GRAINGER W W INC

Check this box

if no longer

subject to

Section 16.

Form 4 or

obligations

may continue.

See Instruction

Form 5

Form 4 March 01, 2012

FORM 4

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

OMB Number:

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January 31, 2005

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OMB APPROVAL

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF **SECURITIES**

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

1(b).

(Last)

(City)

(Print or Type Responses)

1. Name and Address of Reporting Person * **GANTZ WILBUR H**

(First)

(Street)

2. Issuer Name and Ticker or Trading Symbol

GRAINGER W W INC [GWW]

5. Relationship of Reporting Person(s) to

Issuer

(Middle)

3. Date of Earliest Transaction

(Month/Day/Year)

X_ Director 10% Owner Officer (give title Other (specify

(Check all applicable)

03/01/2012

4. If Amendment, Date Original

6. Individual or Joint/Group Filing(Check

Applicable Line)

below)

Filed(Month/Day/Year) _X_ Form filed by One Reporting Person Form filed by More than One Reporting

Person

LAKE FOREST, IL 60045-5201

100 GRAINGER PARKWAY

(State) (Zip)

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1.Title of 2. Transaction Date 2A. Deemed Security (Month/Day/Year) Execution Date, if (Instr. 3) (Month/Day/Year)

4. Securities TransactionAcquired (A) or Code Disposed of (D) (Instr. 8) (Instr. 3, 4 and 5) 5. Amount of Securities Beneficially (D) or Owned Following (Instr. 4)

6. Ownership 7. Nature of Form: Direct Indirect Beneficial Indirect (I) Ownership (Instr. 4)

(A) or

Reported Transaction(s) (Instr. 3 and 4)

Code V Amount (D) Price

6,300 D

Common Stock

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

Persons who respond to the collection of SEC 1474 information contained in this form are not (9-02)required to respond unless the form displays a currently valid OMB control number.

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

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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. Transacti Code (Instr. 8)	5. orNumber of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)		8. Pri Deriv Secun (Instr
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares	
Stock Units	(1)	03/01/2012		A	77	(2)	(2)	Common Stock	77	\$ 20
Stock Option	\$ 45.5					04/30/2003	04/29/2013	Common Stock	1,980	
Stock Option	\$ 54.14					04/28/2004	04/27/2014	Common Stock	1,670	

Reporting Owners

Reporting Owner Name / Address	Relationships					
	Director	10% Owner	Officer	Other		
GANTZ WILBUR H 100 GRAINGER PARKWAY LAKE FOREST, IL 60045-5201	X					

Signatures

John L. Howard, as attorney-in-fact

03/01/2012

**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)** 1-for-1
- (2) The stock units are expected to settle in cash following termination of service as a director.

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.

Reporting Owners 2