

have all been well selected. The paragraphs on the meaning of maps also are good.

The second part of the work treats in brief manner of the earth as a whole, by like fruitful methods. The illustrations in this part are in the main physiographic, biological, and ethnological. They form a very essential part of the book, and carry with them as much instruction as the text itself. The maps, while small, are clear and well conceived; they are not overloaded by useless details, and while all persons will not be inclined to concede to them the superlative merit which the authors claim, they are certainly for practical purposes an improvement on the traditional cartographical products. In the statistics given in the appendix, there is a discrepancy between the figures representing the area of North America in square miles and those representing the total area of its component states. The area of North America is given as only six and one half million square miles, while the total area of the United States, Mexico, Canada, and Central America by actual addition foots up to more than eight million square miles. T. J. McC.

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#### BOOK NOTICES.

ERNST HAECKEL, EIN LEBENSBILD. By *Wilhelm Bölsche*. Dresden and Leipsic: Verlag von Carl Reissner. 1900, Pages, 259.

Wilhelm Bölsche's excellent biography of Ernst Haeckel is one of the volumes of a series of biographical portraits called *Men of the Period*. Krupp, Nansen, Nietzsche, Liszt, Windthorst, Forschenbeck, and Stephan form the other numbers of the series. Each volume is provided with a good portrait. Haeckel's career is exceedingly interesting from a human as well as from a scientific point of view; it has been spent in the very thick of the great intellectual contests of the period, and is representative and characteristic in every way. And as to Mr. Bölsche's portrayal of his achievements, it may be said to be in every respect satisfactory, and quite worthy of its subject.

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It seems rather odd that a mathematical text-book written by a native of India should possess such merits "as to entitle it when introduced into England with suitable modifications and additions to a unique position among English school-books"; yet such is the case, say Mr. William Briggs and Mr. G. H. Bryan, editors of the University Tutorial Series, which has for its purpose tuition by correspondence and preparation for the examinations of the University of London. These gentlemen, who are the authors or editors of several practical scientific and mathematical school-books, have taken the *Algebra* of an Indian professor, Radhakrishnan, which has been characterised as "a Chrystal for beginners," and by the addition of chapters on logarithms, interest, graphical representation, continued fractions, etc., have adapted the same to instruction in English and American schools. The work, which consists of two volumes, is particularly fitted for the purpose of independent study. The text is ample, the explanations and examples are full, the typography is clear. In Part II., *The Advanced Course*, which we now have before us, modern ideas of algebraic form have been sufficiently interwoven with the prevailing method of presentation to make the work superior to the ordinary run of algebraical text-books. The essential elements of Chrystal's work have been reproduced in the chapters treating of zero and infinity,

maxima and minima, imaginary and complex quantities, the notion of functions, graphs, etc., permutations and combinations. While Professor Chrystal has himself recently written an *Introduction to Algebra*, it will be admitted, we think, by all who have ever used the book that his presentation, despite its practical aims, is in the majority of the chapters too abstract for the ordinary young student,—a fact which, added to the annoying compactness of the typographical setting of the work, renders it in places even more difficult of comprehension than his larger treatise. The independent student, therefore, is likely to gain much more from such digests of Chrystal's work as the present than he would even from Chrystal's *Introduction* itself. (*The Tutorial Algebra: Part II., Advanced Course.* By William Briggs, M.A., F.C.S., F.R.A.S. and G. H. Bryan, Sc.D., F.R.S. New York: Hinds and Noble, 4 Cooper Institute. London: W. B. Clive, 13 Booksellers Row, Strand, W. C. 1898. Pages, viii, 596. Price, 6s. 6d.)

The attention of the readers of *The Open Court* should be called to the elementary scientific and educational publications of the Society for Promoting Christian Knowledge. These publications embrace several series, bearing such titles as "The Romance of Science," "Manuals of Elementary Science," "Natural History Rambles," "Ancient History from the Monuments," "The People's Library," etc., etc. "The Romance of Science" and "Ancient History" series particularly claim our attention. The former contains some excellent little books by men quite eminent in their way, as *The Birth and Growth of Worlds*, by Prof. A. H. Green; *Soap-Bubbles, and the Forces which Mould Them*, by C. V. Boys; *Spinning Tops*, by Prof. J. Perry; *Diseases of Plants*, by Prof. Marshall Ward; *The Story of a Tinder-Box*, by Charles Meymott Tidy; *Time and Tide*, by Sir Robert S. Ball. We have recently received two practical educational books from these series; viz., (1) *Simple Experiments for Science Teaching*, by J. A. Bower, and (2) *How to Make Common Things*, by the same author. The first book is a detailed descriptive manual of physical and chemical experiments which can easily be performed without expensive scientific apparatus, by means at every person's disposal. The second is a composite of modern ideas of manual training, with the older theory and practice of carpentry-work for boys. It gives directions for making many useful and ornamental objects, such as shelves, desks, stands, brackets, picture frames, models of sailing vessels, etc., for wood-carving, metal-working, copying of medals and casts, and the construction of useful electrical appliances. "The Ancient History" series contains volumes on Assyria, Babylonia, Egypt, and Persia, by such authorities as the late George Smith, the Rev. A. H. Sayce, Dr. S. Birch, and Mr. W. S. W. Vaux. For details readers are referred to the catalogues, which will be supplied on request by the publishers. (New York: E. & J. B. Young & Co. London: Society for Promoting Christian Knowledge.)