NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

COMPANY BACKGROUND

W.W. Grainger, Inc. is a broad line, business-to-business distributor of maintenance, repair and operating (MRO) supplies and other related products and services. W.W. Grainger, Inc.'s operations are primarily in the United States (U.S.) and Canada, with a presence in Europe, Asia and Latin America. In this report, the words "Company" or "Grainger" mean W.W. Grainger, Inc. and its subsidiaries.

PRINCIPLES OF CONSOLIDATION

The Consolidated Financial Statements include the accounts of the Company and its subsidiaries over which the Company exercises control. All significant intercompany transactions are eliminated from the consolidated financial statements. The Company has a controlling ownership interest in MonotaRO Co., Ltd. (MonotaRO), the single channel online business in Japan, with the residual representing the noncontrolling interest.

USE OF ESTIMATES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses, and the disclosure of contingent liabilities. Actual results could differ from those estimates.

FOREIGN CURRENCY TRANSLATION

The U.S. dollar is the reporting currency for all periods presented. The financial statements of the Company's foreign operating subsidiaries are measured using the local currency as the functional currency. Assets and liabilities of the Company's foreign operating subsidiaries are translated into U.S. dollars at the exchange rate in effect at the balance sheet date. Revenues and expenses are translated at average rates in effect during the period. Net exchange gains or losses resulting from the translation of financial statements of foreign operations and related long-term debt are recorded as a separate component of other comprehensive earnings. See Note 13 to the Consolidated Financial Statements. Foreign currency transaction gains and losses are included in the Consolidated Statement of Earnings.

RECLASSIFICATIONS

Certain amounts in the 2016 and 2015 financial statements, as previously reported, have been reclassified to conform to the 2017 presentation. In March 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-09, *Stock Based Compensation: Improvements to Employee Share-Based Payment Accounting*, which became effective January 1, 2017. As a result, the Company reclassified $21 million in 2016 and $46 million in 2015 of employee taxes paid from cash flows from operating activities to cash flows from financing activities in the Consolidated Statements of Cash Flows. These changes did not have a material impact on the Consolidated Financial Statements.

REVENUE RECOGNITION

Revenues recognized include product sales, billings for freight and handling charges and fees earned for services provided. The Company recognizes product sales and billings for freight and handling charges primarily on the date products are shipped to, or picked up by, the customer. In cases where the product is shipped directly to the customer, the Company recognizes revenue at the time of shipment primarily on a gross basis. The Company's standard shipping terms are FOB shipping point. On occasion, the Company will negotiate FOB destination terms. These sales are recognized upon delivery to the customer. eCommerce revenues, which accounted for 51% of total 2017 revenues, are recognized on the same terms as revenues through other channels. Service revenues, which accounted for approximately 1% of total 2017 revenues, are recognized after services are completed, including related service costs. Taxes collected from customers and remitted to governmental authorities are presented on a net basis and are not included in revenue.

Grainger offers sales incentives to customers primarily consisting of volume rebates. Volume rebates are generally based on annual targets and accruals are established throughout the year based on contract terms, Grainger's historical payout experience and estimations of customer participation and performance levels. Sales incentives are primarily accounted for as a reduction of revenue. Contract terms for most of Grainger's incentive arrangements do not exceed a year. Total accrued sales incentives were $45 million and $36 million as of December 31, 2017 and 2016, respectively, and are reflected in Accrued expenses in the Consolidated Balance Sheet.

COST OF MERCHANDISE SOLD
Cost of merchandise sold includes product and product-related costs, vendor consideration, freight and handling costs. The Company defines handling costs as those costs incurred to fulfill a shipped sales order.

VENDOR CONSIDERATION
The Company receives rebates and allowances from its vendors to promote their products. The Company utilizes numerous advertising programs to promote its vendors' products, including catalogs and other printed media, Internet, radio and other marketing programs. Most of these programs relate to multiple vendors, which makes supporting the specific, identifiable and incremental criteria difficult, and would require numerous assumptions and judgments. Based on the inexact nature of trying to track reimbursements to the advertising expenditure for each vendor, the Company treats most vendor advertising allowances as a reduction to product purchase price and is reflected in Cost of merchandise sold rather than a reduction of operating (advertising) expenses.

Vendor funds that are determined to be reimbursement of specific, incremental and identifiable costs incurred to promote vendors' products are recorded as an offset to the related expenses in Warehouse, marketing and administrative expenses.

Rebates earned from vendors that are based on product purchases are capitalized into inventory as part of product purchase price. These rebates are credited to Cost of merchandise sold based on sales. Vendor rebates that are earned based on products sold are credited directly to Cost of merchandise sold.

ADVERTISING
Advertising costs are expensed in the year the related advertisement is first presented. Advertising expense was $187 million, $180 million and $180 million for 2017, 2016 and 2015, respectively. Most vendor-provided allowances are classified as a reduction to product purchase price and are reflected in Cost of merchandise sold. For additional information see VENDOR CONSIDERATION above.

Catalog expense is amortized equally over the life of the catalog, beginning in the month of its distribution. Advertising costs for catalogs that have not been distributed by year-end are capitalized as Prepaid expenses. Amounts included in Prepaid expenses at December 31, 2017 and 2016, were $10 million and $12 million, respectively.

WAREHOUSING, MARKETING AND ADMINISTRATIVE EXPENSES
Included in this category are purchasing, branch operations, information services and marketing and selling expenses, as well as other types of general and administrative costs.

STOCK INCENTIVE PLANS
The Company measures all share-based payments using fair-value-based methods and records compensation expense related to these payments over the vesting period. See Note 11 to the Consolidated Financial Statements.

INCOME TAXES
Income taxes are recognized during the year in which transactions enter into the determination of financial statement income, with deferred taxes being provided for temporary differences between financial and tax reporting. The Company recognizes in the financial statements a provision for tax uncertainties, resulting from application of complex tax regulations in multiple tax jurisdictions. The Company evaluates deferred income taxes to determine if valuation allowances are required using a “more likely than not” standard. This assessment considers the nature, frequency and amount of book and taxable income and losses, the duration of statutory carryback and forward periods, future reversals of existing taxable temporary differences and tax planning strategies, among other matters. On December 22, 2017, The Tax Cuts and Jobs Act of 2017 was enacted. See Note 14 to the Consolidated Financial Statements.

OTHER COMPREHENSIVE EARNINGS (LOSSES)
The Company's Other comprehensive earnings (losses) include foreign currency translation adjustments, changes in fair value of derivatives designated as hedges and unrecognized gains (losses) on postretirement and other employment-related benefit plans. Accumulated other comprehensive earnings (losses) (AOCE) are presented separately as part of shareholders' equity. See Note 13 to the Consolidated Financial Statements.

CASH AND CASH EQUIVALENTS
The Company considers investments in highly liquid debt instruments, purchased with an original maturity of 90 days or less, to be cash equivalents.

CONCENTRATION OF CREDIT RISK

The Company places temporary cash investments with institutions of high credit quality and, by policy, limits the amount of credit exposure to any one institution.

The Company has a broad customer base representing many diverse industries doing business in all regions of the United States, Canada, Europe, Asia and Latin America. Consequently, no significant concentration of credit risk is considered to exist.

ACCOUNTS RECEIVABLE AND ALLOWANCE FOR DOUBTFUL ACCOUNTS

Accounts receivable are stated at their estimated net realizable value. The Company establishes reserves for customer accounts that are potentially uncollectible. The method used to estimate the allowances is based on several factors, including the age of the receivables and the historical ratio of actual write-offs to the age of the receivables. These analyses also take into consideration economic conditions that may have an impact on a specific industry, group of customers or a specific customer. See Note 4 to the Consolidated Financial Statements.

INVENTORIES

Inventories are valued at the lower of cost or net realizable value. Cost is determined primarily by the last-in, first-out (LIFO) method, which accounts for approximately 64% of total inventory. Grainger uses LIFO method to better match inventory cost and revenue. For the remaining inventory, cost is determined by the first-in, first-out (FIFO) method.

Grainger regularly reviews inventory to evaluate continued demand and identify any obsolete or excess quantities. Grainger records provisions for the difference between excess and obsolete inventory cost and its estimated realizable value. See Note 5 of the Consolidated Financial Statements.

PROPERTY, BUILDINGS AND EQUIPMENT

Property, buildings and equipment are valued at cost. For financial statement purposes, depreciation and amortization are recorded in amounts sufficient to relate the cost of depreciable assets to operations over their estimated service lives, principally on the declining-balance and sum-of-the-years-digits depreciation methods. The Company's international businesses record depreciation expense primarily on a straight-line basis. The principal estimated useful lives for determining depreciation are as follows:

Buildings, structures and improvements	10 to 30 years
Furniture, fixtures, machinery and equipment	3 to 10 years

Depreciation expense was $170 million, $166 million and $162 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Improvements to leased property are amortized over the initial terms of the respective leases or the estimated service lives of the improvements, whichever is shorter.

The Company capitalized interest costs of $2 million, $2 million and $4 million for the years ended December 31, 2017, 2016 and 2015, respectively.

LONG-LIVED ASSETS

The carrying value of long-lived assets, primarily property, buildings and equipment and amortizable intangibles, is evaluated whenever events or changes in circumstances indicate that the carrying value of the asset may be impaired. An impairment loss is recognized when estimated undiscounted future cash flows resulting from use of the asset, including disposition, are less than the carrying value of the asset. Impairment is measured as the amount by which the asset's carrying amount exceeds the fair value.

GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill is recognized as the excess cost of an acquired entity over the net amount assigned to assets acquired and liabilities assumed. Goodwill is not amortized, but rather tested for impairment on an annual basis and more often if circumstances require. Impairment losses are recognized whenever the carrying value of a reporting unit exceeds its fair value. See Note 3 to the Consolidated Financial Statements.

The Company recognizes an acquired intangible apart from goodwill whenever the intangible arises from contractual or other legal rights, or whenever it can be separated or divided from the acquired entity and sold, transferred, licensed, rented or exchanged, either individually or in combination with a related contract, asset or liability. Such intangibles are amortized over their estimated useful lives (approximately 7 to 22 years) unless the estimated useful life is determined to be indefinite. The straight-line method of amortization is used as it has been determined to approximate the use pattern of the asset. The Company also maintains intangible assets with indefinite lives that are not amortized. These intangibles are tested for impairment on an annual basis and more often if circumstances require. An impairment loss is recognized whenever the estimated fair value of the asset is less than its carrying value. See Note 3 to the Consolidated Financial Statements.

The Company capitalizes certain costs related to the purchase and development of internal-use software. Amortization of capitalized software is on a straight-line basis over three or five years.

FAIR VALUE OF FINANCIAL INSTRUMENTS
The carrying amounts of cash and cash equivalents, receivables and accounts payable approximate fair value due to the short-term nature of these financial instruments. See Note 8 to the Consolidated Financial Statements for fair value of long-term debt.

WARRANTY RESERVES
The Company generally warrants the products it sells against defects for one year. For a significant portion of warranty claims, the manufacturer of the product is responsible for expenses. For warranty expenses not covered by the manufacturer, the Company provides a reserve for future costs based primarily on historical experience. Warranty reserves were $2 million and $3 million at December 31, 2017 and 2016, respectively.

CONTINGENCIES
The Company accrues for costs relating to litigation claims and other contingent matters, when it is probable that a liability has been incurred and the amount of the assessment can be reasonably estimated.

NEW ACCOUNTING STANDARDS

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments: Recognition and Measurement of Financial Assets and Financial Liabilities*. This change to the financial instrument model primarily affects the accounting for equity investments, financial liabilities under the fair value options and the presentation and disclosure requirements for financial instruments. The effective date of this ASU is for fiscal years and interim periods beginning after December 15, 2017. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

In February 2016, the FASB issued ASU 2016-02, *Leases.* This ASU improves transparency and comparability related to the accounting and reporting of leasing arrangements. The guidance will require balance sheet recognition for assets and liabilities associated with rights and obligations created by leases with terms greater than twelve months. The effective date of this ASU is for fiscal years and interim periods beginning after December 15, 2018 and early adoption is permitted. The Company is evaluating the impact of this ASU.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows - Classification of Certain Cash Receipts and Cash Payments.* This ASU addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. The effective date of this ASU is for fiscal years and interim periods beginning after December 15, 2017. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business.* This ASU clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill and consolidation. The effective date of this ASU is for fiscal years and interim periods beginning after December 15, 2017. This ASU should be applied prospectively on or after the effective date. No disclosures are required at transition. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles-Goodwill and Other (Topic 350) Simplifying the Test for Goodwill Impairment*. ASU 2017-04 simplifies the subsequent measurement of goodwill by eliminating the Step 2 procedure from the goodwill impairment test. Under ASU 2017-04, an entity should perform its annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The amendments of this ASU are effective for annual or any interim goodwill impairment tests beginning after December 15, 2019, and early adoption is permitted for annual and interim goodwill impairment testing dates after January 1, 2017. The Company early adopted this ASU during the third quarter of 2017 and there was no impact to the financial statements.

In March 2017, the FASB issued ASU 2017-07, *Compensation Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.* This ASU improves the presentation of net periodic pension cost and net periodic postretirement benefit cost. The amendments in this ASU are effective for public entities for fiscal years and interim periods beginning after December 15, 2017. The amendments in this ASU should be applied retrospectively for the presentation of the net periodic postretirement cost components in the income statement and prospectively, on and after the effective date, for the capitalization of the service cost component of net periodic pension cost and net periodic postretirement benefit in assets. The Company is evaluating the impact of this ASU.

In May 2017, the FASB issued ASU 2017-09, *Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting.* This ASU provides clarity and reduces both (1) diversity in practice and (2) cost and complexity when applying the guidance in Topic 718, Compensation-Stock Compensation, to a change to the terms or conditions of a share-based payment award. The amendments in this ASU are effective for public entities for fiscal years and interim periods beginning after December 15, 2017. The ASU should be applied prospectively on and after the effective date. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

REVENUE RECOGNITION STANDARDS

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)* as modified by subsequently issued ASUs 2015-14, 2016-08, 2016-10, 2016-12 and 2016-20 (collectively “new revenue standard”). The core principle of the ASU, among other changes, is that an entity should recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The Company has elected the modified retrospective method and will adopt the new revenue guidance effective January 1, 2018, with an immaterial impact to the opening retained earnings.

The analysis of contracts with customers under the new revenue recognition standard was consistent with the Company’s current revenue recognition model, whereby revenue is recognized primarily on the date products are shipped to, or picked up by, the customer.

Adoption of the new standard will primarily result in reclassification of certain service related costs from Warehousing, marketing and administrative expenses to Cost of merchandise sold. The ASU also requires expanded qualitative and quantitative disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers, significant judgments and accounting policy.

Adoption of the new standard will not have an ongoing material impact on the Company's Consolidated Financial Statements.

NOTE 2 - BUSINESS ACQUISITIONS

On September 1, 2015, the Company acquired all of the issued share capital of Cromwell Group (Holdings) Limited (Cromwell). With sales of £285 million ($437 million) for fiscal year ending August 31, 2015, prior to the acquisition, Cromwell was the largest independent MRO distributor in the United Kingdom. This acquisition brought together Cromwell's product strength and customer relationships with Grainger's expertise in supply chain and eCommerce to accelerate growth in the core and online Cromwell business. The Company paid £310 million ($464 million), subject to customary adjustments, for the Cromwell acquisition. The acquisition was partially funded with newly issued debt in the United Kingdom. The goodwill recorded in the acquisition totaled approximately $123 million. The goodwill is not deductible for tax purposes. The intangibles recorded in the acquisition consisted primarily of trade name (approximately $84 million) and customer relationships (approximately $132 million). The trade name is deemed to have an indefinite life and the customer relationship are amortized over 15 years. The purchase price allocation was finalized in 2016 and the impact to the consolidated financial statements was not material. Disclosure of pro forma results was not required.

NOTE 3 - GOODWILL AND OTHER INTANGIBLE ASSETS

Grainger had approximately $1.1 billion of goodwill and intangible assets as of December 31, 2017 and 2016, or 19% and 20% of total assets, respectively. Grainger tests reporting units' goodwill and intangible assets for impairment annually during the fourth quarter and more frequently if impairment indicators exist. Grainger periodically performs qualitative assessments of significant events and circumstances such as reporting units' historical and current results, assumptions regarding future performance, strategic initiatives and overall economic factors to determine the existence of impairment indicators and assess if it is more likely than not that the fair value of the reporting unit or indefinite-lived intangible assets is less than its carrying value and if a quantitative impairment test is necessary. In the quantitative test, Grainger compares the carrying value of the reporting unit or an indefinite-lived intangible asset with its fair value. Any excess of the carrying value over fair value is recorded as an impairment charge.

The fair value of reporting units is calculated primarily using the discounted cash flow (DCF) method and utilizing value indicators from a market approach to evaluate the reasonableness of the resulting fair values. The DCF method incorporates various assumptions including the amount and timing of future expected cash flows, including revenues, gross margins, operating expenses, capital expenditures and working capital based on operational budgets, long-range strategic plans and other estimates. The terminal value growth rate is used to calculate the value of cash flows beyond the last projected period and reflects management's best estimates for perpetual growth for the reporting units. Estimates of market-participant risk-adjusted weighted average cost of capital are used as a basis for determining the discount rates to apply to the reporting units' future expected cash flows and terminal value.

Grainger's indefinite-lived intangibles are primarily trade names. The fair value of trade names is calculated primarily using the relief from royalty method, which estimates the expected royalty savings attributable to the ownership of the trade name asset. The key assumptions when valuing a trade name are the revenue base, the royalty rate and the discount rate.

During the quarter ended September 30, 2017, the Company performed qualitative assessments of its reporting units' goodwill and intangible assets. Quantitative tests on two of its reporting units were performed due to lower than expected operating performance and lowered short-term forecasts. Based on the results of the quantitative tests performed, the Company concluded that there was no impairment of goodwill or indefinite-lived intangible assets for the two reporting units as of September 30, 2017. The fair values of the reporting units exceeded their carrying values by approximately 31 percent for the Canada reporting unit and 15 percent for the Cromwell reporting unit included in other businesses.

Grainger completed its annual goodwill impairment testing in the fourth quarter. The testing included qualitative assessment of each reporting units' goodwill and intangible assets. The Company concluded that for each of its reporting units, including the two reporting units for which quantitative tests were performed during the third quarter, it was not more likely than not that the fair value of the reporting unit or indefinite-lived intangible assets is less than their carrying value.

The risk of potential failure of future impairment tests is highly dependent upon a number of assumptions. Changes in assumptions regarding discount rate and future performance, as well as the ability to execute on growth initiatives and productivity improvements, may have a significant impact on future cash flows. Likewise, unfavorable economic environment and changes in market conditions or other factors may result in future impairments of the goodwill and intangible assets.

The balances and changes in the carrying amount of Goodwill by segment are as follows (in thousands of dollars):

	United States	Canada	Other businesses	Total
Balance at January 1, 2016	$ 202,020	$ 118,529	$ 261,787	$ 582,336
Purchase Price Adjustments	—	—	8,362	8,362
Impairment	—	—	(47,244)	(47,244)
Translation	—	3,611	(19,915)	(16,304)
Balance at December 31, 2016	202,020	122,140	202,990	527,150
Divestiture	(3,316)	—	—	(3,316)
Impairment	(7,169)	—	—	(7,169)
Translation	—	8,282	18,956	27,238
Balance at December 31, 2017	$ 191,535	$ 130,422	$ 221,946	$ 543,903
Cumulative goodwill impairment charges, January 1, 2017	$ 17,038	$ 32,265	$ 70,299	$ 119,602
Impairment	7,169	—	—	7,169
Cumulative goodwill impairment charges, December 31, 2017	$ 24,207	$ 32,265	$ 70,299	$ 126,771

The balances and changes in Intangible assets - net are as follows (in thousands of dollars):

		As of December 31,					
		2017			2016		
	Weighted average life	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
Customer lists and relationships	13.8 years	$ 430,026	$ 195,842	$ 234,184	$ 424,405	$ 175,112	$ 249,293
Trademarks, trade names and other	13.5 years	25,886	16,054	9,832	25,353	14,262	11,091
Non-amortized trade names and other		137,491	—	137,491	128,282	—	128,282
Capitalized software	4.1 years	632,431	444,823	187,608	571,978	374,518	197,460
Total intangible assets	8.2 years	$ 1,225,834	$ 656,719	$ 569,115	$ 1,150,018	$ 563,892	$ 586,126

Amortization expense recognized on intangible assets was $89 million, $82 million and $65 million for the years ended December 31, 2017, 2016 and 2015, respectively, and is included in Warehousing, marketing and administrative expenses on the Consolidated Statement of Earnings.

Estimated amortization expense for future periods is as follows (in thousands of dollars):

Year	Expense	
2018	$	91,178
2019		73,995
2020		52,409
2021		40,315
2022		28,468
Thereafter		145,259

NOTE 4 - ALLOWANCE FOR DOUBTFUL ACCOUNTS

The following table shows the activity in the allowance for doubtful accounts (in thousands of dollars):

	For the Years Ended December 31,			
	2017		2016	
Balance at beginning of period	$	26,690	$	22,288
Provision for uncollectible accounts		16,376		16,216
Write-off of uncollectible accounts, net of recoveries		(16,597)		(11,248)
Foreign currency and other		2,798		(566)
Balance at end of period	$	29,267	$	26,690

NOTE 5 - INVENTORIES

Inventories primarily consist of merchandise purchased for resale. Inventories would have been $382 million higher than reported at December 31, 2017 and December 31, 2016, if the FIFO method of inventory accounting had been used for all the Company inventories. Net earnings would have decreased by $1 million, $3 million and $1 million for the years ended December 31, 2017, 2016 and 2015, respectively, using the FIFO method of accounting. Inventory values using the FIFO method of accounting approximate replacement cost. The Company records provisions for the difference between excess and obsolete inventory cost and its estimated realizable value.

The following table shows the activity in the reserves for excess and obsolete inventory (in thousands of dollars):

	For the Years Ended December 31,			
	2017		2016	
Balance at beginning of period	$	(191,514)	$	(168,105)
Provision for excess and obsolete inventory		(24,829)		(58,485)
Disposal of unsaleable inventory		29,442		30,161
Other		(6,547)		4,915
Balance at end of period	$	(193,448)	$	(191,514)

NOTE 6 - RESTRUCTURING RESERVES

The Company continues to evaluate performance and take restructuring actions such as the consolidation of the contact center network in the U.S. business, branch closures in the U.S. and Canada businesses and disposition of underperforming assets and businesses in the U.S., Canada and other businesses. The purpose of these initiatives is to reduce costs in the U.S. business and at the Company level (unallocated expense) and streamline and focus on profitability in the Canada and other businesses.

Restructuring costs, net of gains, for the years ended December 31, 2017, 2016 and 2015 are as follows (in thousands of dollars):

	For the Year Ended December 31, 2017			
	Cost of merchandise sold	Warehousing, marketing and administrative expenses		Total
		Involuntary employee termination costs	Other charges (gains)	
United States	$ 1,379	$ 32,134	$ (22,255)	$ 11,258
Canada	8,310	15,001	15,976	39,287
Other businesses	3,861	11,724	39,435	55,020
Unallocated expense	—	—	10,593	10,593
Total	$ 13,550	$ 58,859	$ 43,749	$ 116,158

	For the Year Ended December 31, 2016			
	Cost of merchandise sold	Warehousing, marketing and administrative expenses		Total
		Involuntary employee termination costs	Other charges (gains)	
United States	$ 3,100	$ 21,151	$ (8,583)	$ 15,668
Canada	1,605	12,536	857	14,998
Unallocated expense	—	—	8,947	8,947
Total	$ 4,705	$ 33,687	$ 1,221	$ 39,613

	For the Year Ended December 31, 2015			
	Cost of merchandise sold	Warehousing, marketing and administrative expenses		Total
		Involuntary employee termination costs	Other charges (gains)	
United States	$ 1,194	$ 21,524	$ 12,754	$ 35,472
Canada	—	4,183	—	4,183
Other businesses	—	—	5,696	5,696
Total	$ 1,194	$ 25,707	$ 18,450	$ 45,351

Other charges (gains) for all three years primarily include asset impairments and write-down losses in the U.S., Canada and at the Company level (unallocated expense) and other exit-related costs. The charges in the U.S. and Canada businesses are partially offset by gains from the sales of branches in those segments. Included in other charges (gains) is also approximately $18 million of accumulated foreign currency translations losses reclassified from Accumulated other comprehensive losses to earnings in other businesses primarily related to the wind-down of Colombia during 2017.

Restructuring reserves are primarily recorded as part of Accrued compensation and benefits and Accrued expenses. The following summarizes the restructuring reserve activity for the years ended December 31, 2017 and 2016 (in thousands of dollars):

	Current assets write-downs	Fixed assets write-downs and disposals	Involuntary employee termination costs	Lease termination costs	Other costs	Total
Reserves as of January 1, 2016	$ —	$ —	$ 29,516	$ 5,070	$ —	$ 34,586
Restructuring costs, net of (gains)	4,684	(9,289)	33,687	3,432	7,099	39,613
Cash (paid) received	(2,933)	18,235	(38,193)	(5,377)	(5,710)	(33,978)
Non-cash, translation and others	$ (1,584)	$ (8,946)	$ (469)	$ —	$ (878)	$ (11,877)
Reserves as of December 31, 2016	$ 167	$ —	$ 24,541	$ 3,125	$ 511	$ 28,344
Restructuring costs, net of (gains)	13,892	511	58,859	5,572	37,324	116,158
Cash (paid) received	(898)	23,624	(34,066)	(3,770)	(7,639)	(22,749)
Non-cash, translation and others	(60)	(23,394)	955	(34)	(17,432)	(39,965)
Reserves as of December 31, 2017	$ 13,101	$ 741	$ 50,289	$ 4,893	$ 12,764	$ 81,788

The cumulative amounts incurred to date and expected (excluding results of sales of real estate) in connection with the Company's restructuring actions for active programs are as follows (in thousands of dollars):

	Cumulative amount incurred to date	Additional amount expected
United States	$ 62,398	$ 5,075
Canada	58,468	11,428
Other businesses	60,716	135
Unallocated expense	19,540	—
Total	$ 201,122	$ 16,638

NOTE 7 - SHORT-TERM DEBT

Short-term debt consisted of the following (in thousands of dollars):

	As of December 31,	
	2017	2016
Lines of Credit		
Outstanding at December 31	$ 55,603	$ 16,392
Maximum month-end balance during the year	$ 55,621	$ 24,722
Weighted average interest rate during the year	2.41%	4.04%
Weighted average interest rate at December 31	2.01%	5.13%
Commercial Paper		
Outstanding at December 31	$ —	$ 369,748
Maximum month-end balance during the year	$ 454,696	$ 629,712
Weighted average interest rate during the year	0.83%	0.50%
Weighted average interest rate at December 31	—%	0.69%

Lines of Credit
In October 2017, the Company replaced its U.S. $900 million unsecured revolving line of credit with a new five-year $750 million unsecured revolving line of credit, with the option to extend the line to up to $1.1 billion. The terms of the new line of credit are customary for transactions of this type and do not contain any financial performance covenants. The primary purpose of this credit facility is to provide support to the Company's commercial paper program and for general corporate purposes. There were no borrowings outstanding under these lines of credit as of December 31, 2017 and 2016. The Company paid a commitment fee of 0.06% and 0.07% in 2017 and 2016, respectively.

Foreign subsidiaries utilize lines of credit for working capital purposes and other operating needs, primarily British Pound (£) and Euro (€) revolving credit facilities with £20 million and €12.5 million outstanding at December 31, 2017, respectively, and no outstanding balance at December 31, 2016. The British Pound revolving credit facility bears interest at London Interbank Offered Rate (LIBOR) plus a margin of 75 basis points (1.22% at December 31, 2017) and a commitment fee of 0.26% as of December 31, 2017. The Euro revolving credit facility bears interest at Euro Interbank Offered Rate (EURIBOR) plus a margin of 35 basis points (0.35% at December 31, 2017) and a commitment fee of 0.12% as of December 31, 2017.

Uncommitted Lines of Credit
The Company had $71 million and $88 million of uncommitted lines of credit at December 31, 2017 and 2016, respectively.

Commercial Paper
The Company issued commercial paper for general working capital needs. A portion of the proceeds from the May 2017 bond issuance (see Note 8 to the Consolidated Financial Statements) was used to pay outstanding commercial paper. At December 31, 2017, there was none outstanding.

Letters of Credit
The Company's U.S. business had $33 million and $30 million of letters of credit at December 31, 2017 and 2016, respectively, primarily related to the Company's insurance program. Letters of credit were also issued to facilitate purchases of products. These issued amounts were $1 million and $5 million at December 31, 2017 and 2016, respectively. Letters of credit issued by the Company's international businesses were immaterial.

NOTE 8 - LONG-TERM DEBT

Long-term debt consisted of the following (in thousands of dollars):

	As of December 31, 2017	As of December 31, 2016
4.60% senior notes due 2045	$ 1,000,000	$ 1,000,000
3.75% senior notes due 2046	400,000	400,000
4.20% senior notes due 2047	400,000	—
British pound term loan	194,574	187,506
Euro term loan	131,956	120,900
Canadian dollar revolving credit facility	99,388	100,521
Capital lease obligations and other	84,274	71,109
	2,310,192	1,880,036
Less current maturities	(38,709)	(19,966)
Debt issuance costs and discounts	(23,447)	(19,124)
	$ 2,248,036	$ 1,840,946

Senior Notes

In May 2017, the Company issued $400 million of unsecured 4.20%Senior Notes (4.20% Notes) that mature on May 15, 2047. The 4.20% Notes require no principal payments until the maturity date and interest is payable semi-annually on May 15 and November 15, beginning on November 15, 2017. Prior to November 15, 2046, the Company may redeem the 4.20% Notes in whole at any time or in part from time to time at a “make-whole” redemption price. This redemption price is calculated by reference to the then-current yield on a U.S. treasury security with a maturity comparable to the remaining term of the 4.20% Notes plus 20 basis points, together with accrued and unpaid interest, if any, at the redemption date. Additionally, if the Company experiences specific kinds of changes in control, it will be required to make an offer to purchase the 4.20% Notes at 101% of their principal amount plus accrued and unpaid interest, if any, at the date of purchase. On or after November 15, 2046, the Company may redeem the 4.20% Notes in whole at any time or in part from time to time at 100% of their principal amount, together with accrued and unpaid interest, if any, to the redemption date. Costs and discounts of approximately $5.8 million associated with the issuance of the 4.20% Notes, representing underwriting fees and other expenses, have been recorded as a contra-liability within Long-term debt and is being amortized to interest expense over the term of the 4.20% Notes. The fair value of the 4.20% Notes was approximately $411 million as of December 31, 2017.

In May 2016, the Company issued $400 million of unsecured 3.75% Senior Notes (3.75% Notes) that mature on May 15, 2046. The 3.75% Notes require no principal payments until the maturity date and interest is payable semi-annually on May 15 and November 15, beginning on November 15, 2016. Prior to November 15, 2045, the Company may redeem the 3.75% Notes in whole at any time or in part from time to time at a “make-whole” redemption price. This redemption price is calculated by reference to the then-current yield on a U.S. treasury security with a maturity comparable to the remaining term of the 3.75% Notes plus 20 basis points, together with accrued and unpaid interest, if any, to the redemption date. Additionally, if the Company experiences specific kinds of changes in control, it will be required to make an offer to purchase the 3.75% Notes at 101% of their principal amount plus accrued and unpaid interest, if any, to the date of purchase. On or after November 15, 2045, the Company may redeem the 3.75% Notes in whole at any time or in part from time to time at 100% of their principal amount, together with accrued and unpaid interest, if any, to the redemption date. Costs and discounts of approximately $7 million associated with the issuance of the 3.75% Notes, representing underwriting fees and other expenses, have been recorded as a contra-liability within Long-term debt and is being amortized to interest expense over the term of the 3.75% Notes. The fair value of the 3.75% Notes was approximately $384 million and $371 million as of December 31, 2017 and 2016, respectively.

In June 2015, the Company issued $1 billion of unsecured 4.60% Senior Notes (4.60% Notes) that mature on June 15, 2045. The 4.60% Notes require no principal payments until the maturity date and interest is payable semi-annually on June 15 and December 15, beginning on December 31, 2015. Prior to December 15, 2044, the Company may redeem the 4.60% Notes in whole at any time or in part from time to time at a “make-whole” redemption price. This redemption price is calculated by reference to the then-current yield on a U.S. treasury security with a maturity comparable to the remaining term of the 4.60% Notes plus 25 basis points, together with accrued and unpaid interest, if any, to the redemption date. Additionally, if the Company experiences specific kinds of changes in control, it will be required to make an offer to purchase the 4.60% Notes at 101% of their principal amount plus accrued and unpaid interest, if any, to the date of purchase. On or after December 15, 2044, the Company may redeem the 4.60% Notes in whole at any time or in part from time to time at 100% of their principal amount, together with accrued and unpaid interest, if any, to the redemption date. Costs and discounts of approximately $11 million associated with the issuance of the 4.60% Notes, representing underwriting fees and other expenses, have been recorded as a contra-liability within Long-term debt and is beingamortized to interest expense over the term of the 4.60% Notes. The fair value of the 4.60% Notes was approximately $1.1 billion as of December 31, 2017 and 2016.

The estimated fair values of the Company's Senior Notes were based on available external pricing data and current market rates for similar debt instruments, among other factors, which are classified as level 2 inputs within the fair value hierarchy.

British Pound Term Loan
In August 2015, the Company entered into an unsecured credit facilities agreement providing for a five-year term loan of £160 million and revolving credit facility of up to £20 million (see Note 7 to the Consolidated Financial Statements). Proceeds of the term loan were used to partially fund the acquisition of Cromwell and to pay certain costs related to the acquisition. Under the agreement, the principal amount of the term loan will be repaid semiannually in installments of £4 million beginning February 2016 through February 2020 with the remaining outstanding amount due August 2020. At the election of the Company, the term loan bears interest at the LIBOR Rate plus a margin of 75 basis points, as defined within the term loan agreement. At December 31, 2017, the Company had elected a one-month LIBOR interest period. The weighted average interest rate was 1.04% and 1.17% for the years ended December 31, 2017 and 2016, respectively. The carrying value of the British Pound term loan approximates fair value due to the variable interest rate.

Euro Term Loan
On August 31, 2016, the Company entered into an agreement for a five-year term loan of €110 million and a revolving credit facility of up to €20 million (see Note 7 to the Consolidated Financial Statements). The proceeds from the term loan were used to pay in full €102.5 million of a term loan that matured in August 2016. Under the agreement, no principal amount of the loan will be required to be paid until the loan becomes due on August 31, 2021, at which time the loan will be required to be paid in full. The Company, at its option, may prepay this term loan in whole or in part at the end of any interest period without penalty. The loan bears interest at the EURIBOR plus a margin of 45 basis points, as defined within the term loan agreement. If EURIBOR is less than zero, then EURIBOR will be deemed to be zero. The interest rate at December 31, 2017, was 0.45%. The carrying value of the Euro term loan approximates fair value due to the variable interest rate.

Canadian Dollar Revolving Credit Facility
In September 2014, the Company entered into an unsecured revolving credit facility with a maximum availability of C$175 million. Pursuant to the credit agreement, there is a commitment fee of 0.07% as of December 31, 2017, and the facility matures on September 24, 2019. The amounts outstanding were C$125 million and C$135 million as of December 31, 2017 and 2016, respectively. The loan bears interest at the Canadian Dollar Offered Rate (CDOR) plus a margin of 70 basis points, as defined within the loan agreement. The weighted average interest rate during the year on this outstanding amount was 1.78%. No principal payments are required on the credit facility until the maturity date. Accordingly, the amount outstanding is included in long-term debt as of December 31, 2017. The carrying value of the Canadian Dollar revolving credit facility approximates fair value due to the variable interest rate.

The scheduled aggregate principal payments related to capital lease obligations and long-term debt, excluding debt issuance costs, are due as follows (in thousands of dollars):

Year	Payment Amount
2018	$ 38,709
2019	144,156
2020	190,774
2021	136,543
2022	10
Thereafter	1,800,000
Total	$ 2,310,192

The Company's debt instruments include affirmative and negative covenants that are usual and customary for companies with similar credit ratings. The Company was in compliance with all debt covenants as December 31, 2017.

NOTE 9 - EMPLOYEE BENEFITS

The Company provides various retirement benefits to eligible employees, including contributions to defined contribution plans, pension benefits associated with defined benefit plans, postretirement medical benefits and other benefits. Eligibility requirements and benefit levels vary depending on employee location. Various foreign benefit plans cover employees in accordance with local legal requirements.

Defined Contribution Plans

A majority of the Company's U.S. employees are covered by a noncontributory profit-sharing plan. Effective January 1, 2016, the plan was amended to better align Company contributions to Company performance and now includes two components, a variable annual contribution based on a rate of return on invested capital and an automatic contribution equal to 3% of total eligible compensation. In addition, employees covered by the plan are also able to make personal contributions. The total Company contribution will be maintained at a minimum of 8% and a maximum of 18% of total eligible compensation paid to eligible employees. The total profit-sharing plan expense was $120 million, $84 million and $121 million for 2017, 2016 and 2015, respectively.

The Company sponsors additional defined contribution plans available to certain U.S. and foreign employees for which contributions are paid by the Company and participating employees. The expense associated with these defined contribution plans totaled $18 million, $12 million and $11 million for 2017, 2016 and 2015, respectively.

Defined Benefit Plans and Other Retirement Plans

The Company sponsors defined benefit plans available to certain foreign employees. The cost of these programs is not significant to the Company. In certain countries, pension contributions are made to government-sponsored social security pension plans in accordance with local legal requirements. For these plans, the Company has no continuing obligations other than the payment of contributions.

Postretirement Healthcare Benefits Plans

The Company has a postretirement healthcare benefits plan that provides coverage for a majority of its U.S. employees hired prior to January 1, 2013, and their dependents should they elect to maintain such coverage upon retirement. Covered employees become eligible for participation when they qualify for retirement while working for the Company. Participation in the plan is voluntary and requires participants to make contributions toward the cost of the plan, as determined by the Company.

During the third quarter of 2017, the Company implemented plan design changes effective January 1, 2018, for the post-65 age group. This plan change will move all post-65 Medicare eligible retirees to healthcare exchanges and provide them a subsidy to purchase insurance. The amount of the subsidy will be based on years of service. As of August 31, 2017, as a result of the plan change, the plan obligation was remeasured. The remeasurement resulted in a decrease in the postretirement benefit obligation of $75.7 million and a corresponding unrecognized gain recorded in Other comprehensive earnings net of tax of $29.2 million.

The net periodic benefits costs charged to operating expenses, which were valued with a measurement date of January 1 for each year and August 31, 2017 remeasurement date, consisted of the following components (in thousands of dollars):

	For the Years Ended December 31,		
	2017	2016	2015
Service cost	$ 7,423	$ 8,238	$ 10,128
Interest cost	8,103	9,855	9,649
Expected return on assets	(11,826)	(10,113)	(10,375)
Amortization of prior service credit	(7,570)	(6,688)	(6,801)
Amortization of unrecognized (gains) losses	(2,437)	129	1,512
Net periodic (benefits) costs	$ (6,307)	$ 1,421	$ 4,113

Reconciliations of the beginning and ending balances of the postretirement benefit obligation, which is calculated as of December 31 measurement date, the fair value of plan assets available for benefits and the funded status of the benefit obligation follow (in thousands of dollars):

	2017	2016
Benefit obligation at beginning of year	$ 265,028	$ 239,348
Service cost	7,423	8,238
Interest cost	8,103	9,855
Plan participants' contributions	3,346	2,943
Actuarial (gains) losses	(34,236)	13,218
Plan amendment	(34,182)	—
Benefits paid	(8,631)	(9,439)
Prescription drug rebates	1,499	865
Benefit obligation at end of year	208,350	265,028
Plan assets available for benefits at beginning of year	163,545	155,611
Actual returns on plan assets	29,477	13,557
Plan participants' contributions	3,266	2,774
Benefits paid	(8,295)	(9,262)
Prescription drug rebates	1,499	865
Plan assets available for benefits at end of year	189,492	163,545
Noncurrent postretirement benefit obligation	$ 18,858	$ 101,483

The amounts recognized in Accumulated other comprehensive earnings (AOCE) consisted of the following (in thousands of dollars):

	As of December 31,	
	2017	2016
Prior service credit	$ 80,426	$ 53,814
Unrecognized gains (losses)	36,794	(12,656)
Deferred tax (liability)	(43,793)	(15,861)
Net accumulated gains	$ 73,427	$ 25,297

The $49 million increase in unrecognized gain was primarily driven by the plan amendment and a change in census, claims costs and other actuarial assumptions offset by a decrease in the discount rate.

The components of AOCE related to unrecognized gains that will be amortized into net periodic postretirement benefit costs in 2018 are estimated as follows (in thousands of dollars):

	2018
Amortization of prior service credit	$ (9,696)
Amortization of unrecognized gains	(2,787)
Estimated amount to be amortized from AOCE into net periodic postretirement benefit costs	$ (12,483)

The Company has elected to amortize the amount of net unrecognized gains over a period equal to the average remaining service period for active plan participants expected to retire and receive benefits of approximately 13.2 years for 2017.

The benefit obligation was determined by applying the terms of the plan and actuarial models. These models include various actuarial assumptions, including discount rates, long-term rates of return on plan assets, healthcare cost trend rate and cost-sharing between the Company and the retirees. The Company evaluates its actuarial assumptions on an annual basis and considers changes in these long-term factors based upon market conditions and historical experience.

The following assumptions were used to determine net periodic benefit costs at January 1 of each year (excluding the August 31, 2017 remeasurement date):

	For the Years Ended December 31,		
	2017	2016	2015
Discount rate	4.00%	4.20%	3.89%
Long-term rate of return on plan assets, net of tax	7.13%	6.65%	6.65%
Initial healthcare cost trend rate - pre age 65	6.81%	7.00%	7.25%
Initial healthcare cost trend rate - post age 65	9.36%	7.00%	7.25%
Ultimate healthcare cost trend rate	4.50%	4.50%	4.50%
Year ultimate healthcare cost trend rate reached	2026	2026	2026

The following assumptions were used to determine benefit obligations at December 31:

	2017	2016	2015
Discount rate	3.44%	4.00%	4.20%
Expected long-term rate of return on plan assets, net of tax	7.13%	7.13%	6.65%
Initial healthcare cost trend rate - pre age 65	6.56%	6.81%	7.00%
Initial healthcare cost trend rate - post age 65	N/A	9.36%	7.00%
Catastrophic drug benefit	12.50%	N/A	N/A
Ultimate healthcare cost trend rate	4.50%	4.50%	4.50%
Year ultimate healthcare cost trend rate reached	2026	2026	2026
HRA credit inflation index for grandfathered retirees	2.50%	N/A	N/A

The discount rate assumptions reflect the rates available on high-quality fixed income debt instruments as of December 31, the measurement date of each year. These rates have been selected due to their similarity to the duration of the projected cash flows of the postretirement healthcare benefit plan. As of December 31, 2017, the Company decreased the discount rate from 4.00% to 3.44% to reflect the decrease in the market interest rates, which offset the unrealized actuarial gain at December 31, 2017. As of December 31, 2017, the Company changed the mortality improvement table used to project mortality rates into the future from Mortality Table RPH-2014 with Mortality Improvement Scale MP 2016 to Mortality Table RPH-2014 with Mortality Improvement Scale MP 2017, which was published by the Society of Actuaries and reflects the most recent updates to life expectancies. RPH-2014 Table is a headcount weighted table, which is also more appropriate for a postretirement healthcare benefit plan. The Company reviews external data and its own historical trends for healthcare costs to determine the healthcare cost trend rates. As of December 31, 2016, Grainger adopted a new healthcare trend rate to include a pre and post age 65 trend rates. Post age 65, prescription drug costs, primarily specialty drugs, are expected to increase the cost of healthcare more significantly than medical expenses. The alternative trend rates allow for a better estimate of expected costs for this plan. As of December 31, 2017, the initial healthcare cost trend rate was 6.56% for pre age 65. The healthcare costs trend rates decline each year until reaching the ultimate trend rate of 4.50%. The plan amendment adopted in 2017 moves all post age 65 Medicare eligible retirees to an exchange and provides a subsidy to those retirees to purchase insurance. The amount of the subsidy is based on years of service and is indexed at 2.50% for grandfathered employees. Assumed healthcare cost trend rates have a significant effect on the amounts reported for the healthcare plans. A 1 percentage point change in assumed healthcare cost trend rates would have the following effects on 2017 results (in thousands of dollars):

	1 Percentage Point	
	Increase	(Decrease)
Effect on total service and interest cost	$ 1,269	$ (1,053)
Effect on postretirement benefit obligation	5,516	(5,095)

The Company has established a Group Benefit Trust (Trust) to fund the plan obligations and process benefit payments. All assets of the Trust are invested in equity funds designed to track to either the Standard & Poor's 500 Index (S&P 500) or the Total International Composite Index. The Total International Composite Index tracks non-U.S. stocks within developed and emerging market economies. This investment strategy reflects the long-term nature of the plan obligation and seeks to take advantage of the earnings potential of equity securities in the global markets and intends to reach a balanced allocation between U.S. and non-U.S. equities. The plan's assets are stated at fair value, which represents the net asset value of shares held by the plan in the registered investment companies at the quoted market prices (Level 1 input). The plan assets available for benefits are net of Trust liabilities, primarily related to deferred income taxes and taxes payable at December 31 (in thousands of dollars):

	2017	2016
Registered investment companies:		
Fidelity Spartan U.S. Equity Index Fund	$ 83,238	$ 70,950
Vanguard 500 Index Fund	103,706	87,587
Vanguard Total International Stock	30,684	24,056
Plan Assets	217,628	182,593
Trust liabilities	(28,136)	(19,048)
Plan assets available for benefits	$ 189,492	$ 163,545

The Company uses the long-term historical return on the plan assets and the historical performance of the S&P 500 and the Total International Composite Index to develop its expected return on plan assets. The after-tax expected long-term rates of return on plan assets of 7.13% at December 31, 2017 is based on the historical average of long-term rates of return and an estimated tax rate. The required use of an expected long-term rate of return on plan assets may result in recognition of income that is greater or less than the actual return on plan assets in any given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns and, therefore, result in a pattern of income recognition that more closely matches the pattern of the services provided by the employees.

The Company's investment policies include periodic reviews by management and trustees at least annually concerning: (1) the allocation of assets among various asset classes (e.g., domestic stocks, international stocks, short-term bonds, long-term bonds, etc.); (2) the investment performance of the assets, including performance comparisons with appropriate benchmarks; (3) investment guidelines and other matters of investment policy and (4) the hiring, dismissal or retention of investment managers.

The funding of the Trust is an estimated amount that is intended to allow the maximum deductible contribution under the Internal Revenue Code of 1986 (IRC), as amended. There are no minimum funding requirements and the Company intends to follow its practice of funding the maximum deductible contribution under the IRC.

The Company forecasts the following benefit payments related to postretirement (which include a projection for expected future employee service) for the next ten years (in thousands of dollars):

Year	Estimated Gross Benefit Payments
2018	$ 7,365
2019	8,956
2020	10,029
2021	11,025
2022	12,077
2023-2027	67,760

NOTE 10 - LEASES

The Company leases certain land, buildings, equipment and vehicles under noncancelable operating leases that expire at various dates through 2036. Many of the building leases obligate the Company to pay real estate taxes, insurance and certain maintenance costs and contain multiple renewal provisions, exercisable at the Company's option. Leases that contain predetermined fixed escalations of the minimum rentals are recognized in rental expense on a straight-line basis over the lease term. Cash or rent abatements received upon entering into certain operating leases are also recognized on a straight-line basis over the lease term.

At December 31, 2017, the approximate future minimum lease payments for operating leases were as follows (in thousands of dollars):

Year	Future Minimum Lease Payments
2018	$ 63,625
2019	50,610
2020	31,984
2021	20,891
2022	13,555
Thereafter	15,879
Total minimum payments required	196,544
Less amounts representing sublease income	(4,125)
	$ 192,419

The expected reduction of future minimum lease payments is the result of the decreasing branch network across the U.S. and Canada business.

Rent expense was $76 million, $81 million and $77 million for 2017, 2016 and 2015, respectively. These amounts are net of sublease income of $2 million for each 2017, 2016 and 2015.

Capital leases as of December 31, 2017 are not considered material. Capital lease obligations are reported in long-term debt.

NOTE 11 - STOCK INCENTIVE PLANS

The Company maintains stock incentive plans under which the Company may grant a variety of incentive awards to employees and directors. Non-qualified stock options, performance shares, restricted stock units and deferred stock units have been granted and are outstanding under these plans. In 2015, the Company approved the 2015 Incentive Plan, which replaced all prior active plans. As of December 31, 2017, there were 2.7 million shares available for grant under the plans. When options are exercised, shares of the Company's treasury stock are issued.

Pretax stock-based compensation expense was $31 million, $35 million and $43 million in 2017, 2016 and 2015, respectively, and is included in Warehousing, marketing and administrative expenses. Related income tax benefits recognized in earnings were $25 million, $11 million and $13 million in 2017, 2016 and 2015, respectively.

Options

The Company issues stock option grants to certain employees as part of their incentive compensation. Option awards are granted with an exercise price equal to the closing market price of the Company's stock on the day of the grant. The options generally vest over three years, although accelerated vesting is provided in certain circumstances. Awards generally expire 10 years from the grant date. Transactions involving stock options are summarized as follows:

	Shares Subject to Option	Weighted Average Price Per Share	Options Exercisable
Outstanding at January 1, 2015	2,582,804	$ 149.01	1,647,903
Granted	294,522	$ 232.20	
Exercised	(587,441)	$ 105.08	
Canceled or expired	(63,599)	$ 216.76	
Outstanding at December 31, 2015	2,226,286	$ 169.96	1,411,460
Granted	294,874	$ 234.25	
Exercised	(317,110)	$ 108.28	
Canceled or expired	(80,014)	$ 210.01	
Outstanding at December 31, 2016	2,124,036	$ 186.59	1,346,707
Granted	306,206	$ 230.97	
Exercised	(409,269)	$ 115.35	
Canceled or expired	(87,260)	$ 222.00	
Outstanding at December 31, 2017	1,933,713	$ 207.10	1,375,844

At December 31, 2017, there was $8.9 million of total unrecognized compensation expense related to nonvested option awards, which the Company expects to recognize over a weighted average period of 1.8 years.

The following table summarizes information about stock options (in thousands of dollars):

	For the years ended December 31,		
	2017	2016	2015
Fair value of options exercised	$ 10,816	$ 8,086	$ 14,423
Total intrinsic value of options exercised	47,332	35,800	73,671
Fair value of options vested	23,503	14,535	16,047
Settlements of options exercised	47,181	34,573	61,863

Information about stock options outstanding and exercisable as of December 31, 2017, is as follows:

	Options Outstanding				Options Exercisable			
		Weighted Average				Weighted Average		
Range of Exercise Prices	Number	Remaining Contractual Life	Exercise Price	Intrinsic Value (000s)	Number	Remaining Contractual Life	Exercise Price	Intrinsic Value (000s)
$72.14 - $85.82	84,831	0.87 years	$ 80.11	$ 13,246	84,831	0.87 years	$ 80.11	$ 13,246
$102.26 - $196.31	363,820	2.96 years	$ 133.79	37,275	362,677	2.94 years	$ 133.68	37,199
$204.01 - $262.14	1,485,062	6.96 years	$ 232.31	5,853	928,336	6.16 years	$ 232.16	3,797
	1,933,713	5.94 years	$ 207.10	$ 56,374	1,375,844	4.98 years	$ 196.83	$ 54,242

The Company uses a binomial lattice option pricing model for the valuation of stock options. The weighted average fair value of options granted in 2017, 2016 and 2015 was $45.09, $44.94 and $46.67, respectively. The fair value of options granted in 2017, 2016 and 2015 used the following assumptions:

	For the years ended December 31,		
	2017	2016	2015
Risk-free interest rate	2.0%	1.4%	1.5%
Expected life	6 years	6 years	6 years
Expected volatility	23.9%	24.5%	24.9%
Expected dividend yield	2.1%	2.0%	1.9%

The risk-free interest rate is selected based on yields from U.S. Treasury zero-coupon issues with a remaining term approximately equal to the expected term of the options being valued. The expected life selected for options granted during each year presented represents the period of time that the options are expected to be outstanding based on historical data of option holder exercise and termination behavior. Expected volatility is based upon implied and historical volatility of the Company's closing stock price over a period equal to the expected life of each option grant. Historical Company information is the primary basis for selection of expected dividend yield assumptions.

Performance Shares

The Company awards performance-based shares to certain executives. Receipt of Company stock is contingent upon the Company meeting sales growth and/or return on invested capital (ROIC) goals. Each participant is granted a target number of shares; however the number of shares actually awarded at the end of the performance period can fluctuate from the target award, based upon achievement of the sales or ROIC goals.

Performance share value is based upon closing market prices on the last trading day preceding the date of award and is charged to earnings on a ratable basis over the vesting period, primarily three, and up to seven years for certain awards, based on the number of shares expected to vest. Holders of performance share awards are not entitled to receive cash payments equivalent to cash dividends. If the performance shares vest, they will be settled by the Company's issuance of common stock in exchange for the performance shares on a one-for-one basis.

The following table summarizes the transactions involving performance-based share awards:

	2017		2016		2015	
	Shares	Weighted Average Price Per Share	Shares	Weighted Average Price Per Share	Shares	Weighted Average Price Per Share
Beginning nonvested shares outstanding	98,340	$ 203.91	73,160	$ 232.72	57,236	$ 220.00
Issued	52,371	$ 216.99	60,414	$ 191.38	47,264	$ 227.26
Canceled	(66,579)	$ 201.84	(11,724)	$ 241.41	(13,108)	$ 215.01
Vested	—	$ —	(23,510)	$ 242.65	(18,232)	$ 191.36
Ending nonvested shares outstanding	84,132	$ 213.69	98,340	$ 203.91	73,160	$ 232.72

At December 31, 2017, there was $11.4 million of total unrecognized compensation expense related to performance-based share awards that the Company expects to recognize over a weighted average period of 2.7 years.

Restricted Stock Units (RSUs)

The Company awards restricted stock units (RSUs) to certain employees and executives. RSUs granted vest over periods from three to seven years from issuance, although accelerated vesting is provided in certain instances. Holders of RSUs are entitled to receive nonforfeitable cash payments equivalent to cash dividends and other distributions paid with respect to common stock. RSUs are settled by the issuance of the Company's common stock on a one-for-one basis. Compensation expense related to RSUs is based upon the closing market price on the last trading day preceding the date of award and is charged to earnings on a straight-line basis over the vesting period. The following table summarizes RSU activity:

	2017		2016		2015	
	Shares	Weighted Average Price Per Share	Shares	Weighted Average Price Per Share	Shares	Weighted Average Price Per Share
Beginning nonvested units	373,403	$ 221.77	432,783	$ 213.45	560,351	$ 182.40
Issued	129,378	$ 222.53	113,909	$ 230.36	104,220	$ 234.21
Canceled	(47,488)	$ 229.36	(62,869)	$ 229.70	(38,124)	$ 219.74
Vested	(102,374)	$ 203.51	(110,420)	$ 193.51	(193,664)	$ 133.56
Ending nonvested units	352,919	$ 226.31	373,403	$ 221.77	432,783	$ 213.45
Fair value of shares vested	$20,834		$21,367		$25,865	

At December 31, 2017, there was $45 million of total unrecognized compensation expense related to nonvested RSUs that the Company expects to recognize over a weighted average period of 3.0 years.

NOTE 12 - CAPITAL STOCK

The Company had no shares of preferred stock outstanding as of December 31, 2017 and 2016. The activity related to outstanding common stock and common stock held in treasury was as follows:

	2017		2016		2015	
	Outstanding Common Stock	Treasury Stock	Outstanding Common Stock	Treasury Stock	Outstanding Common Stock	Treasury Stock
Balance at beginning of period	58,804,314	50,854,905	62,028,708	47,630,511	67,432,041	42,227,178
Exercise of stock options	407,542	(407,542)	315,171	(315,171)	580,947	(580,947)
Settlement of restricted stock units, net of 36,585, 41,128 and 73,496 shares retained, respectively	103,331	(103,331)	78,310	(78,310)	145,757	(145,757)
Settlement of performance share units, net of 9,334, 6,765 and 9,971 shares retained, respectively	13,978	(13,978)	11,806	(11,806)	15,956	(15,956)
Purchase of treasury shares	(3,000,302)	3,000,302	(3,629,681)	3,629,681	(6,145,993)	6,145,993
Balance at end of period	56,328,863	53,330,356	58,804,314	50,854,905	62,028,708	47,630,511

NOTE 13 - ACCUMULATED OTHER COMPREHENSIVE EARNINGS (LOSSES) (AOCE)

The components of AOCE consisted of the following (in thousands of dollars):

	Foreign Currency Translation	Defined Postretirement Benefit Plan	Other Employment-related Benefit Plans	Other	Total	Foreign Currency Translation Attributable to Noncontrolling Interests	AOCE Attributable to W.W. Grainger, Inc.
Balance at January 1, 2015, net of tax	$ (122,320)	$ 8,148	$ (3,302)	$ (2,185)	$ (119,659)	$ (22,986)	$ (96,673)
Other comprehensive earnings (loss) before reclassifications, net of tax	(154,096)	30,451	641	1,300	(121,704)	(532)	(121,172)
Amounts reclassified to Warehousing, marketing and administrative expenses	—	(5,289)	—	—	(5,289)	—	(5,289)
Amounts reclassified to Income Taxes	—	2,043	—	—	2,043	—	2,043
Net current period activity	$ (154,096)	$ 27,205	$ 641	$ 1,300	$ (124,950)	$ (532)	$ (124,418)
Balance at December 31, 2015, net of tax	$ (276,416)	$ 35,353	$ (2,661)	$ (885)	$ (244,609)	$ (23,518)	$ (221,091)
Other comprehensive earnings (loss) before reclassifications, net of tax	(38,729)	(6,022)	(2,397)	885	(46,263)	906	(47,169)
Amounts reclassified to Warehousing, marketing and administrative expenses	—	(6,559)	—	—	(6,559)	—	(6,559)
Amounts reclassified to Income Taxes	—	2,525	—	—	2,525	—	2,525
Net current period activity	$ (38,729)	$ (10,056)	$ (2,397)	$ 885	$ (50,297)	$ 906	$ (51,203)
Balance at December 31, 2016, net of tax	$ (315,145)	$ 25,297	$ (5,058)	$ —	$ (294,906)	$ (22,612)	$ (272,294)
Other comprehensive earnings (loss) before reclassifications, net of tax	75,193	86,069	456	—	161,718	3,677	158,041
Amounts reclassified to Warehousing, marketing and administrative expenses	17,518	(10,007)	—	—	7,511	—	7,511
Amounts reclassified to Income Taxes	—	(27,932)	—	—	(27,932)	—	(27,932)
Net current period activity	92,711	48,130	456	—	141,297	3,677	137,620
Balance at December 31, 2017, net of tax	$ (222,434)	$ 73,427	$ (4,602)	$ —	$ (153,609)	$ (18,935)	$ (134,674)

NOTE 14 - INCOME TAXES

Income tax expense (benefit) consisted of the following (in thousands of dollars):

	For the Years Ended December 31,		
	2017	2016	2015
Current provision:			
U.S. Federal	$ 248,090	$ 310,582	$ 412,545
U.S. State	28,693	38,249	49,894
Foreign	22,057	25,076	24,087
Total current	298,840	373,907	486,526
Deferred tax provision (benefit)	14,041	12,313	(20,995)
Total provision	$ 312,881	$ 386,220	$ 465,531

Earnings (losses) before income taxes by geographical area consisted of the following (in thousands of dollars):

	For the Years Ended December 31,		
	2017	2016	2015
U.S.	$ 970,892	$ 1,073,879	$ 1,203,880
Foreign	(35,568)	(54,821)	46,825
	$ 935,324	$ 1,019,058	$ 1,250,705

The income tax effects of temporary differences that gave rise to the net deferred tax (liability) asset as of December 31, 2017 and 2016 were (in thousands of dollars):

	As of December 31, 2017	As of December 31, 2016
Deferred tax assets:		
Inventory	$ 13,641	$ 30,030
Accrued expenses	43,889	70,021
Accrued employment-related benefits	63,029	124,556
Foreign operating loss carryforwards	72,197	67,350
Tax credit carryforward	20,201	8,625
Other	8,350	13,631
Deferred tax assets	221,307	314,213
Less valuation allowance	(83,847)	(72,705)
Deferred tax assets, net of valuation allowance	$ 137,460	$ 241,508
Deferred tax liabilities:		
Property, buildings and equipment	(33,342)	(75,690)
Intangibles	(119,302)	(127,292)
Software	(19,903)	(25,431)
Prepaids	(6,109)	(11,959)
Other	(3,521)	(1,067)
Deferred tax liabilities	(182,177)	(241,439)
Net deferred tax (liability) asset	$ (44,717)	$ 69
The net deferred tax (liability) asset is classified as follows:		
Noncurrent assets	$ 22,362	$ 64,775
Noncurrent liabilities (foreign)	(67,079)	(64,706)
Net deferred tax (liability) asset	$ (44,717)	$ 69

At December 31, 2017, the Company had $285 million of net operating loss (NOLs) carryforwards related primarily to foreign operations. Some of the operating loss carryforwards may expire at various dates through 2037. The Company has recorded a valuation allowance, which represents a provision for uncertainty as to the realization of the tax benefits of these carryforwards and deferred tax assets that may not be realized. The Company's valuation allowance changed as follows (in thousands of dollars):

	For the Years Ended December 31, 2017	For the Years Ended December 31, 2016
Balance at beginning of period	$ 72,705	$ 62,333
Increases primarily related to foreign NOLs	12,861	12,174
Releases related to foreign NOLs	(8,035)	(3,870)
Other changes, net	(4,703)	(6,557)
Increase related to U.S. foreign tax credits	11,019	8,625
Balance at end of period	$ 83,847	$ 72,705

A reconciliation of income tax expense with federal income taxes at the statutory rate follows (in thousands of dollars):

	For the Years Ended December 31, 2017	2016	2015
Federal income tax	$ 327,363	$ 356,670	$ 437,746
State income taxes, net of federal income tax benefit	19,850	25,993	29,507
Clean energy credit	(37,138)	(28,670)	(13,358)
Foreign rate difference	9,371	21,077	12,041
U.S. tax legislation impact (see note below)	(3,164)	—	—
Other - net	(3,401)	11,150	(405)
Income tax expense	$ 312,881	$ 386,220	$ 465,531
Effective tax rate	33.5%	37.9%	37.2%

Clean Energy Credit

In 2015 and 2016, the Company acquired noncontrolling interests in limited liability companies established to produce refined coal. The production and sale of refined coal that results in required emission reductions is eligible for tax credits under Section 45 of the Internal Revenue Code. The Company receives tax credits in proportion to its equity interest. The income tax credits from the investment resulted in a 4.0, 2.8 and a 1.0 percentage point reduction to the overall effective tax rate for 2017, 2016 and 2015, respectively.

U.S. Tax Legislation

On December 22, 2017, the Tax Cuts and Jobs Act (the Tax Act) was signed into law, which significantly revised the U.S. corporate income tax system by lowering corporate income tax rates from 35% to 21% effective January 1, 2018, allowing accelerated expensing of qualified capital investments for a specific period, limiting net interest expense deductions and transitioning the U.S. international taxation from a worldwide to a territorial tax system that requires a one-time transition tax on unremitted earnings of certain foreign subsidiaries that were previously tax deferred, among other changes.

As of December 31, 2017, the Company has not fully completed the accounting for the impact from the Tax Act. However, the Company determined a reasonable estimate of such impact per the guidance in Staff Accounting Bulletin (SAB) 118 issued by the Securities and Exchange Commission (SEC) on December 22, 2017 and recognized a net provisional benefit amount of $3.2 million included as a component of income tax expense for the year ended December 31, 2017 and primarily related to deferred tax balances revaluations and one-time transition tax.

The Company remeasured deferred assets and liabilities based on the rates at which they are expected to reverse in the future in consideration of the reduced income tax rates and recognized a net provisional benefit of $5.2 million for the year ended December 31, 2017. Certain aspects of the Tax Act cannot be fully completed at this time, mainly the full determination of assets placed in service in September 2017 or after for tax expensing purposes, the comprehensive evaluation of executive compensation contracts for tax deductibility purposes and the understanding of state tax implications. The Company expects to complete this analysis in 2018, which may potentially affect the remeasurement of the related deferred tax amounts.

The Company estimated the one-time transition tax and recognized a net provisional expense of $2 million for the year ended December 31, 2017. The one-time transition tax calculation includes a $47 million estimated tax obligation related to the Company's estimated total gross post-1986 earnings and profits (E&P) of $472 million that were previously deferred from U.S. income taxes, net of estimated foreign tax credits of $45 million. As of December 31, 2017, the Company has not completed its final calculation of the total post-1986 E&P for all foreign subsidiaries and any state tax impact. The amounts may change when the Company finalizes these calculations in 2018.

Foreign Undistributed Earnings

Estimated gross undistributed earnings of foreign subsidiaries at December 31, 2017, amounted to $472 million. These gross earnings are included in the U.S. one-time transition tax calculation in 2017 as aforementioned. The Company considers these undistributed earnings permanently reinvested in its foreign operations and is not recording a deferred tax liability for any foreign withholding taxes on such amounts. If at some future date the Company ceases to be permanently reinvested in its foreign subsidiaries, the Company may be subject to foreign withholding and other taxes on these undistributed earnings and may need to record a deferred tax liability for any outside basis difference in its investments in its foreign subsidiaries.

Tax Uncertainties

The Company recognizes in the financial statements a provision for tax uncertainties, resulting from application of complex tax regulations in multiple tax jurisdictions. The changes in the liability for tax uncertainties, excluding interest, are as follows (in thousands of dollars):

	For the Years Ended December 31,		
	2017	2016	2015
Balance at beginning of year	$ 58,681	$ 60,576	$ 45,126
Additions for tax positions related to the current year	3,930	14,119	14,916
Additions for tax positions of prior years	4,786	13,215	2,653
Reductions for tax positions of prior years	(12,417)	(14,774)	(1,616)
Reductions due to statute lapse	(5,098)	(1,527)	(402)
Settlements, audit payments, refunds - net	(5,215)	(12,928)	(101)
Balance at end of year	$ 44,667	$ 58,681	$ 60,576

The Company classifies the liability for tax uncertainties in deferred income taxes and tax uncertainties. Included in this amount are $21 million and $22 million at December 31, 2017 and 2016, respectively, of tax positions for which the ultimate deductibility is highly certain but for which there is uncertainty about the timing of such deductibility. Any changes in the timing of deductibility of these items would not affect the annual effective tax rate but would accelerate the payment of cash to the taxing authorities to an earlier period. Excluding the timing items, the remaining amounts would affect the annual tax rate. The changes to tax positions of prior years in 2017 related generally to the impact of expiring statutes, conclusion of audits and audit settlements. The changes to tax positions of prior years in 2016 related generally to the impact of conclusion of audits and audit settlements.

The Company regularly undergoes examination of its federal income tax returns by the Internal Revenue Service (IRS). In 2017, the Company settled the 2011 and 2012 federal audits with the IRS Appeals Office. The statute of limitations expired for the Company's 2013 federal tax return. The tax years 2014 through 2017 are open. The Company is also subject to audit by state, local and foreign taxing authorities. Tax years 2002-2017 remain subject to state and local audits and 2006-2017 remain subject to foreign audits. The amount of liability associated with the Company's tax uncertainties may change within the next 12 months due to the pending audit activity, expiring statutes or tax payments. A reasonable estimate of such change cannot be made.

The Company recognizes interest expense and penalties related to its tax uncertainties in the provision for income taxes. For the years ended December 31, 2017, 2016 and 2015, the Company recognized an expense of approximately $1 million for each year. Total accrued interest and penalties related to tax uncertainties as of December 31, 2017, 2016 and 2015, were approximately $5 million, $4 million and $5 million, respectively.

NOTE 15 - EARNINGS PER SHARE

Certain of the Company's stock incentive plans grant stock awards that contain nonforfeitable rights to dividends meet the criteria of a participating security. Under the two-class method, earnings are allocated between common stock and participating securities. The presentation of basic and diluted earnings per share is required only for each class of common stock and not for participating securities. As such, the Company presents basic and diluted earnings per share for its one class of common stock.

The two-class method includes an earnings allocation formula that determines earnings per share for each class of common stock according to dividends declared and undistributed earnings for the period. The Company's reported net earnings are reduced by the amount allocated to participating securities to arrive at the earnings allocated to common stock shareholders for purposes of calculating earnings per share.

The dilutive effect of participating securities is calculated using the more dilutive of the treasury stock or the two-class method. The Company has determined the two-class method to be the more dilutive. As such, the earnings allocated to common stock shareholders in the basic earnings per share calculation is adjusted for the reallocation of undistributed earnings to participating securities to arrive at the earnings allocated to common stock shareholders for calculating the diluted earnings per share.

The following table sets forth the computation of basic and diluted earnings per share under the two-class method (in thousands of dollars, except for share and per share amounts):

	For the Years Ended December 31,		
	2017	2016	2015
Net earnings attributable to W.W. Grainger, Inc. as reported	$ 585,730	$ 605,928	$ 768,996
Distributed earnings available to participating securities	(2,005)	(2,383)	(2,823)
Undistributed earnings available to participating securities	(2,678)	(3,044)	(4,735)
Numerator for basic earnings per share - Undistributed and distributed earnings available to common shareholders	581,047	600,501	761,438
Undistributed earnings allocated to participating securities	2,678	3,044	4,735
Undistributed earnings reallocated to participating securities	(2,663)	(3,023)	(4,692)
Numerator for diluted earnings per share - Undistributed and distributed earnings available to common shareholders	$ 581,062	$ 600,522	$ 761,481
Denominator for basic earnings per share – weighted average shares	57,674,977	60,430,892	65,156,864
Effect of dilutive securities	308,190	409,038	608,257
Denominator for diluted earnings per share – weighted average shares adjusted for dilutive securities	57,983,167	60,839,930	65,765,121
Earnings per share two-class method			
Basic	$ 10.07	$ 9.94	$ 11.69
Diluted	$ 10.02	$ 9.87	$ 11.58

NOTE 16 - SEGMENT INFORMATION

Grainger's two reportable segments are the U.S. and Canada. The U.S. operating segment reflects the results of Grainger's U.S. businesses. The Canada operating segment reflects the results for Acklands – Grainger, Inc. and its subsidiaries. Other businesses include Zoro Tools, Inc. (Zoro), the single channel online business in the U.S., MonotaRO Co. (MonotaRO) in Japan and operations in Europe, Asia and Latin America. These businesses individually do not meet the criteria of a reportable segment. Operating segments generate revenue almost exclusively through the distribution of MRO supplies, as service revenues account for approximately 1% of total revenues for each operating segment.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. Intersegment transfer prices are established at external selling prices, less costs not incurred due to a related party sale. The segment results include certain centrally incurred costs for shared services that are charged to the segments based upon the relative level of service used by each operating segment.

Following is a summary of segment results (in thousands of dollars):

	2017			
	United States	Canada	Other businesses	Total
Total net sales	$ 7,960,075	$ 752,900	$ 2,120,303	$ 10,833,278
Intersegment net sales	(403,824)	(35)	(4,561)	(408,420)
Net sales to external customers	7,556,251	752,865	2,115,742	10,424,858
Segment operating earnings	1,213,138	(76,538)	55,633	1,192,233
Segment assets	2,309,734	278,633	605,452	3,193,819
Depreciation and amortization	168,862	18,965	31,016	218,843
Additions to long-lived assets	$ 187,384	$ 7,594	$ 61,735	$ 256,713

	2016			
	United States	Canada	Other businesses	Total
Total net sales	$ 7,870,105	$ 733,829	$ 1,884,963	$ 10,488,897
Intersegment net sales	(347,468)	(110)	(4,115)	(351,693)
Net sales to external customers	7,522,637	733,719	1,880,848	10,137,204
Segment operating earnings	1,274,851	(65,362)	40,684	1,250,173
Segment assets	2,275,009	286,035	494,067	3,055,111
Depreciation and amortization	159,334	18,050	23,792	201,176
Additions to long-lived assets	$ 153,556	$ 12,275	$ 95,288	$ 261,119

	2015			
	United States	Canada	Other businesses	Total
Total net sales	$ 7,963,416	$ 890,530	$ 1,405,750	$ 10,259,696
Intersegment net sales	(282,305)	(105)	(3,902)	(286,312)
Net sales to external customers	7,681,111	890,425	1,401,848	9,973,384
Segment operating earnings	1,371,626	27,368	48,051	1,447,045
Segment assets	2,191,045	317,504	507,116	3,015,665
Depreciation and amortization	150,654	17,334	19,999	187,987
Additions to long-lived assets	$ 302,316	$ 20,464	$ 21,135	$ 343,915

Following are reconciliations of the segment information with the consolidated totals per the financial statements (in thousands of dollars):

	2017	2016	2015
Operating earnings:			
Total operating earnings for reportable segments	$ 1,192,233	$ 1,250,173	$ 1,447,045
Unallocated expenses	(143,571)	(130,676)	(146,725)
Total consolidated operating earnings	$ 1,048,662	$ 1,119,497	$ 1,300,320
Assets:			
Assets for reportable segments	$ 3,193,819	$ 3,055,111	$ 3,015,665
Other current and noncurrent assets	2,428,074	2,464,656	2,624,966
Unallocated assets	182,361	174,540	217,124
Total consolidated assets	$ 5,804,254	$ 5,694,307	$ 5,857,755

	2017		
	Segment Totals	Unallocated	Consolidated Total
Other significant items:			
Depreciation and amortization	$ 218,843	$ 21,819	$ 240,662
Additions to long-lived assets	$ 256,713	$ 5,283	$ 261,996
		Revenues	Long-Lived Assets
Geographic information:			
United States		$ 7,948,291	$ 1,097,543
Canada		761,065	199,660
Other foreign countries		1,715,502	246,700
		$ 10,424,858	$ 1,543,903

	2016		
	Segment Totals	Unallocated	Consolidated Total
Other significant items:			
Depreciation and amortization	$ 201,176	$ 21,469	$ 222,645
Additions to long-lived assets	$ 261,119	$ 10,542	$ 271,661
		Revenues	Long-Lived Assets
Geographic information:			
United States		$ 7,834,361	$ 1,134,817
Canada		739,687	210,931
Other foreign countries		1,563,156	210,605
		$ 10,137,204	$ 1,556,353

	2015		
	Segment Totals	Unallocated	Consolidated Total
Other significant items:			
Depreciation and amortization	$ 187,987	$ 18,854	$ 206,841
Additions to long-lived assets	$ 343,915	$ 16,912	$ 360,827

	Revenues	Long-Lived Assets
Geographic information:		
United States	$ 7,866,300	$ 1,231,083
Canada	897,431	215,202
Other foreign countries	1,209,653	153,508
	$ 9,973,384	$ 1,599,793

Revenues are attributed to countries based on the ship-to location of the customer.

Unallocated expenses and unallocated assets primarily relate to the Company headquarters' support services, which are not part of any business segment, as well as intercompany eliminations. Unallocated expenses include payroll and benefits, depreciation and other costs associated with headquarters-related support services. Unallocated assets include non-operating cash and cash equivalents, certain prepaid expenses and property, buildings and equipment-net.

Assets for reportable segments include net accounts receivable and first-in, first-out inventory, which are reported to the Company's Chief Operating Decision Maker. Long-lived assets consist of property, buildings, equipment and capitalized software.

Depreciation and amortization presented above includes depreciation of long-lived assets and amortization of capitalized software.

NOTE 17 - CONTINGENCIES AND LEGAL MATTERS

From time to time the Company is involved in various legal and administrative proceedings that are incidental to its business, including claims related to product liability, general negligence, contract disputes, environmental issues, unclaimed property, wage and hour laws, intellectual property, employment practices, regulatory compliance or other matters and actions brought by employees, consumers, competitors, suppliers or governmental entities. As a government contractor selling to federal, state and local governmental entities, the Company is also subject to governmental or regulatory inquiries or audits or other proceedings, including those related to contract administration or to pricing compliance. It is not expected that the ultimate resolution of any of these matters will have, either individually or in the aggregate, a material adverse effect on the Company's consolidated financial position or results of operations.

From time to time, the Company has also been named, along with numerous other nonaffiliated companies, as a defendant in litigation in various states involving asbestos and/or silica. These lawsuits typically assert claims of personal injury arising from alleged exposure to asbestos and/or silica as a consequence of products manufactured by third parties purportedly distributed by the Company. While several lawsuits have been dismissed in the past based on the lack of product identification, if a specific product distributed by the Company is identified in any pending or future lawsuits, the Company will seek to exercise indemnification remedies against the product manufacturer to the extent available. In addition, the Company believes that a substantial number of these claims are covered by insurance. The Company has entered into agreements with its major insurance carriers relating to the scope and coverage, and the costs of defense, of lawsuits involving claims of exposure to asbestos.

The Company believes it has strong legal and factual defenses and intends to continue defending itself vigorously in these lawsuits. While the Company is unable to predict the outcome of these proceedings, it believes that the ultimate resolution will not have, either individually or in the aggregate, a material adverse effect on the Company’s consolidated financial position or results of operations.

NOTE 18 - SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

A summary of selected quarterly information for 2017 and 2016 is as follows (in thousands of dollars, except for per share amounts):

	2017 Quarter Ended				
	March 31	June 30	September 30	December 31	Total
Net sales	$ 2,541,129	$ 2,615,269	$ 2,635,999	$ 2,632,461	$ 10,424,858
Cost of merchandise sold	1,521,937	1,575,313	1,618,819	1,611,232	6,327,301
Gross profit	1,019,192	1,039,956	1,017,180	1,021,229	4,097,557
Warehousing, marketing and administrative expenses	723,704	807,891	736,010	781,290	3,048,895
Operating earnings	295,488	232,065	281,170	239,939	1,048,662
Net earnings attributable to W.W. Grainger, Inc.	174,744	97,921	162,006	151,059	585,730
Earnings per share - basic	2.95	1.68	2.80	2.64	10.07
Earnings per share - diluted	$ 2.93	$ 1.67	$ 2.79	$ 2.63	$ 10.02

	2016 Quarter Ended				
	March 31	June 30	September 30	December 31	Total
Net sales	$ 2,506,538	$ 2,563,668	$ 2,596,288	$ 2,470,710	$ 10,137,204
Cost of merchandise sold	1,461,485	1,523,609	1,556,536	1,481,017	6,022,647
Gross profit	1,045,053	1,040,059	1,039,752	989,693	4,114,557
Warehousing, marketing and administrative expenses	727,961	734,470	717,165	815,464	2,995,060
Operating earnings	317,092	305,589	322,587	174,229	1,119,497
Net earnings attributable to W.W. Grainger, Inc.	186,713	172,676	185,873	60,666	605,928
Earnings per share - basic	3.00	2.81	3.07	1.02	9.94
Earnings per share - diluted	$ 2.98	$ 2.79	$ 3.05	$ 1.01	$ 9.87

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DATE: February 26, 2018

W.W. GRAINGER, INC.

By: **/s/ D.G. Macpherson**
D.G. Macpherson
Chairman and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of Grainger on February 26, 2018, in the capacities indicated.

/s/ D.G. Macpherson
D.G. Macpherson
Chairman and Chief Executive Officer, Director
(Principal Executive Officer)

/s/ Ronald L. Jadin
Ronald L. Jadin
Senior Vice President
and Chief Financial Officer
(Principal Financial Officer)

/s/ Eric R. Tapia
Eric R. Tapia
Vice President and Controller
(Principal Accounting Officer)

/s/ Brian P. Anderson
Brian P. Anderson
Director

/s/ V. Ann Hailey
V. Ann Hailey
Director

/s/ Neil S. Novich
Neil S. Novich
Director

/s/ E. Scott Santi
E. Scott Santi
Director

/s/ Lucas E. Watson
Lucas E. Watson
Director

EXHIBIT INDEX (1)

EXHIBIT NO.	DESCRIPTION
1.1	Underwriting Agreement, dated as of May 15, 2017, among W.W. Grainger, Inc. and Morgan Stanley & Co. LLC, J.P. Morgan Securities LLC and U.S. Bancorp Investments, Inc., as representatives of the underwriters named therein, incorporated by reference to Exhibit 1.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated May 22, 2017.
2.1	Share Purchase Agreement, dated as of July 30, 2015, by and among Grainger, GWW UK Holdings Limited, Gregory Family Office Limited and Michael Gregory, incorporated by reference to Exhibit 2.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated July 31, 2015.
3.1	Restated Articles of Incorporation, incorporated by reference to Exhibit 3(i) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 1998.
3.2	By-laws, as amended on March 9, 2017, incorporated by reference to Exhibit 3.1.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated March 9, 2017.
4.1	No instruments which define the rights of holders of W.W. Grainger, Inc.'s Industrial Development Revenue Bonds are filed herewith, pursuant to the exemption contained in Regulation S-K, Item 601(b)(4)(iii). W.W. Grainger, Inc. hereby agrees to furnish to the Securities and Exchange Commission, upon request, a copy of any such instrument.
4.2	Indenture, dated as of June 11, 2015, between W.W. Grainger, Inc. and U.S. Bank National Association, as trustee, incorporated by reference to Exhibit 4.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated June 11, 2015.
4.3	First Supplemental Indenture, dated as of June 11, 2015, between W.W. Grainger, Inc. and U.S. Bank National Association, as trustee, and Form of 4.60% Senior Notes due 2045, incorporated by reference to Exhibit 4.2 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated June 11, 2015.
4.4	Second Supplemental Indenture, dated as of May 16, 2016, between W.W. Grainger, Inc., and U.S. Bank National Association, as trustee, incorporated by reference to Exhibit 4.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated May 16, 2016.
4.5	Third Supplemental Indenture, dated as of May 22, 2017, between W.W. Grainger, Inc., and U.S. Bank National Association, as trustee, incorporated by reference to Exhibit 4.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated May 22, 2017.
4.6	Form of 3.75% Senior Notes due 2046 (included in Exhibit 4.4), incorporated by reference to Exhibit 4.2 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated May 16, 2016.
4.7	Form of 4.20% Senior Notes due 2047 (included in Exhibit 4.5), incorporated by reference to Exhibit 4.2 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated May 22, 2017.
10.1	1990 Long-Term Stock Incentive Plan, as amended, incorporated by reference to Exhibit 10(a) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2006.*
10.2	Form of Indemnification Agreement between W.W. Grainger, Inc. and each of its directors and certain of its executive officers, incorporated by reference to Exhibit 10(b)(i) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2009.*
10.3	Frozen Executive Death Benefit Plan, as amended, incorporated by reference to Exhibit 10(b)(v) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007.*
10.4	First amendment to the Frozen Executive Death Benefit Plan, incorporated by reference to Exhibit 10(b)(v)(1) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2008.*
10.5	Second amendment to the Frozen Executive Death Benefit Plan, incorporated by reference to Exhibit 10(b)(iv)(2) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2009.*
10.6	Supplemental Profit Sharing Plan, as amended, incorporated by reference to Exhibit 10(viii) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2003.*
10.7	Supplemental Profit Sharing Plan II, as amended, incorporated by reference to Exhibit 10(b)(ix) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007.*
10.8	Voluntary Salary and Incentive Deferral Plan, as amended, incorporated by reference to Exhibit 10(b)(xi) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007.*
10.9	Summary Description of the 2016 Directors Compensation Program incorporated by reference to Exhibit 10.12 to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2016.*

10.10	2005 Incentive Plan, as amended, incorporated by reference to Exhibit 10(d) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2006.*
10.11	2010 Incentive Plan, incorporated by reference to Exhibit B of W.W. Grainger, Inc.'s Proxy Statement dated March 12, 2010.*
10.12	Form of Stock Option Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(xiv) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2005.*
10.13	Form of Stock Option Award and Restricted Stock Unit Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(xv) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2005.*
10.14	Form of Stock Option Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xvi) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2009.*
10.15	Form of Stock Option Award and Restricted Stock Unit Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xvii) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2009.*
10.16	Form of Restricted Stock Unit Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xviii) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2010.*
10.17	Form of 2012 Performance Share Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xix) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2012.*
10.18	Summary Description of the 2018 Management Incentive Program.*
10.19	Incentive Program Recoupment Agreement, incorporated by reference to Exhibit 10(b)(xxv) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2009.*
10.20	Form of Change in Control Employment Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xxvii) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2010.*
10.21	Form of 2013 Performance Share Award Agreement between Grainger and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xxiii) to Grainger's Annual Report on Form 10-K for the year ended December 31, 2013.*
10.22	Form of 2014 Performance Share Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xxiv) to Grainger's Annual Report on Form 10-K for the year ended December 31, 2014.*
10.23	Form of 2015 Performance Share Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.28 to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2015.*
10.24	W.W. Grainger, Inc. 2015 Incentive Plan, incorporated by reference to Exhibit B of W.W. Grainger, Inc.'s Proxy Statement dated March 13, 2015.*
10.25	First Amendment to the W.W. Grainger, Inc. 2015 Incentive Plan, incorporated by reference to 10.1 of W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.*
10.26	Separation Agreement and General Release by and between W.W. Grainger, Inc. and Court Carruthers dated July 22, 2015, incorporated by reference to Exhibit 10(b)(i) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2015.*
10.27	£180,000,000 Facilities Agreement, dated as of August 26, 2015, by and among GWW UK Holdings Ltd, W.W. Grainger, Inc., the lender parties thereto, Lloyds Bank PLC and Lloyds Securities Inc., as Arrangers, and Lloyds Bank PLC, as Agent, incorporated by reference to W.W. Grainger, Inc.'s Current Report on Form 8-K dated September 1, 2015.
10.28	Form of Stock Option Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.1 to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2016.*
10.29	Form of Restricted Stock Unit Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.2 to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2016.*
10.30	Form of 2016 Performance Share Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.3 to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2016.*
10.31	Form of Stock Option Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.2 to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.*

10.32	Form of Restricted Stock Unit Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.3 to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.*
10.33	Form of 2017 Performance Share Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.4 to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.*
10.34	Credit Agreement dated as of October 6, 2017, by and among W.W. Grainger, Inc., the lenders parties thereto, and U.S. Bank National Association, as Administrative Agent, incorporated by reference to Exhibit 10.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated October 6, 2017.
21	Subsidiaries of Grainger.
23	Consent of Independent Registered Public Accounting Firm.
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

(*) Management contract or compensatory plan or arrangement.

(1) Certain instruments defining the rights of holders of long-term debt securities of the Registrant are omitted pursuant to Item 601(b)(4)(iii) of Regulation S-K. The Registrant hereby undertakes to furnish to the SEC, upon request, copies of any such instruments.

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements (Form S-8 No.'s 33-43902, 333-24215, 333-61980, 333-105185, 333-124356, 333-166345, 333-203715, Form S-4 No. 33-32091 and Form S-3 No. 333-203444) for W.W. Grainger, Inc. and in the related prospectuses of our reports dated February 26, 2018, with respect to the consolidated financial statements of W.W. Grainger, Inc. and the effectiveness of internal control over financial reporting of W.W. Grainger, Inc., included in this Annual Report (Form 10-K) for the year ended December 31, 2017.

/s/ Ernst & Young LLP

Chicago, Illinois
February 26, 2018

CERTIFICATION

Exhibit 31.1

I, D.G. Macpherson, certify that:

1. I have reviewed this Annual Report on Form 10-K of W.W. Grainger, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2018

By:	/s/ D.G. Macpherson
Name:	D.G. Macpherson
Title:	Chairman and Chief Executive Officer

CERTIFICATION

Exhibit 31.2

I, R. L. Jadin, certify that:

1. I have reviewed this Annual Report on Form 10-K of W.W. Grainger, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2018

By:	/s/ R. L. Jadin
Name:	R. L. Jadin
Title:	Senior Vice President and Chief Financial Officer

Exhibit 32

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of W.W. Grainger, Inc. ("Grainger") for the annual period ended December 31, 2017, (the "Report"), D.G. Macpherson, as Chief Executive Officer of Grainger, and R. L. Jadin, as Chief Financial Officer of Grainger, each hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Grainger.

/s/ D.G. Macpherson

D.G. Macpherson

Chairman and Chief Executive
Officer

February 26, 2018

/s/ R. L. Jadin

R. L. Jadin

Senior Vice President and
Chief Financial Officer

February 26, 2018