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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEY	ANCE:	PATENT SECURITY AGREEMENT SUPPLEMENT (REVOLVER)		
CONVEYING PARTY	DATA			
		Name Execution	Date	
HOUGHTON MIFFLIN	N HARCOURT	JRT PUBLISHING COMPANY 07/15/2016		
RECEIVING PARTY I	ΟΑΤΑ			
Name:	CITIBANK	, N.A.		
Street Address:	390 GREE	NWICH ST, 1ST FLOOR		
City:	NEW YOR	IK		
State/Country:	NEW YOR	ικ		
Postal Code:	10014			
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PROPERTY NUMBE	RS Total: 2			
Property Type		Number		
Patent Number:		9368041		
Patent Number:		9355570		
CORRESPONDENCE Fax Number:	(65	0)838-5109		
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PATENT SECURITY AGREEMENT SUPPLEMENT

This PATENT SECURITY AGREEMENT SUPPLEMENT (as amended, amended and restated, supplemented or otherwise modified from time to time, the "*Patent Security Agreement Supplement*") dated July 15, 2016, is made by the Person listed on the signature page hereof (the "*Grantor*"), in favor of Citibank, N.A. (together with its affiliates, "*Citibank*"), as collateral agent (the "*Collateral Agent*") for the Secured Parties (as defined in the Credit Agreement referred to below).

WHEREAS, Houghton Mifflin Harcourt Company, a corporation organized under the laws of the State of Delaware and parent company of the Grantor ("*Holdings*"), Houghton Mifflin Harcourt Publishers Inc., a corporation organized under the laws of the State of Delaware, HMH Publishers LLC, a limited liability company organized under the laws of the State of Delaware, the Grantor, and the subsidiaries of Holdings from time to time party thereto are party to that certain Amended and Restated Revolving Credit Agreement dated as of May 22, 2012 (as amended, amended and restated, supplemented or otherwise modified from time to time, including on July 22, 2015, the "*Credit Agreement*"), with Citibank, as Administrative Agent and as Collateral Agent, and the Lenders party thereto. Terms defined in the Credit Agreement and not otherwise defined herein are used herein as defined in the Credit Agreement.

WHEREAS, pursuant to the Credit Agreement, the Grantor has executed and delivered to the Collateral Agent that certain Amended and Restated Revolving Facility Guarantee and Collateral Agreement dated as of May 22, 2012 (as amended and restated on July 22, 2015), made by the Grantor to the Collateral Agent (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Security Agreement") and that certain Patent Security Agreement dated as of June 21, 2012 (as amended, amended and restated, supplemented or otherwise modified from time to time, collectively with the Security Agreement, the "Security Agreements").

WHEREAS, under the terms of the Security Agreements, the Grantor has granted to the Collateral Agent, for the ratable benefit of the Secured Parties, a security interest in, among other property, the Additional Patent Collateral (as defined in Section 1 below) of the Grantor and has agreed as a condition thereof to execute this Patent Security Agreement Supplement for recording with the United States Patent and Trademark Office and other governmental authorities.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor agrees as follows:

Section 1 <u>Grant of Security</u>. The Grantor hereby grants to the Collateral Agent for the ratable benefit of the Secured Parties a security interest in all of such Grantor's right, title and interest in and to the patents and patent applications set forth in Schedule A hereto (the "*Additional Patent Collateral*").

Section 2 <u>Recordation</u>. The Grantor authorizes and requests that the Commissioner for Patents and any other applicable government officer record this Patent Security Agreement Supplement.

PATENT REEL: 045210 FRAME: 0488 Section 3 <u>Execution in Counterparts</u>. This Patent Security Agreement Supplement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

Section 4 <u>Grants, Rights and Remedies</u>. This Patent Security Agreement Supplement has been entered into in conjunction with the provisions of the Security Agreements. The Grantor does hereby acknowledge and confirm that the grant of the security interest hereunder to, and the rights and remedies of, the Collateral Agent with respect to the Additional Patent Collateral are more fully set forth in the Security Agreements, the terms and provisions of which are incorporated herein by reference as if fully set forth herein. The Security Agreements shall remain in full force and effect in accordance with their terms. In the event of any conflict between the Security Agreements and this Patent Security Agreement Supplement, the terms of the Security Agreements shall control.

Section 5 <u>Governing Law</u>. This Patent Security Agreement Supplement shall be governed by, and construed in accordance with, the laws of the State of New York.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the Grantor has caused this Patent Security Agreement Supplement to be duly executed and delivered by its officer thereunto duly authorized as of the date first above written.

HOUGHTON MIFFLIN HARCOURT PUBLISHING COMPANY By

Name: William F. Bayers Title: Executive Vice President, Secretary and General Counsel

Address for Notices: 222 Berkeley Street Boston, MA 02116

PATENT REEL: 045210 FRAME: 0490 Schedule A Additional Patent Collateral

PATENT APPLICATIONS NOW FORMALLY REGISTERED AS PATENTS							
Patent Description	-	Patent Number	Filing Date	Reg. Date	Status	er Patent Number Filing Date Reg. Date Status Assignee	
Indicating an online test taker status using a test taker icon		9368041		5/25/2016	Registered	Houghton Mifflin Harcourt Publishing Company	
Online Test Polling	11/877428		10/23/2007	5/11/2016	Registered	Houghton Mifflin Harcourt Publishing Company	