

This second edition of the Elementary Encyclopedia has received such extensive additions that the third volume of the original appears in two parts. The first of these was reviewed in this BULLETIN, page 87 of the current volume. The second part, under consideration, contains the revised books entitled "Graphik" and "Wahrscheinlichkeitsrechnung." The first book has a new section on "Axonometrie und Perspektive." "Two new books have been added to meet the views of certain critics of the first edition: "Politische Arithmetik" and "Astronomie." Other changes are minor.

The third book includes the theory of interest and actuarial computations. The theory of interest is based upon compound interest, in the sense that simple interest is looked upon as an annuity in perpetuity. Only the elements of insurance are developed.

The fourth book deals with spherical astronomy and the calculation of orbits. The subjects considered are astronomical coordinates, determination of time, variations of stellar coordinates, observations with instruments, determination of latitude and longitude, and orbits.

The additions to this useful work will be welcome in many quarters. While one might criticize the proportional amount of space devoted to them, and to the other divisions of the book, such criticism would arise from purely personal views as to what applications are important, and would vary from person to person. The authors and editors are deserving of praise for the work taken as a whole.

JAMES BYRNIE SHAW.

A History of the Theories of Aether and Electricity from the Age of Descartes to the Close of the Nineteenth Century. By E. T. WHITTAKER. London, Longmans, Green, and Co., 1910. xiii+475 pp.

EITHER consciously or unconsciously, Whittaker must be imbued with a missionary spirit which leads him forth into dark places to enlighten them with opportune gospel. Three of his books, *Modern Analysis* (1902),* *Analytical Dynamics* (1904),† and this *History*, bear ample evidence to this.

We do not lack for works on the theory of functions, but

* Reviewed in the BULLETIN, volume 10, p. 351, by M. Bôcher.

† Reviewed in the BULLETIN, volume 12, p. 451, by E. B. Wilson.