Perez Beatriz R Form 3 July 27, 2017

FORM 3

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

OMB APPROVAL

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INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, response...

Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting 2. Date of Event Requiring 3. Issuer Name and Ticker or Trading Symbol Person * Statement GRAINGER W W INC [GWW] Perez Beatriz R (Month/Day/Year) 07/25/2017 (Last) (First) (Middle) 4. Relationship of Reporting 5. If Amendment, Date Original Person(s) to Issuer Filed(Month/Day/Year) 100 GRAINGER PARKWAY (Check all applicable) (Street) 6. Individual or Joint/Group Filing(Check Applicable Line) 10% Owner _X_ Director _X_ Form filed by One Reporting Officer Other Person LAKE FOREST, Â ILÂ 60045 (give title below) (specify below) Form filed by More than One Reporting Person (City) (State) (Zip) Table I - Non-Derivative Securities Beneficially Owned

1.Title of Security (Instr. 4)

2. Amount of Securities Beneficially Owned (Instr. 4)

Ownership Form: Direct (D) or Indirect (I)

(Instr. 5)

4. Nature of Indirect Beneficial

Ownership (Instr. 5)

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

SEC 1473 (7-02)

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security			5. Ownership Form of	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	(Instr. 4) Title	Amount or Number of Shares	Price of Derivative Security	Derivative Security: Direct (D) or Indirect (I) (Instr. 5)	

Reporting Owners

Reporting Owner Name / Address

Relationships

Director 10% Owner Offi

Director 10% Owner Officer Other

Perez Beatriz R

100 GRAINGER PARKWAY X LAKE FOREST, ILÂ 60045

Signatures

Hugo Dubovoy, Jr., as attorney-in-fact

07/27/2017

**Signature of Reporting Person

Date

Explanation of Responses:

No securities are beneficially owned

* If the form is filed by more than one reporting person, see Instruction 5(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

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Remarks:

Exhibit List: Exhibit 24 - Power of Attorney

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *See* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

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