506301343 10/13/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT6348092

Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YUNSEONG NAM	04/13/2020
REINHOLD BLUMEL	04/13/2020
NIKODEM GRZESIAK	04/13/2020

RECEIVING PARTY DATA

Name:	IONQ, INC.	
Street Address:	4505 CAMPUS DRIVE	
City:	COLLEGE PARK	
State/Country:	MARYLAND	
Postal Code:	20740	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16854043

CORRESPONDENCE DATA

Fax Number: (713)623-4846

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: 7136234844

Email: kneil@pattersonsheridan.com, psdocketing@pattersonsheridan.com

Correspondent Name: PATTERSON & SHERIDAN, LLP

Address Line 1: 24 GREENWAY PLAZA

Address Line 2: SUITE 1600

Address Line 4: HOUSTON, TEXAS 77046

ATTORNEY DOCKET NUMBER:	IONQ_0004US02
NAME OF SUBMITTER: JOSEPH J. STEVENS	
SIGNATURE:	/Joseph J. Stevens/
DATE SIGNED:	10/13/2020

Total Attachments: 4

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PATENT REEL: 054043 FRAME: 0435

Attorney Docket No.: IONQ/0004USP01

ASSIGNMENT FOR APPLICATION FOR PATENT WITH DECLARATION STATEMENT

W	Н	F	R	F	Δ	2	•

Names and Addresses of Inventors:

1)	Yunseong NAM	2)	Reinhold BLUMEL
	5822 Inman Park Circle, Unit 100,		123 Farm Hill Road
	North Bethesda, MD 20852		Middletown, CT 06457
3)	Nikodem GRZESIAK	4)	
	8455 Fenton St Apt. 523		
	Silver Spring, 20910		,

(hereinafter referred to as Assignors), have invented a certain invention entitled:

AMPLITUDE, FREQUENCY, AND PHASE MODULATED SIMULTANEOUS ENTANGLING GATES FOR TRAPPED-ION QUANTUM COMPUTERS

enclosed herewith or for which	application for Letters Pat under Serial No.		as filed on
WHEREAS, IONQ, INC 4505 Campus Drive, College Pa acquiring the entire right, title and and the invention disclosed there the Invention, heretofore conce patents, inventor's certificates a granted in any and all countries	ark, Maryland 20740 (here d interest in and to said ap ein (hereinafter referred to vived, made or discovered and other forms of protecti	plication (hereinafter referre as Invention), and in and t I by said Assignors, and ir	gnee), is desirous of ed to as Application) to all embodiments of and to any and al

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

- 1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a conventional, division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.
- 2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, conventional, divisional, continuing or additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of

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Attorney Docket No.: IONQ/0004USP01

any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefore and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

- The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.
- Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- In the event that the filing date and/or Application No. of said Invention are not entered above at the time Assignors execute this document, and if such information is deemed necessary, Assignors hereby authorize and request the attorney/agent(s) of Patterson + Sheridan, LLP, to insert above the filing date and/or Application No. of said application.

6.	This d	This declaration is directed to the attached application, or (if following box is checked					
	[]	United States application or PCT international application number					
		filed on					
As a l	below na	med inventor, I hereby declare that:					

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

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application; and

I acknowledge that any willful false statement made in this declaration is punishable under section 1001 of title 18 by fine or imprisonment of not more than 5 years, or both.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

			DocuSigned by:	
1)	4/13/2020	(DATE)	/Yunseong NAM/	
,		,	Yunseong NAM	
2)	4/13/2020	(DATE)	Reinhold BLUMEL	
			Neilliold BLOWLL	
3)		(DATE)		
•		` ,	Nikodem GRZESIAK	

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Attorney Docket No.: IONQ/0004USP01

ASSIGNMENT FOR APPLICATION FOR PATENT WITH DECLARATION STATEMENT

١	Ν	Н	F	R	F.	Δ	S	•

Names and Addresses of Inventors:

1)	Yunseong NAM	2)	Reinhold BLUMEL
	5822 Inman Park Circle, Unit 100,		123 Farm Hill Road
	North Bethesda, MD 20852		Middletown, CT 06457
3)	Nikodem GRZESIAK	4)	
	4709 Tecumseh St Apt 203		
	College Park, MD 20740		,

(hereinafter referred to as Assignors), have invented a certain invention entitled:

enclosed herewith or for which application for Letters Patent in the United States was filed on

AMPLITUDE, FREQUENCY, AND PHASE MODULATED SIMULTANEOUS ENTANGLING GATES FOR TRAPPED-ION QUANTUM COMPUTERS

	under Serial No.	; and	
WHEREAS, IONQ, I	NC., a corporation of the St	tate of Delaware, having a r	place of business at
4505 Campus Drive, College	Park, Maryland 20740 (her	einafter referred to as Assig	nee), is desirous of
acquiring the entire right, title	and interest in and to said ap	oplication (hereinafter referre	d to as Application),
and the invention disclosed t	herein (hereinafter referred to	as Invention), and in and to	all embodiments of
the Invention, heretofore co	nceived, made or discovered	d by said Assignors, and in	and to any and all
patents, inventor's certificate	s and other forms of protect	ion (hereinafter referred to a	as Patents) thereon
granted in any and all countr	ies and groups of countries.		

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

- 1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a conventional, division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.
- 2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, conventional, divisional, continuing or additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of

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Attorney Docket No.: IONQ/0004USP01

any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefore and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

- 3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.
- 4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. In the event that the filing date and/or Application No. of said Invention are not entered above at the time Assignors execute this document, and if such information is deemed necessary, Assignors hereby authorize and request the attorney/agent(s) of **Patterson + Sheridan, LLP**, to insert above the filing date and/or Application No. of said application.

This declaration is directed to the attached application, or (if following box is checked):

	[]	United S	tates applicati	on or PCT international application number filed on
As a	below na	ımed inver	ntor, I hereby o	declare that:
	The a	bove-ident	tified application	on was made or authorized to be made by me;
in the	I belie applicat		m the original	inventor or an original joint inventor of a claimed invention
section				false statement made in this declaration is punishable under sonment of not more than 5 years, or both.
IN W Assignee on				signors have executed and delivered this instrument to said
1)			_ (DATE)	Yunseong NAM
2)			_ (DATE)	Reinhold BLUMEL
3)	4/13/	/2020	(DATE)	Mkodum Grzusiak/ SOADBRTD2BT034CO Nikodem GRZESIAK

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RECORDED: 10/13/2020