



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3561

September 26, 2016

James T. Ryan
Chairman, President and Chief Financial Officer
W.W. Grainger, Inc.
100 Grainger Parkway
Lake Forest, Illinois 60045-5201

Re: W.W. Grainger, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2015
Filed February 29, 2016
File No. 1-5684

Dear Mr. Ryan:

We have completed our review of your filing. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or the filing and the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States. We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable rules require.

Sincerely,

/s/ William H. Thompson

William H. Thompson
Accounting Branch Chief
Office of Consumer Products

cc: Ronald L. Jadin
Senior Vice President and Chief Financial Officer