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NEW BOOKS, ETC.
THE NEW AGRICULTURE. By T. Byard Collins. New York: Munn & Co., 1906. 12mo.; 374 pages; 106 illustrations; cloth. Price, \$2.
This new and authoritative work deals with the subject in a scientific way and from a new viewpoint. Dr. Collins has devoted his lifetime to the study of changing economic agricultural conditions. "Back to the soil" was never a more attractive proposition and never so worthy of being heeded as during these opening years of the twentieth century. Farm life to-day offers more inducements than at any previous period in the world's history, and it is calling millions from the desk. The reason for this is not at first obvious, and for this reason Dr. Collins has prepared the present work, which demonstrates conclusively the debt which agriculture owes to modern science and the painstaking government and State officials. Much of the drudgery of the old farm life has been done away with by the use of improved methods, improved stock and varieties. All this tends to create wealth by increased value of the product and decreased cost of production. Irrigation, the new fertilization, the new transportation, the new creations, the new machinery, all come in for a share of attention. The illustrations are of special value, and are unique. All who are in any way interested in agriculture should obtain a copy of this most timely addition to the literature of agriculture.

AN ELEMENTARY TEXTBOOK OF THEORETICAL MECHANICS. By George A. Merrill, B.S. New York: American Book Company, 1906. 12mo.; pp. 267. Price, \$1.50.

Prof. Merrill's well-illustrated and concise volume is intended for the upper classes in secondary schools and for the two lower classes in college. American publications upon this subject have been decidedly limited in number, and this book will probably be found to provide a long-felt want in many educational departments in this country. Each of the topics treated in the text is followed by a few examples, not many; for these examples, as in the case of the laboratory exercises, can easily be supplied by any intelligent teacher. Beyond giving due attention to the fundamental principles of teaching, no one method of presentation has been used to the exclusion of others.

BRAZING AND SOLDERING. No. 5 of a Series of Practical Papers. By James F. Hobart. New York: The Derry-Collar Company, 1906. Pp. 33. Price, 25 cents.

WIRING A HOUSE. No. 6 of a Series of Practical Papers. By Herbert Pratt. New York: The Derry-Collar Company. Pp. 21. Price, 25 cents.

A SUPPLEMENT TO THE BOOKS "THE MILKY WAY" AND "THE INFINITY OF THE STARRY UNIVERSE." By John Lowry Adams. Sydney: Turner & Henderson, 1906. Pp. 17.

ILLINOIS STATE GEOLOGICAL SURVEY. Bulletin No. 1. The Geological Map of Illinois. By Stuart Weller. Urbana: University of Illinois, 1906. 8vo.; pp. 26.

HOW TO DO MORE BUSINESS. By the Author of "What a Business Man Ought to Know." London: Guilbert Pitman, 1906. 24mo.; pp. 184. Price, 40 cents.

INDEX OF INVENTIONS
For which Letters Patent of the United States were Issued for the Week Ending October 23, 1906,
AND EACH BEARING THAT DATE [See note at end of list about copies of these patents.]

Adding and multiplication machine, S. de Gomme	833,960
Adding machine cabinet, A. Hendricks	833,927
Alley, G. F. Allen	834,055
Amusement apparatus, L. B. May	834,016
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The Use, Cost and Efficiency of Alcohol as a Fuel for Gas Engines are ably explained by H. Diederichs in SCIENTIFIC AMERICAN SUPPLEMENT 1596. Many clear diagrams accompany the text. The article considers the fuel value and physical properties of alcohol, and gives details of the alcohol engine wherever they may be different from those of a gasoline or crude oil motor.

In SCIENTIFIC AMERICAN SUPPLEMENT 1531 the **Production of Industrial Alcohol and its Use in Explosive Motors** are treated at length, valuable statistics being given of the cost of manufacturing alcohol from farm products and using it in engines.

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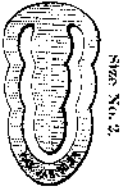
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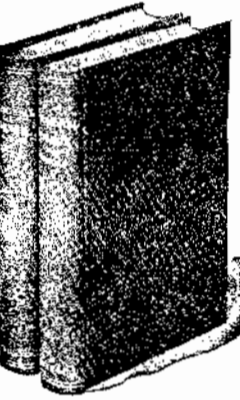
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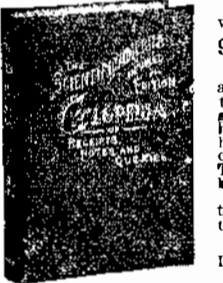
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