WW GRAINGER INC Form SC 13G/A April 10, 2017

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934 (Amendment No.3)*

NAME OF ISSUER: W.W. Grainger, Inc.

TITLE OF CLASS OF SECURITIES: Common Stock

CUSIP NUMBER: 384802104

DATE OF EVENT WHICH REQUIRES FILING OF THIS STATEMENT: March 31, 2017

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

[X] Rule 13d-1(b)
[] Rule 13d-1(c)
[] Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be 'filed' for the purpose of Section 18 of the Securities Exchange Act of 1934 ('Act') or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP NUMBER: 384802104

- (1) Names of Reporting Persons The Bank of New York Mellon Corporation IRS Identification Nos. of Above Persons IRS No.13-2614959
- (2) Check the Appropriate Box if a Member of a Group (See Instructions)
 (a) () (b) ()
- (3) SEC use only

(4) Citizenship or Place of	Orga	nization	New York
Number of Shares Beneficially Owned by Each Reporting Person With	(5)	Sole Voting Power	1,705,734
	(6)	Shared Voting Power	3,022
	(7)	Sole Dispositive Power	1,757,876
	(8)	Shared Dispositive Power	313,893

- (9) Aggregate Amount Beneficially Owned
 by Each Reporting Person 2,071,783
- (10) Check if the Aggregated Amount in Row (9) Excludes Certain

Shares (see]	Instructions)					()		
(11) Percent of Class Represented by Amount in Row (9)						3.53	3%		
(12) Type of Reporting Person (See Instructions) HC									
CUSIP NUMBER: 38	34802104								
(1) Names of Reporting Persons MBC Investments Corporation IRS Identification Nos. of Above Persons IRS No.51-0301132									
(2) Check the Appropriate Box if a Member of a Group (See Instructions) (a) () (b) ()									
(3) SEC use or	nly								
(4) Citizensh	ip or Place of	Organ	ization		De	lawa	re		
Number of Shares			Sole Voting Power			1,509,990			
Beneficially Owned by Each Reporting Person With		(6)	Shared Vot	ing Power			0		
		(7)	Sole Dispo	sitive Power	1,5	48,39	91		
		(8)	Shared Dis	positive Powe:	<u> </u>	308,1	62		
(9) Aggregate Amount Beneficially Owned by Each Reporting Person 1,932,101									
(10) Check if the Shares (see I		unt i	n Row (9)	Excludes Certa	ain	()		
(11) Percent of Class Represented by Amount in Row (9) 3.29%							9%		
(12) Type of Reporting Person (See Instructions) HC							НС		
		001100	120						
SCHEDULE 13G									
	Item 1(a) Name of Issuer: W.W. Grainger, Inc.								
Item 1(b) Addre	Address of Issuer's Principal Executive Office: 100 Grainger Parkway Lake Forest, Illinois 60045-5201 United States								
Item 2(a) Name	(a) Name of Person Filing: The Bank of New York Mellon Corporation and any other reporting person(s) identified on the second part of the cover page(s) and Exhibit I								
Item 2(b) Address of Principal Business Office, or if None, Residence: C/O The Bank of New York Mellon Corporation 225 Liberty Street New York, New York 10286 (for all reporting persons)									
Item 2(c) Cit	izenship:		See cover	page and Exhil	oit I				
Item 2(d) Tit	le of Class of	Secur	ities:	Common Stock					

CUSIP Number 384802104

Item 3 See Item 12 of cover page(s) ("Type of Reporting
Person ") for each reporting person.

Symbol Category

- BD = Broker or Dealer registered under Section 15 of the Securities Exchange Act of 1934
- BK = Bank as defined in Section 3(a)(6) of the Securities Exchange Act of 1934
- IV = Investment Company registered under Section 8 of the Investment Company Act of 1940
- IA = Investment Advisor registered under Section 203 of the Investment Advisors Act of 1940
- EP = Employee Benefit Plan, Pension Fund which is subject
 to the provisions of the Employee Retirement Income
 Security Act of 1974 or Endowment Fund; see
 Section 240.13 d(1)(b)(1)(ii)(F)
- HC = Parent Holding Company, in accordance with Section 240.13-d(1)(b)(1)(ii)(G)

The amount beneficially owned includes, where appropriate, securities not outstanding which are subject to options, warrants, rights or conversion privileges that are exercisable within 60 days. The securities reported herein as beneficially owned may exclude securities of the issuer with respect to which voting and/or dispositive power is exercised by subsidiaries of The Bank of New York Mellon Corporation, or departments or units thereof, independently from the exercise of those powers over the securities reported herein. See SEC Release No. 34-39538 (January 12, 1998). The filing of this Schedule 13G shall not be construed as an admission that The Bank of New York Mellon Corporation, or its direct or indirect subsidiaries, including The Bank of New York Mellon and BNY Mellon, National Association, are for the purposes of Section 13(d) or 13(g) of the Act, the beneficial owners of any securities covered by this Schedule 13G.

The following information applies if checked: () The Bank of New York Mellon and/or () The Bank of New York Mellon Trust Company, National Association is/are the trustee of the issuer's employee benefit plan (the Plan), which is subject to ERISA. The securities reported include all shares held of record by such reporting person(s) as trustee of the Plan which have not been allocated to the individual accounts of employee participants in the Plan. The reporting person, however, disclaims beneficial ownership of all shares that have been allocated to the individual accounts of employee participants in the Plan for which directions have been received and followed.

Item 5 Ownership of Five Percent or Less of a Class:

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following (X)

Item 6 Ownership of More than Five Percent on Behalf of Another Person:

All of the securities are beneficially owned by The Bank of New York Mellon Corporation and its direct or indirect subsidiaries in their various fiduciary capacities. As a result, another entity in every instance is entitled to dividends or proceeds of sale. The number of individual accounts holding an interest of 5% or more is ()

- Item 7 Identification and Classification of the Subsidiary Which Acquired
 the Security Being Reported by the Parent Holding Company:
 See Exhibit I.
- Item 8 Identification and Classification of Members of the Group: N/A
- Item 9 Notice of Dissolution of Group: N/A

Item 10 Certification:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired and are not held in connection with or as a participant in any transaction having such purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct. This filing is signed by The Bank of New York Mellon Corporation on behalf of all reporting entities pursuant to Rule 13d-1(k)(1) promulgated under the Securities and Exchange Act of 1934, as amended.

Date: April 10, 2017

THE BANK OF NEW YORK MELLON CORPORATION

By: /s/ IVAN R. ARIAS
----Ivan R. Arias
Attorney-In-Fact

EXHIBIT I

The shares reported on the attached Schedule 13G are beneficially owned by the following direct or indirect subsidiaries of The Bank of New York Mellon Corporation, as marked (X):

- (A) The Item 3 classification of each of the subsidiaries listed below is "Item 3(b) Bank as defined in Section 3(a)(6) of the Act" (15 U.S.C. 78c) or "Item 3(j)A non-U.S. institution in accordance with Rule 240.13d-1 (b)(1)(ii)(J)"
 - (X) The Bank of New York Mellon (parent holding company of Mellon Overseas Investment Corporation; BNY International Financing Corporation; The Bank of New York Mellon SA/NV; Cutwater Holdings, LLC)
 - () The Bank of New York Mellon Trust Company, National Association
 - (X) BNY Mellon, National Association
 - (X) BNY Mellon Trust of Delaware
 - (X) The Bank of New York Mellon SA/NV (parent holding company of BNY Mellon Service Kapitalanlage-Gesellschaft mbH)

- (B) The Item 3 classification of each of the subsidiaries listed below is "Item 3(e) An investment adviser in accordance with Section 240.13d-1 (b)(1)(ii)(E)" or "Item 3(j) A non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J)"
 - () ARX Investimentos Ltda (parent holding company of BNY Mellon Alocacao de Patrimonia Ltda.)
 - () BNY Mellon Alocacao de Patrimonia Ltda
 - () BNY Mellon Servicos Financeiros Distribuidora de Titulos e Valores Mobiliarios S.A.(parent holding company of BNY Mellon Administração de Ativos Ltda.)
 - () BNY Mellon Administracao de Ativos Ltda.
 - () The Boston Company Asset Management LLC
 - (X) The Dreyfus Corporation (parent holding company of MBSC Securities Corporation)
 - () Insight Investment Management (Global) Limited
 - () Lockwood Advisors, Inc.
 - (X) Mellon Capital Management Corporation
 - () Newton Investment Management (North America) Limited
 - () Newton Investment Management Limited
 - () Standish Mellon Asset Management Company LLC
 - () CenterSquare Investment Management Holdings, Inc.(parent holding company of CenterSquare Investment Management, Inc.)
 - () CenterSquare Investment Management, Inc.
 - (X) Walter Scott & Partners Limited
 - () BNY Mellon Wealth Management, Advisory Services, Inc.
 - () BNY Mellon Trust Company (Cayman) Limited
 - (X) BNY Mellon Investment Management Cayman Limited
 - () Cutwater Asset Management Corporation
 - () Cutwater Investor Services Corporation
 - () Pareto Investment Management Limited
 - () BNY Mellon Asset Management Japan Limited
- (C) The Item 3 classification of each of the subsidiaries listed below is "Item 3(a) Broker or dealer registered under Section 15 of the Act" (15 U.S.C. 78c) or "Item 3(j) A non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J)"
 - () BNY Mellon Capital Markets, LLC
 - () MBSC Securities Corporation
 - (X) Pershing LLC
- (D) The Item 3 classification of each of the subsidiaries listed below is "Item 3(g) a parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G)"
 - (X) The Bank of New York Mellon Corporation
 - (X) B.N.Y. Holdings (Delaware) Corporation (parent holding company of BNY Mellon Trust of Delaware)
 - () MAM (MA) Holdings LLC (parent holding company of Standish Mellon Asset Management Company LLC; The Boston Company Asset Management LLC)
 - (X) MBC Investments Corporation (parent holding company of The Dreyfus Corporation; ARX Investimentos Ltda.; Mellon Capital Management Corporation; BNY Mellon Investment Management (Jersey) Ltd.; BNY Mellon Investment Management APAC LP)
 - (X) BNY Mellon Investment Management (Jersey) Ltd. (parent holding company of BNY Mellon Investment Management (Europe) Ltd.)
 - (X) BNY Mellon Investment Management (Europe) Ltd. (parent holding company of BNY Mellon Investment Management Europe Holdings Ltd.; BNY Mellon Investment Management Cayman Ltd.)
 - (X) BNY Mellon Investment Management Europe Holdings Ltd. (parent holding

- company of BNY Mellon International Asset Management Group Limited)

 (X) BNY Mellon International Asset Management Group Limited (parent holding company of Newton Management Limited; BNY Mellon International Asset Management (Holdings) Limited; Insight Investment Management Limited)
- () Newton Management Limited (parent holding company of Newton Investment Management (North America) Limited; Newton Investment Management Limited)
- (X) BNY Mellon International Asset Management (Holdings) Limited (parent holding company of BNY Mellon International Asset Management (Holdings) No. 1 Limited)
- (X) BNY Mellon International Asset Management (Holdings) No. 1 Limited (parent holding company of Walter Scott & Partners Limited)
- () Insight Investment Management Limited (parent holding company of Insight Investment Management (Global) Limited; Pareto Investment Management Limited)
- () BNY Mellon Investment Management APAC LP (Parent holding company of BNY Mellon Investment Management (APAC) Holdings Limited
- () BNY Mellon Investment Management (APAC) Holdings Limited (parent holding company of BNY Mellon Asset Management Japan Limited)
- (X) Pershing Group LLC (parent holding company of Lockwood Advisors, Inc; Pershing LLC)
- () Mellon Overseas Investment Corporation (parent holding company of Mellon Canada Holding Company; BNY Mellon Participacoes Ltda.)
- () Mellon Canada Holding Company (parent holding company of BNY Mellon Wealth Management, Advisory Services, Inc)
- () BNY Mellon Participacoes Ltda.(parent holding company of BNY Mellon Servicos Financeiros Distribuidora de Titulos e Valores Mobiliarios S.A.)
- () BNY International Financing Corporation (parent holding company of BNY Mellon Trust Company (Cayman) Limited)
- () Cutwater Holdings LLC (parent holding company of Cutwater Asset Management Corporation; Cutwater Investor Services Corporation)
- () BNY Capital Markets Holdings, Inc. (parent holding company of BNY Mellon Capital Markets, LLC)

NOTE: ALL OF THE LEGAL ENTITIES LISTED UNDER (A), (B), (C) AND (D) ABOVE ARE DIRECT OR INDIRECT SUBSIDIARIES OF THE BANK OF NEW YORK MELLON CORPORATION. BENEFICIAL OWNERSHIP OF MORE THAN FIVE PERCENT OF THE CLASS BY ANY ONE OF THE SUBSIDIARIES OR INTERMEDIATE PARENT HOLDING COMPANIES LISTED ABOVE IS REPORTED ON A JOINT REPORTING PERSON PAGE FOR THAT SUBSIDIARY ON THE ATTACHED SCHEDULE 13G AND IS INCORPORATED IN THE TOTAL PERCENT OF CLASS REPORTED ON THE BANK OF NEW YORK MELLON CORPORATION'S REPORTING PERSON PAGE. (DO NOT ADD THE SHARES OR PERCENT OF CLASS REPORTED ON EACH JOINT REPORTING PERSON PAGE ON THE ATTACHED SCHEDULE 13G TO DETERMINE THE TOTAL PERCENT OF CLASS FOR THE BANK OF NEW YORK MELLON CORPORATION).

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each of the undersigned (each a "Company") does hereby make, constitute and appoint each of Nicholas R. Darrow, Ivan Arias and Andrew Weiser (and any other employee of The Bank of New York Mellon Corporation, or one of its affiliates, associated with the Global Holdings Reporting Group and designated in writing by one of the attorneys-in-fact), acting individually, its true and lawful attorney to execute and deliver in its name and on its behalf, whether the Company is acting individually or as representative of others, any and all filings,

be they written or oral, required to be made by the Company with respect to securities which may be deemed to be beneficially owned by the Company or under the Company's investment discretion under:

*the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including those filings required to be submitted on Form 13F, Schedule 13G, Schedule 13D and Forms 3, 4 and 5, and

*the laws of any jurisdiction other than the United States of America, including those filings made to disclose securities holdings as required to be submitted to regulatory agencies, exchanges and/or issuers,

giving and granting unto each said attorney-in-fact power and authority to correspond with issuers, regulatory authorities, and other entities as is required in support of the filings referenced above, and to act in the premises as fully and to all intents and purposes as the Company might or could do to comply with the applicable regulations if personally present by one of its authorized signatories (including, but not limited to, instructing local counsel on a Company's behalf), hereby ratifying and confirming all that said attorney-in-fact shall lawfully do or cause

THIS POWER OF ATTORNEY shall remain in full force and effect until either revoked in writing by the Company or until such time as the person or to whom power of attorney has been hereby granted cease(s) to be an persons employee of The Bank of New York Mellon Corporation or one of its affiliates.

This Power of Attorney may be executed in any number of counterparts all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned hereby execute this Agreement effective as of the date set forth below.

| Banks/Bank Holding Companies |

THE BANK OF NEW YORK MELLON CORPORATION

By: /S/ MITCHELL E.HARRIS

----Mitchell E. Harris
Chief Executive Officer,
Investment Management

Date: March 17, 2017

BNY MELLON, NATIONAL ASSOCIATION

By: /S/ THOMAS J. DICKER

Thomas J. Dicker
Chief Operating Officer
Date: October 9, 2015

THE BANK OF NEW YORK MELLON

By: /S/ MITCHELL E. HARRIS
----Mitchell E. Harris

BNY MELLON, NATIONAL ASSOCIATION

By: /S/ DONALD HEBERLE

----Donald Heberle
Chief Executive Officer

Date: September 16, 2015

THE BANK OF NEW YORK MELLON SA/NV

By: /S/ LAURA AHTO

Laura Ahto
Chief Executive Officer
Date: May 17, 2016

THE BANK OF NEW YORK MELLON

By: /S/ CURTIS ARLEDGE
-----Curtis Arledge

Senior Executive Vice President Date: September 18, 2015 Vice Chairman

Date: August 26, 2015

THE BANK OF NEW YORK MELLON TRUST COMPANY, NATIONAL ASSOCIATION

THE BANK OF NEW YORK MELLON TRUST COMPANY, NATIONAL ASSOCIATION

By: /S/ ANTONIO PORTUONDO

By: /S/ KURTIS R. KURIMSKY

Antonio Portuondo President

Kurtis R. Kurimsky Executive Vice President

Date: October 20, 2015

Date: March 8, 2016

BNY MELLON TRUST OF DELAWARE

BNY MELLON TRUST OF DELAWARE

Lee James Woolley

By: /S/ JAMES P. AMBAGIS James P. Ambagis

By: /S/ LEE JAMES WOOLLEY _____

President

Chairman and

Date: October 21, 2015

Chief Executive Officer Date: October 19, 2015

Investment Advisers and/or Broker-Dealers _____

PERSHING LLC

BNY MELLON CAPITAL MARKETS, LLC

By: /S/ CLAIRE SANTANIELLO

By: /S/ JEFF GEARHART

Claire Santaniello Chief Administrative Officer and Chief Risk Officer

Jeff Gearhart Chief Operating Officer

Date: May 24, 2016

Date: October 19, 2016

ARX INVESTIMENTOS LTDA

ARX INVESTIMENTOS LTDA

By: /S/ CAMILA SOUZA

By: /S/ GUILHERME ABRY

Camila Souza Director

Guilherme Abry Director

Date: January 4, 2016

Date: January 4, 2016

BNY MELLON SERVICOS FINANCEIROS DISTRIBUIDORA DE TITULOS E VALORES MOBILIARIOS S.A.

BNY MELLON SERVICOS FINANCEIROS DISTRIBUIDORA DE TITULOS E VALORES MOBILIARIOS S.A.

By: /S/ CARLOS ALBERTO SARAIVA By: /S/ MARCUS VINICIUS MATHIAS PEREIRA _____

Carlos Alberto Saraiva Director

Marcus Vinicius Mathias Pereira Director

Date: May 5, 2016

Date: May 5, 2016

BNY MELLON ADMINISTRACAO DE ATIVOS TITDA

BNY MELLON ADMINISTRACAO DE ATIVOS LTDA

By: /S/ CARLOS ALBERTO SARAIVA By: /S/ MARCUS VINICIUS MATHIAS PEREIRA

Carlos Alberto Saraiva Director

Date: May 5, 2016

BNY MELLON ALOCACAO DE PATRIMONIO

By: /S/ GUSTAVO CASTELLO BRANCO By: /S/ CAMILA SOUZA

Gustavo Castello Branco

Director

Date: January 4, 2016

LLC

By: /S/ BART GRENIER

Bart Grenier

Chairman and

Chief Executive Officer

Date: July 16, 2015

THE DREYFUS CORPORATION

By: /S/ JAMES BITETTO

James Bitetto Secretary

Date: July 30, 2015

LOCKWOOD ADVISORS, INC.

By: /S/ JOHN J. BRETT

John J. Brett Chairman

Date: July 30, 2015

MELLON CAPITAL MANAGEMENT

CORPORATION

By: /S/ W. CHRISTOPHER APPLER

W. Christopher Appler Managing Director and

Chief Compliance Officer Date: August 4, 2015

NEWTON INVESTMENT MANAGEMENT LIMITED NEWTON INVESTMENT MANAGEMENT

By: /S/ JAMES HELBY

Marcus Vinicius Mathias Pereira

Director

Date: May 5, 2016

BNY MELLON ALOCACAO DE PATRIMONIO

LTDA

Camila Souza Director

Date: January 4, 2016

THE BOSTON COMPANY ASSET MANAGEMENT BNY MELLON ASSET MANAGEMENT JAPAN

LIMITED

By: /S/ SHIZU KISHIMOTO

Shizu Kishimoto

Representative Director

and President

Date: August 5, 2015

INSIGHT INVESTMENT MANAGEMENT

(GLOBAL) LIMITED

By: /s/ CHARLES FARQUHARSON

Charles Farguharson Chief Risk Officer

Date: February 16, 2016

STANDISH MELLON ASSET MANAGEMENT

COMPANY LLC

By: /S/ DAVID LEDUC

David Leduc

Chief Executive Officer and Chief Investment Officer

Date: October 23, 2015

MBSC SECURITIES CORPORATION

By: /S/ KENNETH J. BRADLE

Kenneth J. Bradle

President

Date: April 29, 2016

(NORTH AMERICA) LIMITED

By: /S/ JAMES HELBY

James Helby James Helby Director Chief Risk Officer Date: July 17, 2015 Date: June 30, 2016 CENTERSOUARE INVESTMENT MANAGEMENT CENTERSQUARE INVESTMENT MANAGEMENT, HOLDINGS, INC. By: /S/ R. JOSEPH LAW By: /S/ R. JOSEPH LAW _____ _____ R. Joseph Law R. Joseph Law Chief Financial Officer and Chief Financial Officer and Chief Compliance Officer Chief Compliance Officer Date: July 15, 2015 Date: July 15, 2015 WALTER SCOTT & PARTNERS LIMITED PARETO INVESTMENT MANAGEMENT LIMITED By: /S/ RODGER NISBET By: /S/ CHARLES FARQUHARSON -----_____ Rodger Nisbet Charles Farquharson Chief Risk Officer Executive Chairman Date: February 16, 2016 Date: July 15, 2015 BNY MELLON WEALTH MANAGEMENT, BNY MELLON INVESTMENT MANAGEMENT ADVISORY SERVICES, INC. CAYMAN LTD By: /S/ MARIE-CLAUDE LEPAGE By: /S/ BRENDON J. DONNELLAN Marie-Claude Lepage Brendon J.Donnellan Director Chief Compliance Officer Date: May 9, 2016 Date: August 22, 2016 BNY MELLON TRUST COMPANY BNY MELLON TRUST COMPANY (CAYMAN) LIMITED (CAYMAN) LIMITED By: CANELLA SECRETARIES By: CANELLA SECRETARIES (CAYMAN) LTD, SECRETARY (CAYMAN) LTD, SECRETARY By: /S/ PATRICIA BRUZIO By: /S/GILLIAN NELSON Gillian Nelson Patricia Bruzio Authorized Person Authorized Person Date: May 17, 2016 Date: May 17, 2016 CUTWATER INVESTOR SERVICES CUTWATER ASSET MANAGEMENT CORPORATION CORPORATION By: /S/ CLIFFORD CORSO By: /S/ CLIFFORD CORSO Clifford Corso Clifford Corso Chief Executive Officer Chief Executive Officer Date: March 16, 2015 Date: March 16, 2015 Parent Holding Companies/Control Persons

B.N.Y. HOLDINGS (DELAWARE) CORPORATION PERSHING GROUP LLC

By: /S/ JAMES P. AMBAGIS By: /S/ CLAIRE SANTANIELLO

James P. Ambagis Claire Santaniello
President Chief Administrative Officer
and Chief Risk Officer

Date: October 21, 2015 Date: May 11, 2016

BNY MELLON INVESTMENT MANAGEMENT

BNY MELLON INVESTMENT MANAGEMENT

(APAC) HOLDINGS LIMITED (APAC) HOLDINGS LIMITED

By: /S/ EMILY CHAN

Emily Chan

By: /S/ DONI SHAMSUDDIN

Doni Shamsuddin

Director Director

Date: April 19, 2016 Date: April 19, 2016

BNY MELLON INTERNATIONAL ASSET NEWTON MANAGEMENT LIMITED

MANAGEMENT GROUP LIMITED

By: /S/ GREG BRISK

Greg Brisk

By: /S/ HELENA MORRISSEY

Helena Morrissey

Director
Date: October 21, 2015
Director
Date: July 17, 2015

MAM (MA) HOLDINGS LLC MBC INVESTMENTS CORPORATION

Date: April 29, 2016

MELLON OVERSEAS INVESTMENT INSIGHT INVESTMENT MANAGEMENT CORPORATION LIMITED

By: /S/ KURTIS R. KURIMSKY
By: /S/ CHARLES FARQUHARSON

Kurtis R. Kurimsky
Vice President and Controller

Date: October 7, 2015

Charles Farquharson
Chief Risk Officer
Date: February 16, 2016

BNY INTERNATIONAL FINANCING BNY INTERNATIONAL FINANCING

CORPORATION CORPORATION

By: /S/ KURTIS R. KURIMSKY

Kurtis R. Kurimsky

By: /S/ JOHN M. ROY

John M. Roy

President and Comptroller Vice President
Date: May 12, 2016 Date: August 15, 2016

BNY MELLON INVESTMENT MANAGEMENT BNY MELLON INVESTMENT MANAGEMENT

EUROPE HOLDINGS LIMITED (EUROPE) LIMITED By: /S/ GREG BRISK By: /S/ GREG BRISK _____ _____ Greg Brisk Greg Brisk Director Director Date: October 21, 2015 Date: October 21, 2015 BNY MELLON INVESTMENT MANAGEMENT BNY CAPITAL MARKETS HOLDINGS, INC. (JERSEY) LIMITED By: /S/ THOMAS P. GIBBONS By: /S/ GREG BRISK _____ _____ Greg Brisk Thomas P. Gibbons Director Vice Chairman and Chief Financial Officer Date: October 21, 2015 Date: October 24, 2015 BNY MELLON INTERNATIONAL ASSET BNY MELLON INTERNATIONAL ASSET MANAGEMENT (HOLDINGS) LIMITED MANAGEMENT (HOLDINGS) No. 1 LIMITED By: /S/ GREG BRISK By: /S/ GREG BRISK _____ _____ Greg Brisk Greg Brisk Director Director Date: October 21, 2015 Date: October 21, 2015 MELLON CANADA HOLDING COMPANY CUTWATER HOLDINGS, LLC By: /S/ KELLY SCHWARTZ By: /S/ CLIFFORD CORSO _____ _____ Kelly Schwartz Clifford Corso Chief Executive Officer President and Director Date: May 3, 2016 Date: March 16, 2015 BNY MELLON PARTICIPACOES LTDA BNY MELLON PARTICIPACOES LTDA By: /S/ CARLOS ALBERTO SARAIVA By: /S/ MARCUS VINICIUS MATHIAS PEREIRA Marcus Vinicius Mathias Pereira Carlos Alberto Saraiva Director Director Date: May 5, 2016 Date: May 5, 2016 BNY MELLON INVESTMENT MANAGEMENT APAC LP By: BNY MELLON INVESTMENT MANAGEMENT HOLDINGS, LLC, GENERAL PARTNER By: /S/ PAUL A. GRIFFITHS Paul A. Griffiths President. Date: April 29, 2016 ______ Fund Administrators

BNY MELLON SERVICE KAPITALANLAGE-GESELLSCHAFT mbH

By: /S/ KATARINA MELVAN _____

Katarina Melvan

Date: August 19, 2016

BNY MELLON SERVICE KAPITALANLAGE-GESELLSCHAFT mbH

By: /S/ CAROLINE SPECHT _____

Caroline Specht Managing Director(Chairman) Managing Director
e: August 19, 2016 Date: August 19, 2016 Managing Director

JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the undersigned hereby agree to any and all joint filings required to be made on their behalf on Schedule 13G (including amendments thereto) under the Exchange Act, with respect to securities which may be deemed to be beneficially owned by them under the Exchange Act, and that this Agreement be included as an Exhibit to any such joint filing. This Agreement may be executed in any number of counterparts all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned hereby execute this Agreement effective as of the date set forth below.

______ Banks/Bank Holding Companies

THE BANK OF NEW YORK MELLON CORPORATION

By: /S/ MITCHELL E.HARRIS _____

Mitchell E. Harris Chief Executive Officer, Investment Management

Date: March 17, 2017

BNY MELLON, NATIONAL ASSOCIATION

By: /S/ THOMAS J. DICKER

Thomas J. Dicker Chief Operating Officer Date: October 9, 2015

THE BANK OF NEW YORK MELLON

By: /S/ MITCHELL E. HARRIS _____ Mitchell E. Harris

Date: August 27, 2015

BNY MELLON, NATIONAL ASSOCIATION

By: /S/ DONALD HEBERLE ______

Donald Heberle Chief Executive Officer

Date: September 16, 2015

THE BANK OF NEW YORK MELLON SA/NV

By: /S/ LAURA AHTO _____

Laura Ahto

Chief Executive Officer

Date: May 17, 2016

THE BANK OF NEW YORK MELLON

By: /S/ CURTIS ARLEDGE _____ Curtis Arledge

Senior Executive Vice President Vice Chairman

August 27, 2015 Date: August 26, 2015

THE BANK OF NEW YORK MELLON TRUST COMPANY, NATIONAL ASSOCIATION

By: /S/ ANTONIO PORTUONDO -----

Antonio Portuondo

President

Date: October 20, 2015

BNY MELLON TRUST OF DELAWARE

By: /S/ JAMES P. AMBAGIS _____ James P. Ambagis

President

Date: October 21, 2015

THE BANK OF NEW YORK MELLON TRUST COMPANY, NATIONAL ASSOCIATION

By: /S/ KURTIS R. KURIMSKY _____

Kurtis R. Kurimsky

Executive Vice President

Date: March 8, 2016

BNY MELLON TRUST OF DELAWARE

By: /S/ LEE JAMES WOOLLEY _____ Lee James Woolley

Chairman and

Chief Executive Officer

Date: October 19, 2015

Investment Advisers and/or Broker-Dealers

PERSHING LLC

By: /S/ CLAIRE SANTANIELLO _____ Claire Santaniello

Chief Administrative Officer

and Chief Risk Officer

Date: May 24, 2016

ARX INVESTIMENTOS LTDA

By: /S/ CAMILA SOUZA _____

Camila Souza Director

Date: January 4, 2016

BNY MELLON SERVICOS FINANCEIROS DISTRIBUIDORA DE TITULOS E VALORES MOBILIARIOS S.A.

Carlos Alberto Saraiva

Date: May 5, 2016

BNY MELLON ADMINISTRACAO DE ATIVOS T.TDA

Carlos Alberto Saraiva Director

Date: May 5, 2016

BNY MELLON CAPITAL MARKETS, LLC

By: /S/ JEFF GEARHART _____

Jeff Gearhart Chief Operating Officer

Date: October 19, 2016

ARX INVESTIMENTOS LTDA

By: /S/ GUILHERME ABRY _____

> Guilherme Abry Director

Date: January 4, 2016

BNY MELLON SERVICOS FINANCEIROS DISTRIBUIDORA DE TITULOS E VALORES MOBILIARIOS S.A.

By: /S/ CARLOS ALBERTO SARAIVA By: /S/ MARCUS VINICIUS MATHIAS PEREIRA _____

Marcus Vinicius Mathias Pereira

Date: May 5, 2016

BNY MELLON ADMINISTRAÇÃO DE ATIVOS T₁TDA

By: /S/ CARLOS ALBERTO SARAIVA By: /S/ MARCUS VINICIUS MATHIAS PEREIRA

_____ Marcus Vinicius Mathias Pereira

Director

Date: May 5, 2016

BNY MELLON ALOCACAO DE PATRIMONIO

By: /S/ GUSTAVO CASTELLO BRANCO By: /S/ CAMILA SOUZA

Gustavo Castello Branco

Director

Date: January 4, 2016

THE BOSTON COMPANY ASSET MANAGEMENT

By: /S/ BART GRENIER

Bart Grenier Chairman and

Chief Executive Officer

Date: July 16, 2015

THE DREYFUS CORPORATION

By: /S/ JAMES BITETTO

James Bitetto Secretary

Date: July 30, 2015

LOCKWOOD ADVISORS, INC.

By: /S/ JOHN J. BRETT

John J. Brett Chairman

Date: July 30, 2015

MELLON CAPITAL MANAGEMENT

CORPORATION

By: /S/ W. CHRISTOPHER APPLER

W. Christopher Appler Managing Director and Chief Compliance Officer

Date: August 4, 2015

NEWTON INVESTMENT MANAGEMENT LIMITED

By: /S/ JAMES HELBY

James Helby Director

Date: July 17, 2015

BNY MELLON ALOCACAO DE PATRIMONIO

LTDA

Camila Souza Director

Date: January 4, 2016

BNY MELLON ASSET MANAGEMENT JAPAN

LIMITED

By: /S/ SHIZU KISHIMOTO

_____ Shizu Kishimoto

Representative Director

and President

Date: August 5, 2015

INSIGHT INVESTMENT MANAGEMENT

(GLOBAL) LIMITED

By: /s/ CHARLES FARQUHARSON

Charles Farquharson Chief Risk Officer

Date: February 16, 2016

STANDISH MELLON ASSET MANAGEMENT

COMPANY LLC

By: /S/ DAVID LEDUC

David Leduc

Chief Executive Officer

and Chief Investment Officer

Date: October 23, 2015

MBSC SECURITIES CORPORATION

By: /S/ KENNETH J. BRADLE

Kenneth J. Bradle

President

Date: April 29, 2016

NEWTON INVESTMENT MANAGEMENT

(NORTH AMERICA) LIMITED

By: /S/ JAMES HELBY

James Helby

Chief Risk Officer

Date: June 30, 2016

CENTERSQUARE INVESTMENT MANAGEMENT CENTERSQUARE INVESTMENT MANAGEMENT, HOLDINGS, INC. By: /S/ R. JOSEPH LAW By: /S/ R. JOSEPH LAW _____ _____ R. Joseph Law R. Joseph Law Chief Financial Officer and Chief Compliance Officer Chief Financial Officer and Chief Compliance Officer Date: July 15, 2015 Date: July 15, 2015 WALTER SCOTT & PARTNERS LIMITED PARETO INVESTMENT MANAGEMENT LIMITED By: /S/ RODGER NISBET By: /S/ CHARLES FARQUHARSON _____ _____ Rodger Nisbet Charles Farquharson Chief Risk Officer Executive Chairman Date: July 15, 2015 Date: February 16, 2016 BNY MELLON WEALTH MANAGEMENT, BNY MELLON INVESTMENT MANAGEMENT CAYMAN LTD ADVISORY SERVICES, INC. By: /S/ MARIE-CLAUDE LEPAGE By: /S/ BRENDON J. DONNELLAN ______ _____ Marie-Claude Lepage Brendon J.Donnellan Chief Compliance Officer Director Date: May 9, 2016 Date: August 22, 2016 BNY MELLON TRUST COMPANY BNY MELLON TRUST COMPANY (CAYMAN) LIMITED (CAYMAN) LIMITED By: CANELLA SECRETARIES By: CANELLA SECRETARIES (CAYMAN) LTD, SECRETARY (CAYMAN) LTD, SECRETARY By: /S/GILLIAN NELSON By: /S/ PATRICIA BRUZIO Patricia Bruzio Gillian Nelson Authorized Person Authorized Person Date: May 17, 2016 Date: May 17, 2016 CUTWATER INVESTOR SERVICES CUTWATER ASSET MANAGEMENT CORPORATION CORPORATION By: /S/ CLIFFORD CORSO By: /S/ CLIFFORD CORSO _____ _____ Clifford Corso Clifford Corso Chief Executive Officer Chief Executive Officer
e: March 16, 2015 Date: March 16, 2015 Date: March 16, 2015 Parent Holding Companies/Control Persons ______ B.N.Y. HOLDINGS (DELAWARE) CORPORATION PERSHING GROUP LLC

By: /S/ JAMES P. AMBAGIS By: /S/ CLAIRE SANTANIELLO

Claire Santaniello James P. Ambagis

President

Chief Administrative Officer and Chief Risk Officer

Date: October 21, 2015 Date: May 11, 2016

BNY MELLON INVESTMENT MANAGEMENT

(APAC) HOLDINGS LIMITED

By: /S/ EMILY CHAN

Emily Chan Director

Date: April 19, 2016

BNY MELLON INTERNATIONAL ASSET

MANAGEMENT GROUP LIMITED

By: /S/ GREG BRISK

Greg Brisk

Director Date: October 21, 2015

MAM (MA) HOLDINGS LLC

MELLON OVERSEAS INVESTMENT CORPORATION

By: /S/ KURTIS R. KURIMSKY

Kurtis R. Kurimsky Vice President and Controller

Date: October 7, 2015

BNY INTERNATIONAL FINANCING CORPORATION

By: /S/ KURTIS R. KURIMSKY _____

Kurtis R. Kurimsky President and Comptroller

Date: May 12, 2016

BNY MELLON INVESTMENT MANAGEMENT EUROPE HOLDINGS LIMITED

By: /S/ GREG BRISK

BNY MELLON INVESTMENT MANAGEMENT

(APAC) HOLDINGS LIMITED

By: /S/ DONI SHAMSUDDIN _____

Doni Shamsuddin

Director

Date: April 19, 2016

NEWTON MANAGEMENT LIMITED

By: /S/ HELENA MORRISSEY -----

Helena Morrissey

Director

Date: July 17, 2015

MBC INVESTMENTS CORPORATION

By: /S/ PAUL A. GRIFFITHS

______ Paul A. Griffiths

Chairman, President and Chief Executive Officer

Date: April 29, 2016

INSIGHT INVESTMENT MANAGEMENT

LIMITED

By: /S/ CHARLES FARQUHARSON

Charles Farguharson Chief Risk Officer

Date: February 16, 2016

BNY INTERNATIONAL FINANCING

CORPORATION

By: /S/ JOHN M. ROY

John M. Roy Vice President Date: August 15, 2016

BNY MELLON INVESTMENT MANAGEMENT (EUROPE) LIMITED

By: /S/ GREG BRISK

Greg Brisk Greg Brisk Director Director Date: October 21, 2015 Date: October 21, 2015 BNY MELLON INVESTMENT MANAGEMENT BNY CAPITAL MARKETS HOLDINGS, INC. (JERSEY) LIMITED By: /S/ THOMAS P. GIBBONS By: /S/ GREG BRISK Greg Brisk Thomas P. Gibbons Director Vice Chairman and Chief Financial Officer Date: October 21, 2015 Date: October 24, 2015 BNY MELLON INTERNATIONAL ASSET BNY MELLON INTERNATIONAL ASSET MANAGEMENT (HOLDINGS) LIMITED MANAGEMENT (HOLDINGS) No. 1 LIMITED By: /S/ GREG BRISK By: /S/ GREG BRISK _____ _____ Greg Brisk Greg Brisk Director Director Date: October 21, 2015 Date: October 21, 2015 MELLON CANADA HOLDING COMPANY CUTWATER HOLDINGS, LLC By: /S/ KELLY SCHWARTZ By: /S/ CLIFFORD CORSO _____ _____ Kelly Schwartz Clifford Corso President and Director Chief Executive Officer Date: May 3, 2016 Date: March 16, 2015 BNY MELLON PARTICIPACOES LTDA BNY MELLON PARTICIPACOES LTDA By: /S/ CARLOS ALBERTO SARAIVA By: /S/ MARCUS VINICIUS MATHIAS PEREIRA _____ _____ Carlos Alberto Saraiva Marcus Vinicius Mathias Pereira Director Director Date: May 5, 2016 Date: May 5, 2016 BNY MELLON INVESTMENT MANAGEMENT APAC LP By: BNY MELLON INVESTMENT MANAGEMENT HOLDINGS, LLC, GENERAL PARTNER By: /S/ PAUL A. GRIFFITHS _____ Paul A. Griffiths President Date: April 29, 2016 ______ Fund Administrators

BNY MELLON SERVICE KAPITALANLAGEGESELLSCHAFT mbH
BNY MELLON SERVICE KAPITALANLAGEGESELLSCHAFT mbH

By: /S/ KATARINA MELVAN

Katarina Melvan

Managing Director(Chairman)
e: August 19, 2016

Date: August 19, 2016

By: /S/ CAROLINE SPECHT

Caroline Specht Managing Director Date: August 19, 2016