

## PATENT ASSIGNMENT COVER SHEET

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| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT               |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                   |
| <b>CONVEYING PARTY DATA</b>   |                              |
| <b>Name</b>   | <b>Execution Date</b>        |
| HIROYUKI ISHIKAWA   | 03/28/2016                   |
| KAZUHIKO OHTSU  | 03/30/2016                   |
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| <b>PROPERTY NUMBERS Total: 1</b>  |                              |
| <b>Property Type</b>  | <b>Number</b>                |
| <b>Application Number:</b>  | 15088594                     |
| <b>CORRESPONDENCE DATA</b>  |                              |
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| <b>NAME OF SUBMITTER:</b>   | GREGORY TUROCY               |
| <b>SIGNATURE:</b>   | /Greg Turocy/                |
| <b>DATE SIGNED:</b>   | 04/01/2016                   |
| This document serves as an Oath/Declaration (37 CFR 1.63).  |                              |
| <b>Total Attachments: 2</b>   |                              |
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| source=DEC3396#page2.tif  |                              |

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**COMBINED DECLARATION AND ASSIGNMENT FOR U.S. PATENT  
APPLICATION USING AN APPLICATION DATA SHEET**

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**DECLARATION**

As a below named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Title: LIQUID CIRCULATION DEVICE, LIQUID DISCHARGE DEVICE AND  
LIQUID DISCHARGE METHOD

the application of which is attached hereto unless the following is checked

\_\_\_\_\_ was filed on \_\_\_\_\_ as United States application Serial No. \_\_\_\_\_, or  
as described and claimed in PCT International Application No. \_\_\_\_\_ filed  
on \_\_\_\_\_ and amended on \_\_\_\_\_ (if any).

The above-identified application was made or authorized to be made by me.

Please direct all communications to the following address:

the address associated with Customer Number **23623**, and direct telephone calls to  
Gregory Turocy of Turocy & Watson, LLP at 216-696-8730.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. Section 1001 by fine or imprisonment of not more than five (5) years, or both.

**ASSIGNMENT**

For good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, the undersigned

**Hiroyuki Ishikawa  
Kazuhiko Ohtsu  
Toshiba TEC Kabushiki Kaisha  
1-11-1, Osaki, Shinagawa-ku, Tokyo  
141-8562, Japan**

hereby sell and assign to TOSHIBA TEC KABUSHIKI KAISHA, a corporation of Japan, having a business address at 1-11-1, Osaki, Shinagawa-ku, Tokyo 141-8562, Japan, its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the inventions titled above for which application for United States Letters Patent is executed by the undersigned on the date below and is being filed concurrently herewith, said

application for United States Letters Patent, any and all other applications for Letters Patent on said inventions in countries foreign to the United States, including all divisional, renewal, substitute, continuation, Convention applications, reissue, reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof for the full term or terms for which the same may be granted based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said applications and said Letters Patent; said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

The undersigned hereby appoint, request, and grant power to the following law firm to insert on this Combined Declaration and Assignment further identification which may be necessary or desirable in order to comply with the Rules of the U.S. Patent and Trademark Office for recordation of this document, for example, the U.S. Serial No. and filing date.

Turocy & Watson, LLP, 57th Floor - Key Tower, 127 Public Square, Cleveland, Ohio 44114.

Legal name of sole or first inventor: Hiroyuki Ishikawa

Inventor's signature: Hiroyuki Ishikawa Date: March 28, 2016

Legal name of second inventor: Kazuhiko Ohtsu

Inventor's signature: Kazuhiko Ohtsu Date: Mar 30, 2016