Pulick Michael A Form 4 December 15, 2010

FORM 4

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

SECURITIES

OMB 3235-0287 Number:

OMB APPROVAL

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Check this box

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940 See Instruction

1(b).

(Print or Type Responses)

may continue.

1. Name and Address of Reporting Person ** Pulick Michael A			2. Issuer Name and Ticker or Trading Symbol	5. Relationship of Reporting Person(s) to Issuer			
			GRAINGER W W INC [GWW]	(Check all applicable)			
(Last)	(First)	(Middle)	3. Date of Earliest Transaction				
			(Month/Day/Year)	Director 10% Owner			
100 GRAINGER PARKWAY			12/14/2010	_X_ Officer (give title Other (specify below)			
				Senior Vice President			
	(Street)		4. If Amendment, Date Original	6. Individual or Joint/Group Filing(Check			
			Filed(Month/Day/Year)	Applicable Line)			
				X Form filed by One Reporting Person			
LAKE FOREST, IL 60045-5201				Form filed by More than One Reporting			

(City)	(State) ((Zip) Table	e I - Non-D	erivative	Secur	ities Acq	uired, Disposed of	f, or Beneficial	ly Owned
1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	Code (Instr. 8)	4. Securities Acquired on(A) or Disposed of (D) (Instr. 3, 4 and 5) (A) or			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
Common Stock	12/14/2010		Code V M(1)	Amount 4,800	(D)	Price \$ 76.61	31,684	D	
Common Stock	12/14/2010		S <u>(1)</u>	4,475	D	\$ 135	27,209	D	

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

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

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	Secu Acq (A) Disp (D)	urities uired or posed of tr. 3, 4,	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)	
				Code V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Option	\$ 76.61	12/14/2010		M(1)		4,800	04/26/2009	04/25/2016	Common Stock	4,800
Option	\$ 83.08						04/25/2010	04/24/2017	Common Stock	12,000
Option	\$ 85.82						04/30/2011	04/29/2018	Common Stock	10,500
Option	\$ 81.49						04/29/2012	04/28/2019	Common Stock	30,000
Option	\$ 108.15						04/28/2013	04/27/2020	Common Stock	29,000

Reporting Owners

Reporting Owner Name / Address	Relationships
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Director 10% Owner Officer Other

Pulick Michael A

100 GRAINGER PARKWAY Senior Vice President LAKE FOREST, IL 60045-5201

Signatures

C. L. Kogl, as

attorney-in-fact 12/15/2010

**Signature of Reporting Person Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, *see* Instruction 4(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).
- (1) Transaction pursuant to a previously adopted Rule 10b5-1 trading program.

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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