219

Date Signed

ASSIGNMENT (譲渡証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1,00) or the equivalent thereof, and other good and valuable consideration paid to me citizen of Japan by Hitachi, Ltd. a corporation organized under the laws of Japan, located at 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8280, Japan receipt of which is hereby acknowledged I do hereby sell and assign to said Hitachi, Ltd. its successor and assigns, all my right, title and interest, in and for the United States of America, in and to

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Signed on the date(s) indicated aside our signatures:

INVENTOR(S)

	(発明者フルネームサイン)	(署名日)
1)	Hiroyasu SHICHI	
	Masalii Hasogawa Masaki HASEGAWA	March 27, 2018
	Teruo KOHASHI	
4)	Shinichi MATSUBARA	·
5)		
7)		
8)	. 1841	
9)		
10)		

PATENT REEL: 045653 FRAME: 0220

Date Signed

ASSIGNMENT

(譲渡証)

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IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me citizen of Japan by Hitachi, Ltd. a corporation organized under the laws of Japan, located at 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8280, Japan receipt of which is hereby acknowledged I do hereby sell and assign to said Hitachi, Ltd. its successor and assigns, all my right, title and interest, in and for the United States of America, in and to

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to be held and enjoyed by said Hitachi, Ltd.

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Signed on the date(s) indicated aside our signatures:

INVENTOR(S) (発明者フルネームサイン)		Date Signed (署名日)
1)	Hiroyasu SHICHI	· · · · · · · · · · · · · · · · · · ·
2)	Masaki HASEGAWA	
3) Teruo Koh	Teruo KOHASHI	April 6, 2018
4)	Shinichi MATSUBARA	
5)		
6)		· · · · · · · · · · · · · · · · · · ·
7)		. '
8)		
9)		
(0)		

PATENT REEL: 045653 FRAME: 0221

ASSIGNMENT

(譲渡証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me citizen of Japan by Hitachi, Ltd. a corporation organized under the laws of Japan, located at 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8280, Japan receipt of which is hereby acknowledged I do hereby sell and assign to said Hitachi, Ltd. its successor and assigns, all my right, title and interest, in and for the United States of America, in and to

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to be held and enjoyed by said Hitachi, Ltd.

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	INVENTOR(S) (発明者フルネームサイン)	Date Signed (署名日)
1)	Hiroyasu SHICHI	·
2)	Masaki HASEGAWA	
3)	Teruo KOHASH!	
4) Shini	di Mateulare Shinichi MATSUBARA	March 27. 2018
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PATENT REEL: 045653 FRAME: 0222

RECORDED: 04/27/2018